ПРИВАТНИЙ ВИЩИЙ НАВЧАЛЬНИЙ ЗАКЛАД
«ХАРКІВСЬКИЙ МІЖНАРОДНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»
Кафедра фундаментальних загальнонаукових дисциплін

МЕТОДИЧНІ МАТЕРІАЛИ ДО САМОСТІЙНОЇ РОБОТИ

освітньої компоненти

INFORMATION TECHNOLOGY IN HEALTHCARE MANAGEMENT

(«Інформаційні технологій в управлінні охороною здоров'я»
для студентів з англійською мовою навчання)

(назва освітньої компоненти)

підготовки другого (магістерського) рівня вищої освіти
галузь знань 22 ОХОРОНА ЗДОРОВ'Я
спеціальність 222 МЕДИЦИНА
освітньо-професійної програми МЕДИЦИНА

Курс 1 (2) Семестр 2 (3)

Методичні матеріали до практичних занять розглянуто та затверджено на засіданні кафедри фундаментальних загальнонаукових дисциплін
Протокол від «23» вересня 2022 року № 2

Зав. кафедри _____ Тетяна КУДРЯВЦЕВА
(підпис)

Затверджено на засіданні навчально-методичної комісії
Протокол від «28» лютого 2023 року № 2 (наказ № 23 від 28.02.2023)

Голова _____ Жанна ДАВИДОВА
(підпис)

РОЗРОБНИК : НЕССОНОВА Марина, доцент кафедри, к.т.н., доцент

(вказати ПРІЗВИЩЕ, ім’я авторів, їхні посади, наукові ступені та вчені звання)

Методичні матеріали для самостійної роботи з вибіркової освітньої компоненти «Інформаційні технологій в управлінні охороною здоров’я» для студентів 1—2 курсів спеціальності 222 Медицина другого (магістерського) рівня вищої освіти з англійською мовою навчання містять методичні рекомендації з організації самостійної роботи за усіма темами освітньої компоненти, які включають набори завдань для практичного виконання, тестові питання, рекомендовані джерела для самопідготовки, форми контролю і критерії оцінювання самостійної роботи.

Методичні розробки мають на меті полегшити організацію самостійної роботи студентів викладачам, що проводять заняття за освітньою компонентою, як в оффлайн, так і в онлайн форматах.

МЕТОДИЧНА КАРТКА ОРГАНІЗАЦІЇ САМОСТІЙНОЇ РОБОТИ

Тема: Spreadsheets software tools for sorting and filtering medical data records. Visualization of data and data slices

Ключові терміни та поняття теми: sorting order, custom sorting list, the key of sorting, multi-key sorting, filtering, autofilter, standard filter, advanced filter, filter criteria.

Методичні рекомендації до виконання самостійної роботи:

Самостійна робота з даної теми передбачає:

a. виконання студентами практичних завдань за темою (завершення виконання практичних завдань, що були надані у переліку завдань до практичної роботи);
b. тестування за темою.

Рекомендовано користуватися конспектом, зробленим під час розв'язку типових завдань з теми на практичних заняттях, конспектом і слайдами лекції з поточної теми.

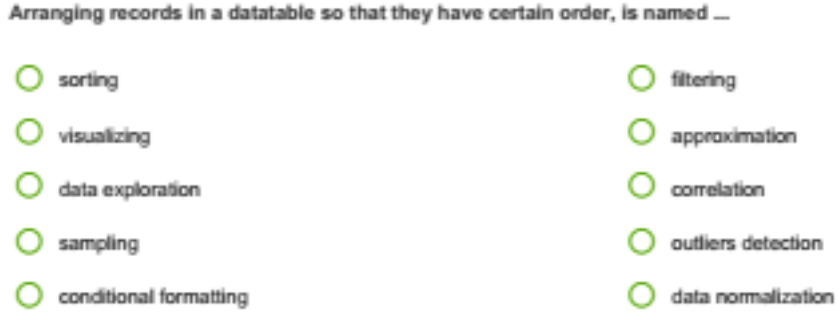
Інші джерела, рекомендовані для використання під час самостійної роботи з теми:

1. Hoyt R.E. Health informatics: practical guide / Robert E. Hoyt, William R. Hersh. – 7th ed. – [S. l.] : Lulu.com, Informatics Education, 2018. – 475 p.
2. Essentials of Clinical Informatics / ed. by M.E. Frisse, K.E. Misulis. – [S. l.] : Oxford University Press, 2019. – 366 p.
3. Medical informatics: textbook for students of higher medical education establishments / I. Ye. Bulakh [et al.]. – 4th ed., rev.– Kyiv : Medicine, 2018. – 368 p.
4. Medical Informatics / S.J Singer [et al.]. – New York : Springer Science + Business Media, 2001. – 780 p.
5. Musen M.A. Handbook of Medical Informatics / ed. by M.A. Musen, J. van Bemmel. – [S. l.] : Springer, 2002. – 628 p.

Тестові завдання за темою доступні за посиланням https://onlinetestpad.com/4fvg6gz3jhluc .

Кожен тест містить 10 питань, що охоплюють матеріал даної теми освітньої компоненти. Налаштування тесту дозволяють проходити тест у тренувальному режимі з перевіркою правильності наданих відповідей.

Повний перелік тестових питань наведено нижче:



Patient	Diagnosis	Duration of Treatment (days)
Jameson	Arthritis	80
Baker	Arthritis	70
Cooper	Arthritis	67
Brithman	Arthritis	61
Eastbrook	Arthritis	55
Pepper	Arthritis	9
Oldman	Bronchitis	57
Willis	Bronchitis	57
Draiper	Bronchitis	44
Smith	Bronchitis	14
Trueman	Tuberculosis	95
Downson	Tuberculosis	76
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Aweson	Tuberculosis	20

Which sorting criteria is applied to this table?

- ○ sorting by two keys: first -- by diagnoses alphabetically, second -- by patients alphabetically
- ○ sorting by two keys: first -- by days of treatment descending, second -- by diagnoses alphabetically
- ○ by diagnoses alphabetically
- ○ sorting by two keys: first -- by diagnoses alphabetically, second -- by days of treatment descending
- ○ by days of treatment descending
- ○ by days of treatment ascending
- ○ sorting by two keys: first -- by diagnoses alphabetically, second -- by patients in opposite alphabetical order

Hiding those records in a datatable that do not meet certain criteria, is named ...

- ○ sorting
- ○ visualizing
- ○ data exploration
- ○ outliers detection
- ○ data normalization
- ○ filtering
- ○ approximation
- ○ correlation
- ○ sampling
- ○ conditional formatting

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In a spreadsheet you can sort data by...

- ☐ cell values
- ☐ modification times of cells
- ☐ font sizes
- ☐ cell colors
- ☐ font colors
- ☐ number formats

Sorting numbers in descending order means...

- ○ arranging them from smallest to largest
- ○ arranging them alphabetically
- ○ arranging them from recent to older
- ○ arranging them from longest to shortest
- ○ arranging them from largest to smallest
- ○ arranging them in opposite alphabetical order
- ○ arranging them from older to recent
- ○ arranging them from shortest to longest

In a spreadsheet you can filter data by...

- [ ] cell values
- [ ] cell colors
- [ ] modification times of cells
- [ ] sheet names
- [ ] font sizes
- [ ] number formats

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36

Which sorting criteria is applied to this table?

- ○ sorting by two keys: first -- by diagnoses alphabetically, second -- by patients alphabetically
- ○ sorting by two keys: first -- by patients alphabetically, second -- by diagnoses alphabetically
- ○ by diagnoses alphabetically
- ○ sorting by two keys: first -- by diagnoses alphabetically, second -- by days of treatment descending
- ○ by days of treatment descending
- ○ by patients in alphabetical order
- ○ sorting by two keys: first -- by diagnoses alphabetically, second -- by patients in opposite alphabetical order

Sorting dates in ascending order means...

- ○ arranging them alphabetically
- ○ arranging them in opposite alphabetical order
- ○ arranging them from recent to older values
- ○ arranging them from older to recent values
- ○ arranging them from those entered earlier to those entered later
- ○ arranging them from those entered later to those entered earlier
- ○ arranging them from longest to shortest
- ○ arranging them from shortest to longest

Patient	Diagnosis	Duration of Treatment (days)
Trueman	Tuberculosis	95
Jameson	Arthritis	80
Downson	Tuberculosis	76
Baker	Arthritis	70
Cooper	Arthritis	67
Brithman	Arthritis	61
Oldman	Bronchitis	57
Willis	Bronchitis	57
Eastbrook	Arthritis	55
Draiper	Bronchitis	44
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Aweson	Tuberculosis	20
Smith	Bronchitis	14
Pepper	Arthritis	9

Which sorting criteria is applied to this table?

- sorting by two keys: first -- by diagnoses in opposite alphabetical order, second -- by patients in opposite alphabetical order
- sorting by two keys: first -- by days of treatment ascending, second -- by patients alphabetically
- by diagnoses in opposite alphabetical order
- sorting by two keys: first -- by diagnoses alphabetically, second -- by days of treatment descending
- by days of treatment descending
- by patients in opposite alphabetical order
- sorting by two keys: first -- by diagnoses in opposite alphabetical order, second -- by patients in opposite alphabetical order

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Sorting text values in ascending order means...

- arranging them from smallest to largest
- arranging them from largest to smallest
- arranging them alphabetically
- arranging them in opposite alphabetical order
- arranging them from recent to older values
- arranging them from older to recent values
- arranging them from those entered earlier to those entered later
- arranging them from those entered later to those entered earlier
- arranging them from longest to shortest strings
- arranging them from shortest to longest strings

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Sorting numbers in ascending order means...

- arranging them from smallest to largest
- arranging them from largest to smallest
- arranging them alphabetically
- arranging them in opposite alphabetical order
- arranging them from recent to older
- arranging them from older to recent
- arranging them from longest to shortest
- arranging them from shortest to longest

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Maddison	Eczema	28	Bulgakov
Willis	Psoriasis	25	Bulgakov
Young	Eczema	22	Bulgakov
Oldman	Eczema	14	Bulgakov
Baker	Neurodermatitis	13	Bulgakov
Reaves	Psoriasis	8	Bulgakov
Trueman	Lupus Erythematosus	5	Bulgakov
Draiper	Eczema	3	Bulgakov
Pepper	Neurodermatitis	49	Checkhoff
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Robbinson	Eczema	48	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Collins	Neurodermatitis	43	Checkhoff
Murray	Psoriasis	41	Doyle
Carter	Neurodermatitis	41	Doyle
Tailor	Eczema	39	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Smith	Lupus Erythematosus	31	Doyle
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Brithman	Eczema	19	Doyle
Agresti	Eczema	16	Doyle
Cooper	Lupus Erythematosus	13	Doyle
Eastbrook	Psoriasis	11	Doyle
Pollack	Eczema	5	Doyle

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- first -- by diagnoses in opposite alphabetical order, second -- by patients alphabetically
- first -- by days of treatment descending, second -- by patients alphabetically
- first -- by days of treatment descending, second -- by doctors alphabetically
- first -- by doctors alphabetically, second -- by days of treatment ascending
- first -- by doctors alphabetically, second -- by days of treatment descending
- first -- by doctors alphabetically, second -- by diagnoses in opposite alphabetical order
- first -- by diagnoses in opposite alphabetical order, second -- by doctors in opposite alphabetical order

Sorting dates in descending order means...

- arranging them alphabetically
- arranging them in opposite alphabetical order
- arranging them from recent to older values
- arranging them from older to recent values
- arranging them from those entered earlier to those entered later
- arranging them from those entered later to those entered earlier
- arranging them from longest to shortest
- arranging them from shortest to longest

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Young	Eczema	22	Bulgakov
Willis	Psoriasis	25	Bulgakov
Trueman	Lupus Erythematosus	5	Bulgakov
Reaves	Psoriasis	8	Bulgakov
Oldman	Eczema	14	Bulgakov
Maddison	Eczema	28	Bulgakov
Draiper	Eczema	3	Bulgakov
Downson	Psoriasis	50	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Baker	Neurodermatitis	13	Bulgakov
Robbinson	Eczema	48	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Collins	Neurodermatitis	43	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Zielbermann	Psoriasis	25	Doyle
Tailor	Eczema	39	Doyle
Smith	Lupus Erythematosus	31	Doyle
Pollack	Eczema	5	Doyle
Murray	Psoriasis	41	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Eastbrook	Psoriasis	11	Doyle
Cooper	Lupus Erythematosus	13	Doyle
Carter	Neurodermatitis	41	Doyle
Brithman	Eczema	19	Doyle
Agresti	Eczema	16	Doyle
Abrahamson	Neurodermatitis	21	Doyle

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- ○ first -- by doctors alphabetically, second -- by days of treatment ascending
- ○ first -- by doctors alphabetically, second -- by patients in opposite alphabetical order
- ○ first -- by patients in opposite alphabetical order, second -- by doctors alphabetically
- ○ first -- by doctors alphabetically, second -- by days of treatment descending
- ○ first -- by doctors alphabetically, second -- diagnoses alphabetically
- ○ first -- by patients in opposite alphabetical order, second -- by diagnoses alphabetically
- ○ first -- by patients in opposite alphabetical order, second -- by days of treatment ascending

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Murray	Psoriasis	41	Doyle
Carter	Neurodermatitis	41	Doyle
Tailor	Eczema	39	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Smith	Lupus Erythematosus	31	Doyle
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Brithman	Eczema	19	Doyle
Agresti	Eczema	16	Doyle
Cooper	Lupus Erythematosus	13	Doyle
Eastbrook	Psoriasis	11	Doyle
Pollack	Eczema	5	Doyle
Pepper	Neurodermatitis	49	Checkhoff
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Robbinson	Eczema	48	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Collins	Neurodermatitis	43	Checkhoff
Downson	Psoriasis	50	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Maddison	Eczema	28	Bulgakov
Willis	Psoriasis	25	Bulgakov
Young	Eczema	22	Bulgakov
Oldman	Eczema	14	Bulgakov
Baker	Neurodermatitis	13	Bulgakov
Reaves	Psoriasis	8	Bulgakov
Trueman	Lupus Erythematosus	5	Bulgakov
Draiper	Eczema	3	Bulgakov

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- ○ first -- by doctors alphabetically, second -- by days of treatment ascending
- ○ first -- by doctors in opposite alphabetical order, second -- by days of treatment descending
- ○ first -- by doctors in opposite alphabetical order, second -- by diagnoses alphabetically
- ○ first -- by days of treatment descending, second -- by doctors in opposite alphabetical order
- ○ first -- by days of treatment descending, second -- by patients alphabetically
- ○ first -- by patients in opposite alphabetical order, second -- by doctors in opposite alphabetical order
- ○ first -- by days of treatment descending, second -- by diagnoses alphabetically

Sorting text values in ascending order means...

- ○ arranging them from smallest to largest
- ○ arranging them from largest to smallest
- ○ arranging them alphabetically
- ○ arranging them in opposite alphabetical order
- ○ arranging them from recent to older values
- ○ arranging them from older to recent values
- ○ arranging them from those entered earlier to those entered later
- ○ arranging them from those entered later to those entered earlier
- ○ arranging them from longest to shortest strings
- ○ arranging them from shortest to longest strings

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Draiper	Eczema	3	Bulgakov
Pollack	Eczema	5	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Reaves	Psoriasis	8	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Baker	Neurodermatitis	13	Bulgakov
Cooper	Lupus Erythematosus	13	Doyle
Oldman	Eczema	14	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Young	Eczema	22	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Maddison	Eczema	28	Bulgakov
Smith	Lupus Erythematosus	31	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Tailor	Eczema	39	Doyle
Carter	Neurodermatitis	41	Doyle
Murray	Psoriasis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Beeshop	Neurodermatitis	44	Bulgakov
Aweson	Lupus Erythematosus	48	Checkhoff
Robbinson	Eczema	48	Checkhoff
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Downson	Psoriasis	50	Bulgakov

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- ○ first -- by doctors alphabetically, second -- by days of treatment ascending
- ○ first -- by doctors in opposite alphabetical order, second -- by days of treatment descending
- ○ first -- by diagnoses alphabetically, second -- by days of treatment ascending
- ○ first -- by days of treatment ascending, second -- by doctors in opposite alphabetical order
- ○ first -- by days of treatment ascending, second -- by patients alphabetically
- ○ first -- by patients alphabetically, second -- by days of treatment ascending
- ○ first -- by days of treatment ascending, second -- by diagnoses alphabetically

Sorting numbers in ascending order means...

- ○ arranging them from smallest to largest
- ○ arranging them from largest to smallest
- ○ arranging them alphabetically
- ○ arranging them in opposite alphabetical order
- ○ arranging them from recent to older
- ○ arranging them from older to recent
- ○ arranging them from longest to shortest
- ○ arranging them from shortest to longest

Sorting text values in descending order means...

- arranging them from smallest to largest
- arranging them from largest to smallest
- arranging them alphabetically
- arranging them in opposite alphabetical order
- arranging them from recent to older values
- arranging them from older to recent values
- arranging them from those entered earlier to those entered later
- arranging them from those entered later to those entered earlier
- arranging them from longest to shortest strings
- arranging them from shortest to longest strings

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reawes	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- first -- by diagnoses in opposite alphabetical order, second -- by days of treatment ascending
- first -- by diagnoses in opposite alphabetical order, second -- by doctors alphabetically
- first -- by diagnoses alphabetically, second -- by days of treatment ascending
- first -- by diagnoses in opposite alphabetical order, second -- by days of treatment descending
- first -- by days of treatment descending, second -- by diagnoses in opposite alphabetical order
- first -- by patients alphabetically, second -- by diagnoses in opposite alphabetical order
- first -- by diagnoses in opposite alphabetical order, second -- by patients alphabetically

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Maddison	Eczema	28	Bulgakov
Young	Eczema	22	Bulgakov
Brithman	Eczema	19	Doyle
Agresti	Eczema	16	Doyle
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Draiper	Eczema	3	Bulgakov
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Jameson	Lupus Erythematosus	32	Doyle
Smith	Lupus Erythematosus	31	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Cooper	Lupus Erythematosus	13	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Pepper	Neurodermatitis	49	Checkhoff
Beeshop	Neurodermatitis	44	Bulgakov
Collins	Neurodermatitis	43	Checkhoff
Carter	Neurodermatitis	41	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Downson	Psoriasis	50	Bulgakov
Murray	Psoriasis	41	Doyle
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Eastbrook	Psoriasis	11	Doyle
Reaves	Psoriasis	8	Bulgakov

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- first -- by diagnoses in opposite alphabetical order, second -- by days of treatment ascending
- first -- by diagnoses alphabetically, second -- by doctors alphabetically
- first -- by diagnoses alphabetically, second -- by days of treatment ascending
- first -- by diagnoses alphabetically, second -- by days of treatment descending
- first -- by days of treatment descending, second -- by diagnoses alphabetically
- first -- by diagnoses alphabetically, second -- by patients in opposite alphabetical order
- first -- by diagnoses in opposite alphabetical order, second -- by doctors in opposite alphabetical order

When we apply a filter to a datatable, the records that do not meet filter criteria are ...

- deleted
- hidden
- copied to separate sheet
- highlighted
- removed without the possibility of their recovery
- moved to separate sheet

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Reaves	Psoriasis	8	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Murray	Psoriasis	41	Doyle
Downson	Psoriasis	50	Bulgakov
Baker	Neurodermatitis	13	Bulgakov
Abrahamson	Neurodermatitis	21	Doyle
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Beeshop	Neurodermatitis	44	Bulgakov
Pepper	Neurodermatitis	49	Checkhoff
Trueman	Lupus Erythematosus	5	Bulgakov
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Smith	Lupus Erythematosus	31	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Aweson	Lupus Erythematosus	48	Checkhoff
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Draiper	Eczema	3	Bulgakov
Pollack	Eczema	5	Doyle
Oldman	Eczema	14	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Young	Eczema	22	Bulgakov
Maddison	Eczema	28	Bulgakov
Tailor	Eczema	39	Doyle
Robbinson	Eczema	48	Checkhoff

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- first -- by diagnoses in opposite alphabetical order, second -- by days of treatment ascending
- first -- by diagnoses in opposite alphabetical order, second -- by doctors alphabetically
- first -- by diagnoses alphabetically, second -- by days of treatment ascending
- first -- by diagnoses in opposite alphabetical order, second -- by days of treatment descending
- first -- by days of treatment ascending, second -- by diagnoses in opposite alphabetical order
- first -- by patients alphabetically, second -- by diagnoses in opposite alphabetical order
- first -- by diagnoses in opposite alphabetical order, second -- by patients alphabetically

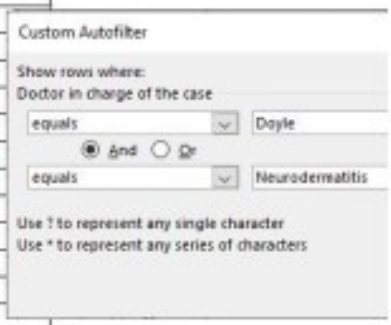
Highlighting with different cell background or font color those records or values in a datatable that meet certain criteria, is named ...

- sorting
- filtering
- visualizing
- approximation
- data exploration
- correlation
- outliers detection
- sampling
- data normalization
- conditional formatting

Showing only those records in a datatable that meet certain criteria, is named ...

- ○ sorting
- ○ visualizing
- ○ data exploration
- ○ outliers detection
- ○ data normalization
- ○ filtering
- ○ approximation
- ○ correlation
- ○ sampling
- ○ conditional formatting

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

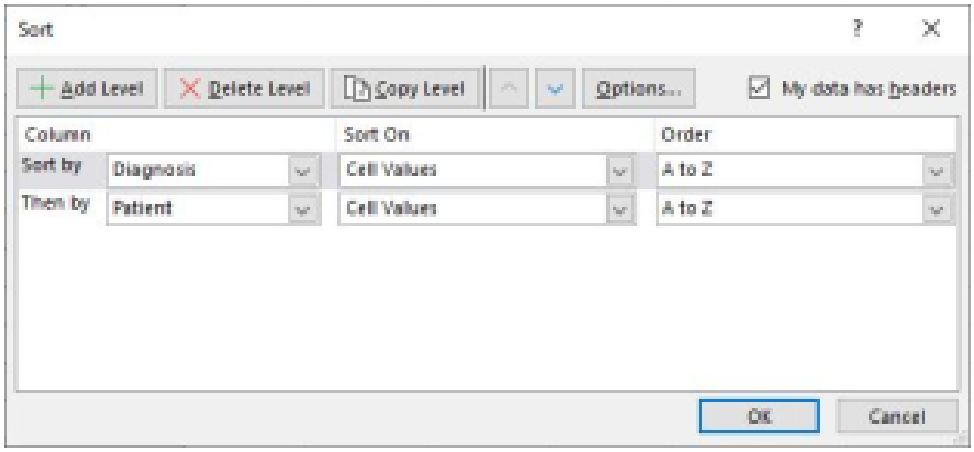
- ○ patients of Dr. Doyle suffering from neurodermatitis
- ○ all patients suffering from neurodermatitis, and all Dr. Doyle's patients
- ○ all the records remain
- ○ none of the records remain, because these filtering conditions are incompatible
- ○ all patients suffering from neurodermatitis
- ○ all Dr. Doyle's patients
- ○ none of the records remain, because in this table there are no Dr. Doyle's patients suffering from neurodermatitis

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Young	Eczema	22	Bulgakov
Tailor	Eczema	39	Doyle
Robbinson	Eczema	48	Checkhoff
Pollack	Eczema	5	Doyle
Oldman	Eczema	14	Bulgakov
Maddison	Eczema	28	Bulgakov
Draiper	Eczema	3	Bulgakov
Brithman	Eczema	19	Doyle
Agresti	Eczema	16	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Smith	Lupus Erythematosus	31	Doyle
Oppenheim	Lupus Erythematosus	49	Checkhoff
Jameson	Lupus Erythematosus	32	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Cooper	Lupus Erythematosus	13	Doyle
Aweson	Lupus Erythematosus	48	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Collins	Neurodermatitis	43	Checkhoff
Carter	Neurodermatitis	41	Doyle
Beeshop	Neurodermatitis	44	Bulgakov
Baker	Neurodermatitis	13	Bulgakov
Abrahamson	Neurodermatitis	21	Doyle
Zielbermann	Psoriasis	25	Doyle
Willis	Psoriasis	25	Bulgakov
Reaves	Psoriasis	8	Bulgakov
Murray	Psoriasis	41	Doyle
Eastbrook	Psoriasis	11	Doyle
Downson	Psoriasis	50	Bulgakov

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- first – by diagnoses alphabetically, second – by days of treatment ascending
- first – by diagnoses alphabetically, second – by doctors alphabetically
- first – by diagnoses alphabetically, second – by days of treatment descending
- first – by diagnoses alphabetically, second – by patients in opposite alphabetical order
- first – by diagnoses alphabetically, second – by patients alphabetically
- first – by patients in opposite alphabetical order, second – by diagnoses alphabetically
- first – by patients in opposite alphabetical order, second – by days of treatment ascending



Which of the tables satisfy the sort criteria shown in the picture?

○

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brittenson	Arthritis	61
Cooper	Arthritis	87
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	34
Willis	Bronchitis	57
Agnotti	Tuberculosis	42
Awenson	Tuberculosis	20
Dawnson	Tuberculosis	36
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	85
Young	Tuberculosis	30

○

Patient	Diagnosis	Duration of Treatment (days)
Jameson	Arthritis	80
Baker	Arthritis	70
Cooper	Arthritis	87
Brittenson	Arthritis	61
Eastbrook	Arthritis	55
Pepper	Arthritis	9
Oldman	Bronchitis	57
Willis	Bronchitis	57
Draiper	Bronchitis	44
Smith	Bronchitis	34
Trueman	Tuberculosis	85
Dawnson	Tuberculosis	36
Agnotti	Tuberculosis	42
Young	Tuberculosis	30
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Awenson	Tuberculosis	20

○

Patient	Diagnosis	Duration of Treatment (days)
Trueman	Tuberculosis	85
Jameson	Arthritis	80
Dawnson	Tuberculosis	36
Baker	Arthritis	70
Cooper	Arthritis	87
Brittenson	Arthritis	61
Oldman	Bronchitis	57
Willis	Bronchitis	57
Eastbrook	Arthritis	55
Draiper	Bronchitis	44
Agnotti	Tuberculosis	42
Young	Tuberculosis	30
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Awenson	Tuberculosis	20
Smith	Bronchitis	34
Pepper	Arthritis	9

○ none of these tables

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- ○ first -- by diagnoses alphabetically, second -- by days of treatment descending
- ○ first -- by diagnoses in opposite alphabetical order, second -- by doctors alphabetically
- ○ first -- by diagnoses in opposite alphabetical order, second -- by days of treatment descending
- ○ first -- by diagnoses in opposite alphabetical order, second -- by patients in opposite alphabetical order
- ○ first -- by diagnoses in opposite alphabetical order, second -- by patients alphabetically
- ○ first -- by patients alphabetically, second -- by diagnoses in opposite alphabetical order
- ○ first -- by days of treatment descending, second -- by diagnoses in opposite alphabetical order

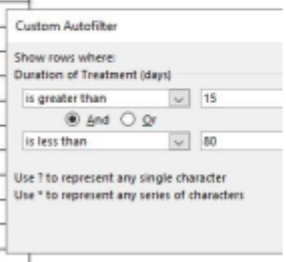
Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Young	Eczema	22	Bulgakov
Robbinson	Eczema	48	Checkhoff
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Pollack	Eczema	5	Doyle
Tailor	Eczema	39	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Aweson	Lupus Erythematosus	48	Checkhoff
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Smith	Lupus Erythematosus	31	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Abrahamson	Neurodermatitis	21	Doyle
Carter	Neurodermatitis	41	Doyle
Downson	Psoriasis	50	Bulgakov
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Zielbermann	Psoriasis	25	Doyle

The sorting by two keys was applied to the table shown in the picture.

Which sorting criteria were used?

- first -- by diagnoses alphabetically, second -- by days of treatment ascending
- first -- by diagnoses alphabetically, second -- by doctors alphabetically
- first -- by diagnoses alphabetically, second -- by patients alphabetically
- first -- by diagnoses alphabetically, second -- by patients in opposite alphabetical order
- first -- by diagnoses alphabetically, second -- by doctors in opposite alphabetical order
- first -- by doctors alphabetically, second -- by diagnoses alphabetically
- first -- by doctors alphabetically, second -- by days of treatment ascending

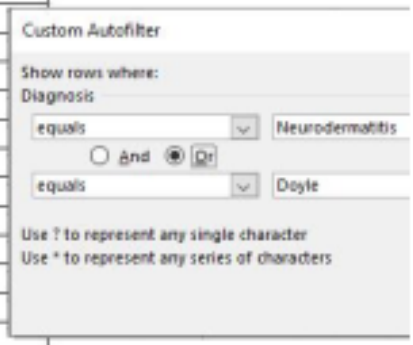
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

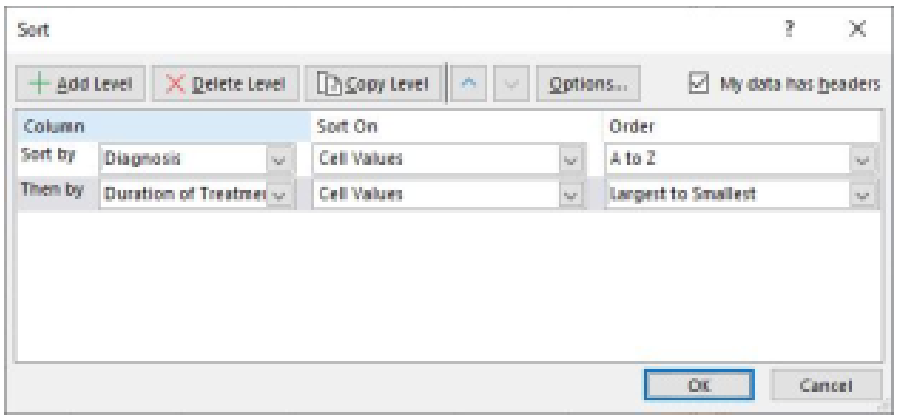
- patients, whose treatment lasts more than 15 days but less than 80 days
- patients, whose treatment lasts less than 15 days, and patients, whose treatment lasts longer than 80 days
- all the records remain, because any duration of treatment will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- patients, whose treatment lasts no longer than 15 days, and patients, whose treatment lasts 80 days or less
- all the records remain, because in this table all the records fit to these conditions

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients of Dr. Doyle suffering from neurodermatitis
- all patients suffering from neurodermatitis, and all Dr. Doyle's patients
- all the records remain
- none of the records remain, because these filtering conditions are incompatible
- all patients suffering from neurodermatitis
- all Dr. Doyle's patients
- none of the records remain, because in this table there are no Dr. Doyle's patients suffering from neurodermatitis



Which of the tables satisfy the sort criteria shown in the picture?

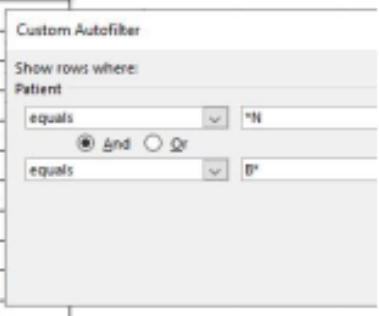
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brittenson	Arthritis	81
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jamesson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	34
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aveeson	Tuberculosis	20
Dawnson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	86
Young	Tuberculosis	36

Patient	Diagnosis	Duration of Treatment (days)
Jamesson	Arthritis	80
Baker	Arthritis	70
Cooper	Arthritis	67
Brittenson	Arthritis	81
Eastbrook	Arthritis	55
Pepper	Arthritis	9
Oldman	Bronchitis	57
Willis	Bronchitis	57
Draiper	Bronchitis	44
Smith	Bronchitis	34
Trueman	Tuberculosis	86
Dawnson	Tuberculosis	76
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Aveeson	Tuberculosis	20

Patient	Diagnosis	Duration of Treatment (days)
Trueman	Tuberculosis	86
Jamesson	Arthritis	80
Dawnson	Tuberculosis	76
Baker	Arthritis	70
Cooper	Arthritis	67
Brittenson	Arthritis	81
Oldman	Bronchitis	57
Willis	Bronchitis	57
Eastbrook	Arthritis	55
Draiper	Bronchitis	44
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Aveeson	Tuberculosis	20
Smith	Bronchitis	34
Pepper	Arthritis	9

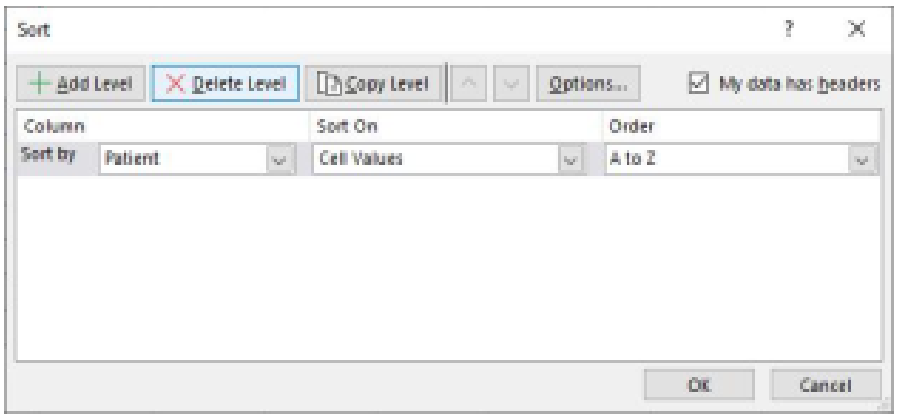
none of these tables

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose names begin with the letter N, and patients, whose names begin with the letter B
- patients, whose names begin with the letter B and end with the letter N
- all the records remain, because any patient's name will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- patients, who have codes *N instead of their full names, and patients, who have codes B* instead of their full names
- patients, whose names contain the letters N and B at the same time
- patients, whose names contain the letter N, and patients, whose names contain the letter B
- patients, whose names begin with the letter N and end with the letter B
- patients, whose names end with the letter N, and patients, whose names end with the letter B



Which of the tables satisfy the sort criteria shown in the picture?

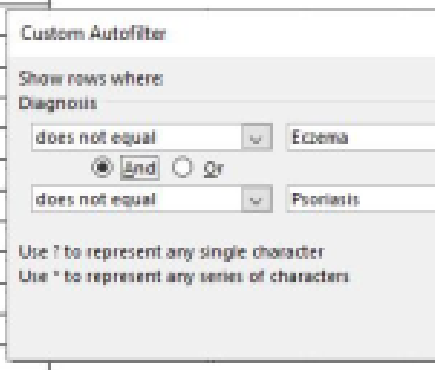
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brittenson	Arthritis	61
Cooper	Arthritis	87
Eastbrook	Arthritis	55
Jamesson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	54
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Axenson	Tuberculosis	20
Dowinson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	85
Young	Tuberculosis	36

Patient	Diagnosis	Duration of Treatment (days)
Jamesson	Arthritis	80
Baker	Arthritis	70
Cooper	Arthritis	87
Brittenson	Arthritis	61
Eastbrook	Arthritis	55
Pepper	Arthritis	9
Oldman	Bronchitis	57
Willis	Bronchitis	57
Draiper	Bronchitis	44
Smith	Bronchitis	54
Trueman	Tuberculosis	85
Dowinson	Tuberculosis	76
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Axenson	Tuberculosis	20

Patient	Diagnosis	Duration of Treatment (days)
Trueman	Tuberculosis	85
Jamesson	Arthritis	80
Dowinson	Tuberculosis	76
Baker	Arthritis	70
Cooper	Arthritis	87
Brittenson	Arthritis	61
Oldman	Bronchitis	57
Willis	Bronchitis	57
Eastbrook	Arthritis	55
Draiper	Bronchitis	44
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Axenson	Tuberculosis	20
Smith	Bronchitis	54
Pepper	Arthritis	9

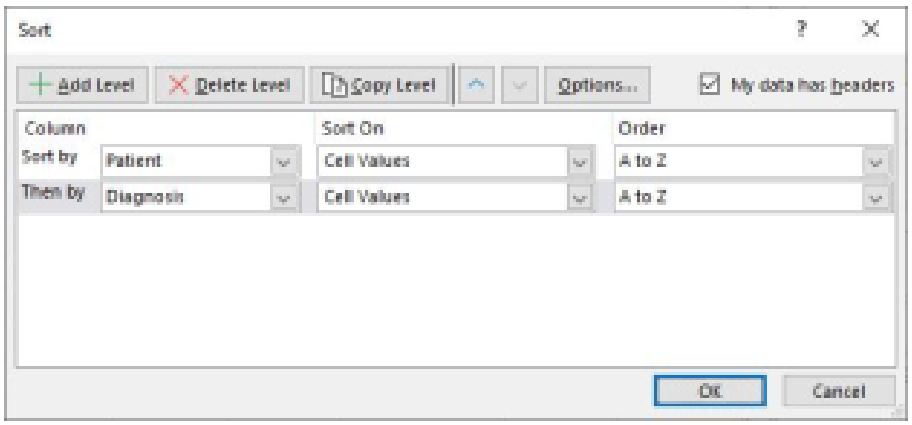
- none of these tables

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from any diseases except eczema
- patients suffering from eczema and psoriasis at the same time
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- all the records remain, because in this table all the records fit to these conditions
- patients suffering neither from psoriasis nor from eczema
- patients suffering from any diseases except psoriasis



Which of the tables satisfy the sort criteria shown in the picture?

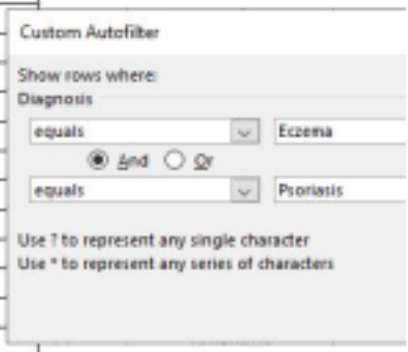
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brittenson	Arthritis	61
Cooper	Arthritis	87
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	34
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Axenson	Tuberculosis	20
Dowinson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	85
Young	Tuberculosis	36

Patient	Diagnosis	Duration of Treatment (days)
Jameson	Arthritis	80
Baker	Arthritis	70
Cooper	Arthritis	87
Brittenson	Arthritis	61
Eastbrook	Arthritis	55
Pepper	Arthritis	9
Oldman	Bronchitis	57
Willis	Bronchitis	57
Draiper	Bronchitis	44
Smith	Bronchitis	34
Trueman	Tuberculosis	85
Dowinson	Tuberculosis	76
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Axenson	Tuberculosis	20

Patient	Diagnosis	Duration of Treatment (days)
Trueman	Tuberculosis	85
Jameson	Arthritis	80
Dowinson	Tuberculosis	76
Baker	Arthritis	70
Cooper	Arthritis	87
Brittenson	Arthritis	61
Oldman	Bronchitis	57
Willis	Bronchitis	57
Eastbrook	Arthritis	55
Draiper	Bronchitis	44
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Axenson	Tuberculosis	20
Smith	Bronchitis	34
Pepper	Arthritis	9

none of these tables

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from eczema, and patients suffering from psoriasis
- patients suffering from eczema and psoriasis at the same time
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- all the records remain, because in this table all the records fit to these conditions
- patients suffering neither from psoriasis nor from eczema

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov

From the table shown in the picture, you need to select the records about the patients whose treatment lasts longer than a year but not longer than 4 years.

Which conditions for advanced filter you should use?

○

Duration of Treatment (months)	Duration of Treatment (months)
>1	<=4

○

Duration of Treatment (months)	Duration of Treatment (months)
>12	<=48

○

Duration of Treatment (months)
>12
<=48

○

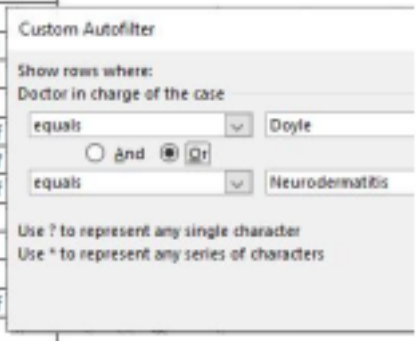
Duration of Treatment (months)
<12
>=48

○

Duration of Treatment (months)	Duration of Treatment (months)
>=12	<48

○ none of these (other)

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients of Dr. Doyle suffering from neurodermatitis
- all patients suffering from neurodermatitis, and all Dr. Doyle's patients
- all the records remain
- none of the records remain, because these filtering conditions are incompatible
- all patients suffering from neurodermatitis
- all Dr. Doyle's patients
- none of the records remain, because in this table there are no Dr. Doyle's patients suffering from neurodermatitis

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov

From the table shown in the picture, you need to select the records about Dr. Doyle's patients whose treatment lasts for a year or longer.

Which conditions for advanced filter you should use?

○

Doctor in charge of the case	Duration of Treatment (months)
Doyle	>=12

○

Doctor in charge of the case	Duration of Treatment (months)
Doyle	>12

○

Doctor in charge of the case	Duration of Treatment (months)
Doyle	
	>=12

○

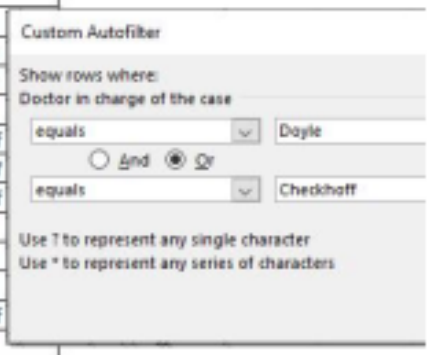
Doctor in charge of the case	Duration of Treatment (months)
Dr. Doyle	>=12

○

Doctor in charge of the case	Duration of Treatment (months)
Doyle	>=1 year

○ none of these (other)

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients of Dr. Doyle, and patients of Dr. Checkhoff
- Dr. Checkhoff's patients only
- all the records remain, because any patient will fit these conditions
- none of the records remain, because these filtering conditions are incompatible
- Dr. Doyle's patients only
- none of the records remain, because both doctors' names are spelled incorrectly

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov

From the table shown in the picture, you need to select the records about patients suffering from neurodermatitis and eczema.

Which conditions for advanced filter you should use?

○

Patient	Diagnosis
Eczema	Eczema
Neurodermatitis	Neurodermatitis

○

Diagnosis
Eczema
Neurodermatitis

○

Patient	Diagnosis
Eczema	Neurodermatitis

○

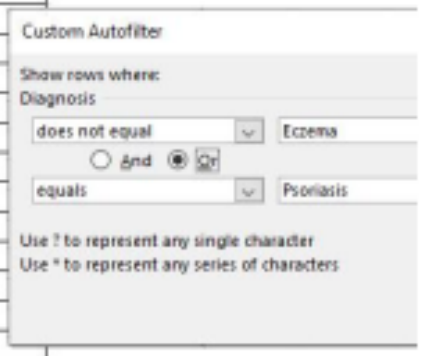
Diagnosis	Diagnosis
Eczema	Neurodermatitis

○

Diagnosis
<>Psoriasis

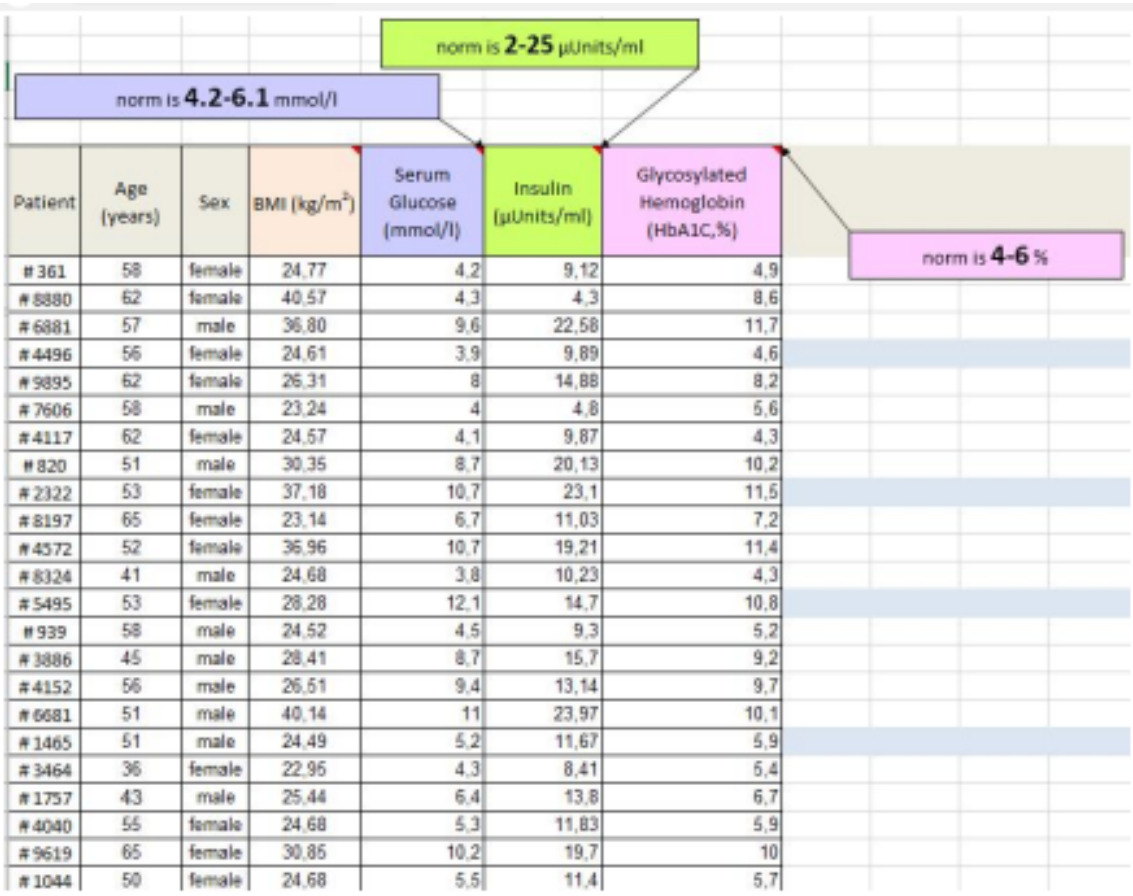
○ none of these (other)

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from any diseases except eczema
- patients suffering from eczema and psoriasis at the same time
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- all the records remain, because in this table all the records fit to these conditions
- patients suffering neither from psoriasis nor from eczema
- patients suffering from psoriasis only



Patient	Age (years)	Sex	BMI (kg/m^2)	Serum Glucose (mmol/l)	Insulin (µUnits/ml)	Glycosylated Hemoglobin (HbA1C,%)
# 361	58	female	24,77	4,2	9,12	4,9
# 8880	62	female	40,57	4,3	4,3	8,6
# 6881	57	male	36,80	9,6	22,58	11,7
# 4496	56	female	24,61	3,9	9,89	4,6
# 9895	62	female	26,31	8	14,88	8,2
# 7606	58	male	23,24	4	4,8	5,6
# 4117	62	female	24,57	4,1	9,87	4,3
# 820	51	male	30,35	8,7	20,13	10,2
# 2322	53	female	37,18	10,7	23,1	11,5
# 8197	65	female	23,14	6,7	11,03	7,2
# 4572	52	female	36,96	10,7	19,21	11,4
# 8324	41	male	24,68	3,8	10,23	4,3
# 5495	53	female	28,28	12,1	14,7	10,8
# 939	58	male	24,52	4,5	9,3	5,2
# 3886	45	male	28,41	8,7	15,7	9,2
# 4152	56	male	26,51	9,4	13,14	9,7
# 6681	51	male	40,14	11	23,97	10,1
# 1465	51	male	24,49	5,2	11,67	5,9
# 3464	36	female	22,95	4,3	8,41	5,4
# 1757	43	male	25,44	6,4	13,8	6,7
# 4040	55	female	24,68	5,3	11,83	5,9
# 9619	65	female	30,85	10,2	19,7	10
# 1044	50	female	24,68	5,5	11,4	5,7

From the table shown in the picture, you need to select the records about women older than 50 but younger than 60 years.

Which conditions for advanced filter you should use?

○

Age (years)	Sex
>60	female
<50	

○

Age (years)	Sex
<60	female
>50	female

○

Age (years)	Age (years)	Sex
>50	<60	female

○

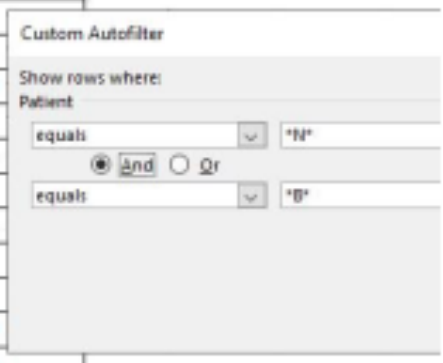
Sex	Age (years)	Age (years)
female	>=50	<=60

○

Sex	Age (years)	Age (years)
	>=50	<=60
female		

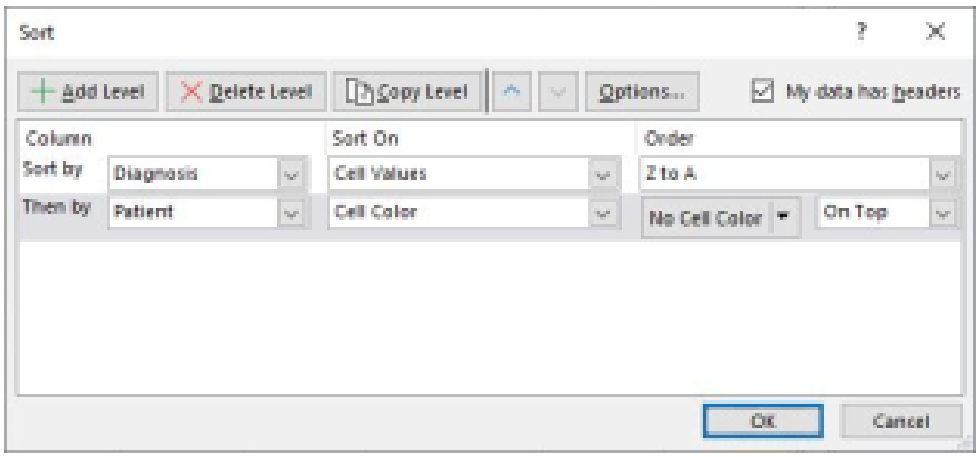
○ none of these (other)

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose names begin with the letter N, and patients, whose names begin with the letter B
- patients, whose names begin with the letter B and end with the letter N
- all the records remain, because any patient's name will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- patients, who have codes N* instead of their full names, and patients, who have codes B* instead of their full names
- patients, whose names contain the letters N and B at the same time
- patients, whose names contain the letter N, and patients, whose names contain the letter B
- patients, whose names begin with the letter N and end with the letter B
- patients, whose names end with the letter N, and patients, whose names end with the letter B



Which of the tables satisfy the sort criteria shown in the picture?

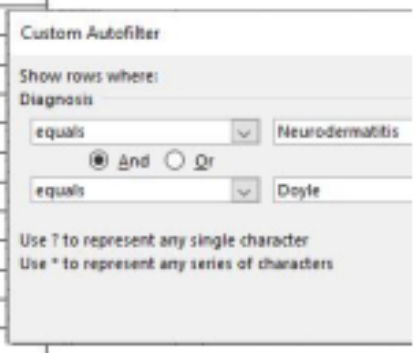
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brittinian	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jamesjon	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	34
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aveson	Tuberculosis	20
Dawnson	Tuberculosis	36
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	85
Young	Tuberculosis	36

Patient	Diagnosis	Duration of Treatment (days)
Aveson	Arthritis	80
Baker	Arthritis	70
Cooper	Arthritis	67
Brittinian	Arthritis	61
Eastbrook	Arthritis	55
Pepper	Arthritis	9
Oldman	Bronchitis	57
Willis	Bronchitis	57
Draiper	Bronchitis	44
Smith	Bronchitis	34
Trueman	Tuberculosis	85
Dawnson	Tuberculosis	36
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Aveson	Tuberculosis	20

Patient	Diagnosis	Duration of Treatment (days)
Trueman	Tuberculosis	85
Aveson	Arthritis	80
Dawnson	Tuberculosis	36
Baker	Arthritis	70
Cooper	Arthritis	67
Brittinian	Arthritis	61
Oldman	Bronchitis	57
Willis	Bronchitis	57
Eastbrook	Arthritis	55
Draiper	Bronchitis	44
Agresti	Tuberculosis	42
Young	Tuberculosis	36
Robbinson	Tuberculosis	33
Maddison	Tuberculosis	29
Aveson	Tuberculosis	20
Smith	Bronchitis	34
Pepper	Arthritis	9

none of these tables

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients of Dr. Doyle suffering from neurodermatitis
- all patients suffering from neurodermatitis, and all Dr. Doyle's patients
- all the records remain
- none of the records remain, because these filtering conditions are incompatible
- all patients suffering from neurodermatitis
- all Dr. Doyle's patients
- none of the records remain, because in this table there are no Dr. Doyle's patients suffering from neurodermatitis

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov

From the table shown in the picture, you need to select the records about patients suffering from psoriasis and neurodermatitis whose treatment lasts longer than two years.

Which conditions for advanced filter you should use?

○

Diagnosis	Diagnosis	Duration of Treatment (months)
Psoriasis	Neurodermatitis	>2

○

Diagnosis	Duration of Treatment (months)
Psoriasis	>2
Neurodermatitis	

○

Diagnosis	Duration of Treatment (months)
Neurodermatitis	>24
Psoriasis	

○

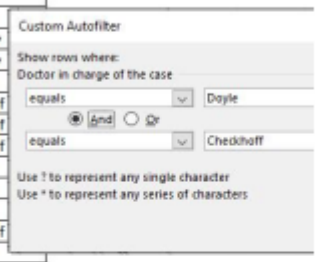
Diagnosis	Duration of Treatment (months)
Neurodermatitis	>24
Psoriasis	>24

○

Diagnosis	Duration of Treatment (months)	Diagnosis	Duration of Treatment (months)
Neurodermatitis	>24	Psoriasis	>24

○ none of these (other)

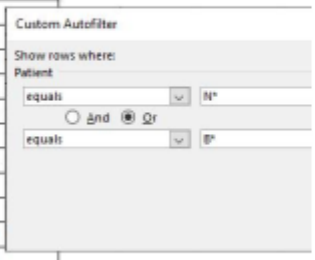
Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients of Dr. Doyle, and patients of Dr. Checkhoff
- Dr. Checkhoff's patients only
- all the records remain, because any patient will fit these conditions
- none of the records remain, because these filtering conditions are incompatible
- Dr. Doyle's patients only
- none of the records remain, because both doctors' names are spelled incorrectly

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose names begin with the letter N, and patients, whose names begin with the letter B
- patients, whose names begin with the letter B and end with the letter N
- all the records remain, because any patient's name will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- patients, who have codes N* instead of their full names, and patients, who have codes B* instead of their full names
- patients, whose names contain the letters N and B at the same time
- patients, whose names contain the letter N, and patients, whose names contain the letter B
- patients, whose names begin with the letter N and end with the letter B
- patients, whose names end with the letter N, and patients, whose names end with the letter B

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov

From the table shown in the picture, you need to select the records about patients suffering from eczema treated by doctors Checkhoff and Bulgakov.

Which conditions for advanced filter you should use?

○

Diagnosis	Doctor in charge of the case
Eczema	Checkhoff
	Bulgakov

○

Diagnosis	Doctor in charge of the case
Eczema	Checkhoff
Eczema	Bulgakov

○

Diagnosis	Doctor in charge of the case
Eczema	Checkhoff, Bulgakov

○

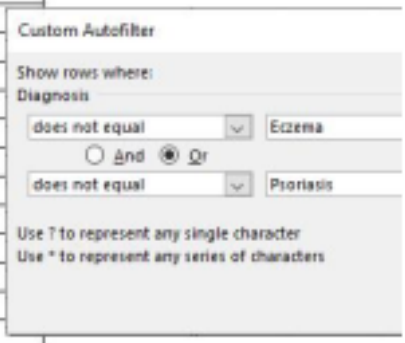
Diagnosis	Doctor in charge of the case
Eczema	
	Checkhoff
	Bulgakov

○

Eczema	Checkhoff	Bulgakov

○ none of these (other)

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from any diseases except eczema
- patients suffering from eczema and psoriasis at the same time
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- all the records remain, because in this table all the records fit to these conditions
- patients suffering neither from psoriasis nor from eczema
- patients suffering from any diseases except psoriasis

Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willlis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov

From the table shown in the picture, you need to select the records about Dr. Doyle's patients suffering from psoriasis and lupus erythematosus.

Which conditions for advanced filter you should use?

○

Doctor in charge of the case	Diagnosis
Dr. Doyle	Psoriasis
	Lupus Erythematosus

○

Doctor in charge of the case	Diagnosis
Doyle	Psoriasis
Doyle	Lupus Erythematosus

○

Doctor in charge of the case	Diagnosis	Diagnosis
Doyle	Psoriasis	Lupus Erythematosus

○

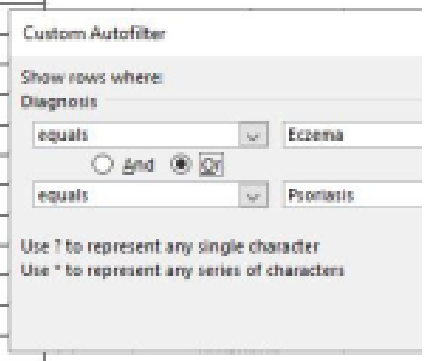
Doctor in charge of the case	Diagnoses
Doyle	Psoriasis
	Lupus Erythematosus

○

Diagnosis	Doctor in charge of the case
Psoriasis	
Lupus Erythematosus	
	Doyle

○ none of these (other)

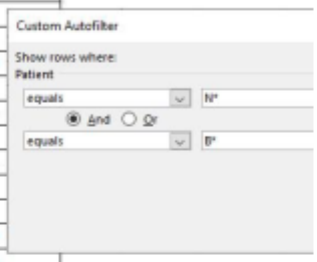
Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from eczema, and patients suffering from psoriasis
- patients suffering from eczema and psoriasis at the same time
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- all the records remain, because in this table all the records fit to these conditions
- patients suffering neither from psoriasis nor from eczema

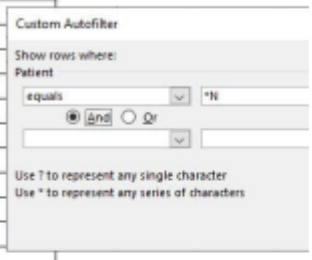
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

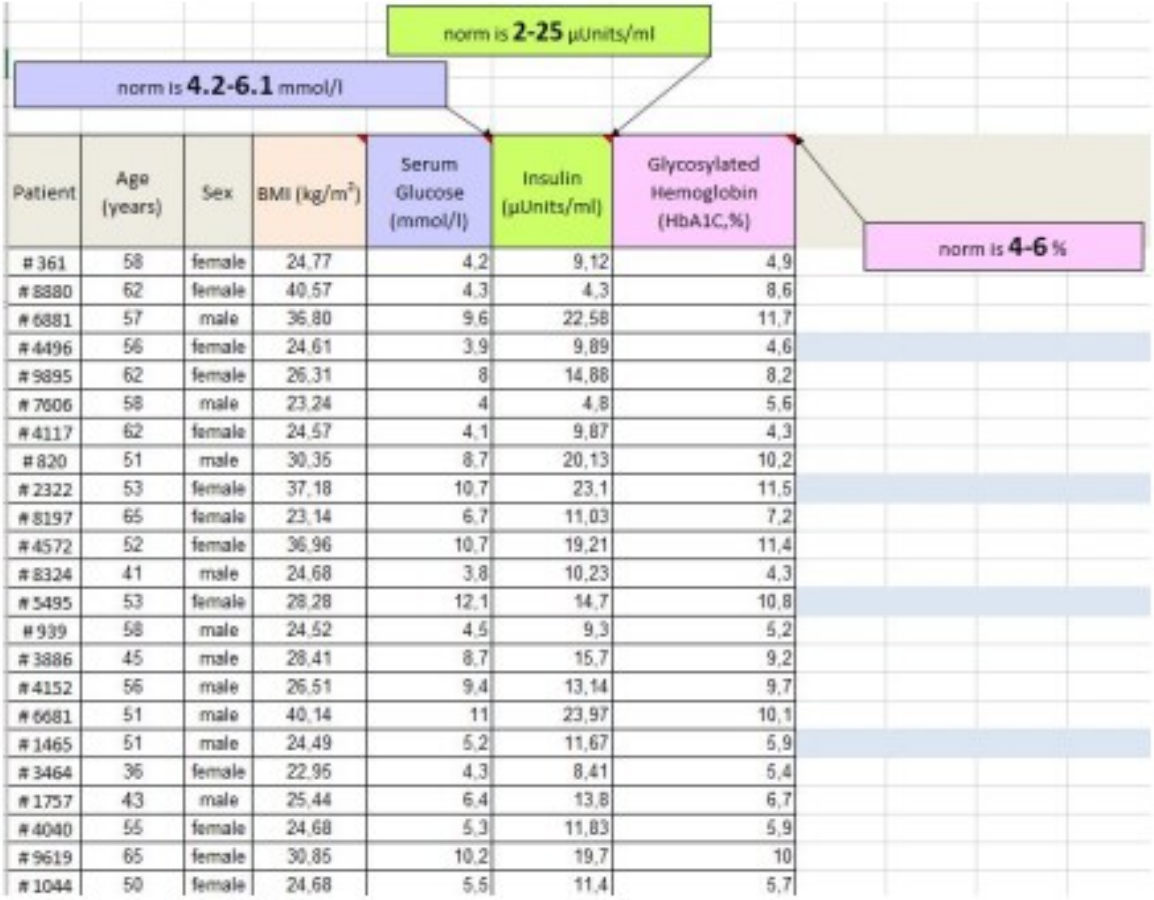
- patients, whose names begin with the letter N, and patients, whose names begin with the letter B
- patients, whose names begin with the letter B and end with the letter N
- all the records remain, because any patient's name will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- patients, who have codes N* instead of their full names, and patients, who have codes B* instead of their full names
- patients, whose names contain the letters N and B at the same time
- patients, whose names contain the letter N, and patients, whose names contain the letter B
- patients, whose names begin with the letter N and end with the letter B
- patients, whose names end with the letter N, and patients, whose names end with the letter B

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose names begin with the letter N
- patients, whose names end with the letter N
- all the records remain, because any patient's name will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- patients, who have codes *N instead of their full names
- patients, whose names contain the letter N
- patients, whose names begin with the symbol *



Patient	Age (years)	Sex	BMI (kg/m^2)	Serum Glucose (mmol/l)	Insulin (µUnits/ml)	Glycosylated Hemoglobin (HbA1C,%)
# 361	58	female	24,77	4,2	9,12	4,9
# 8880	62	female	40,57	4,3	4,3	8,6
# 6881	57	male	36,80	9,6	22,58	11,7
# 4496	56	female	24,61	3,9	9,89	4,6
# 9895	62	female	26,31	8	14,86	8,2
# 7606	58	male	23,24	4	4,8	5,6
# 4117	62	female	24,57	4,1	9,87	4,3
# 820	51	male	30,35	8,7	20,13	10,2
# 2322	53	female	37,18	10,7	23,1	11,5
# 8197	65	female	23,14	6,7	11,03	7,2
# 4572	52	female	36,96	10,7	19,21	11,4
# 8324	41	male	24,68	3,8	10,23	4,3
# 5495	53	female	28,28	12,1	14,7	10,8
# 939	58	male	24,52	4,5	9,3	5,2
# 3886	45	male	28,41	8,7	15,7	9,2
# 4152	56	male	26,51	9,4	13,14	9,7
# 6681	51	male	40,14	11	23,97	10,1
# 1465	51	male	24,49	5,2	11,67	5,9
# 3464	36	female	22,95	4,3	8,41	5,4
# 1757	43	male	25,44	6,4	13,8	6,7
# 4040	55	female	24,68	5,3	11,83	5,9
# 9619	65	female	30,85	10,2	19,7	10
# 1044	50	female	24,68	5,5	11,4	5,7

From the table shown in the picture, you need to select the records about patients with abnormal glucose level in blood serum.

Which conditions for advanced filter you should use?

○

Patient	Serum Glucose (mmol/l)
#*	<4,2
	>6,1

○

Patient	Serum Glucose (mmol/l)
#*	>=4,2
#*	<=6,1

○

Serum Glucose (mmol/l)	Serum Glucose (mmol/l)
>=4,2	<=6,1

○

Serum Glucose (mmol/l)	Serum Glucose (mmol/l)
<4,2	>6,1

○

Patient	Serum Glucose (mmol/l)
	<>norm

○

Patient	Serum Glucose (mmol/l)
	abnormal

○

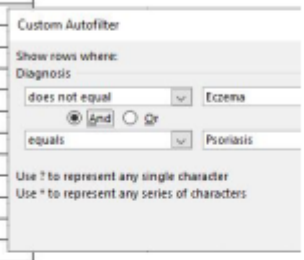
Serum Glucose (mmol/l)	Serum Glucose (mmol/l)
increased	decreased

○

Serum Glucose (mmol/l)
increased
decreased

○ none of these (other)

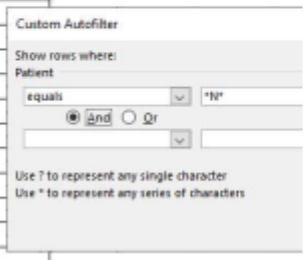
Patient	Diagnosis	Duration of Treatment (months)	Doctor in charge of the case
Downson	Psoriasis	50	Bulgakov
Eastbrook	Psoriasis	11	Doyle
Murray	Psoriasis	41	Doyle
Reaves	Psoriasis	8	Bulgakov
Willis	Psoriasis	25	Bulgakov
Zielbermann	Psoriasis	25	Doyle
Abrahamson	Neurodermatitis	21	Doyle
Baker	Neurodermatitis	13	Bulgakov
Beeshop	Neurodermatitis	44	Bulgakov
Carter	Neurodermatitis	41	Doyle
Collins	Neurodermatitis	43	Checkhoff
Pepper	Neurodermatitis	49	Checkhoff
Aweson	Lupus Erythematosus	48	Checkhoff
Cooper	Lupus Erythematosus	13	Doyle
Jackson	Lupus Erythematosus	20	Doyle
Jameson	Lupus Erythematosus	32	Doyle
Oppenhaim	Lupus Erythematosus	49	Checkhoff
Smith	Lupus Erythematosus	31	Doyle
Trueman	Lupus Erythematosus	5	Bulgakov
Agresti	Eczema	16	Doyle
Brithman	Eczema	19	Doyle
Draiper	Eczema	3	Bulgakov
Maddison	Eczema	28	Bulgakov
Oldman	Eczema	14	Bulgakov
Pollack	Eczema	5	Doyle
Robbinson	Eczema	48	Checkhoff
Tailor	Eczema	39	Doyle
Young	Eczema	22	Bulgakov



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from any diseases except eczema
- patients suffering from eczema and psoriasis at the same time
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- all the records remain, because in this table all the records fit to these conditions
- patients suffering neither from psoriasis nor from eczema
- patients suffering from psoriasis only

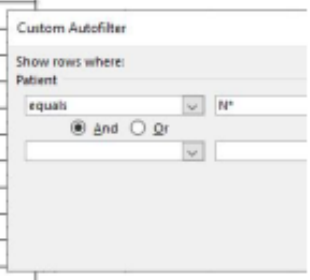
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose names begin with the letter N
- patients, whose names end with the letter N
- all the records remain, because any patient's name will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- patients, who have codes *N* instead of their full names
- patients, whose names contain the letter N
- patients, whose names begin and end with the symbol *

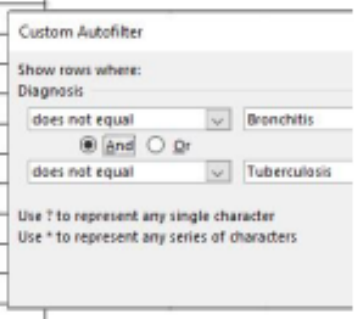
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Dralper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose names begin with the letter N
- patients, whose names end with the letter N
- all the records remain, because any patient's name will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- patients, who have codes N* instead of their full names
- patients, whose names contain the letter N
- patients, whose names end with the symbol *

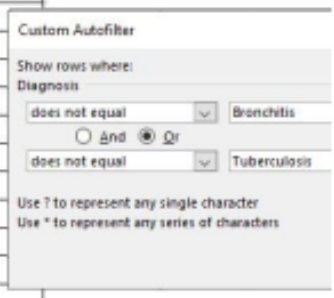
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Dralper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from bronchitis, and patients suffering from tuberculosis
- patients suffering from bronchitis and tuberculosis at the same time
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- all the records remain, because in this table all the records fit to these conditions
- patients suffering neither from bronchitis nor from tuberculosis

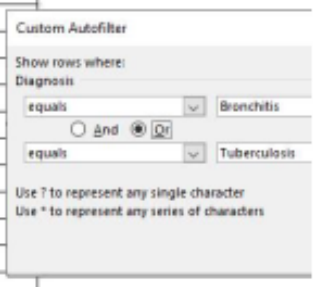
Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Dralper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from bronchitis, and patients suffering from tuberculosis
- patients suffering neither from bronchitis nor from tuberculosis
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- patients suffering from bronchitis and tuberculosis at the same time
- all the records remain, because in this table all the records fit to these conditions

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Dralper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering from bronchitis, and patients suffering from tuberculosis
- patients suffering from bronchitis and tuberculosis at the same time
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- patients suffering neither from bronchitis nor from tuberculosis
- all the records remain, because in this table all the records fit to these conditions

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
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Cooper	Arthritis	67
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Draiper	Bronchitis	44
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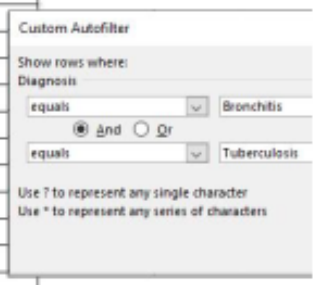
Aweson	Tuberculosis	20
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients suffering neither from bronchitis nor from tuberculosis
- patients suffering from bronchitis, and patients suffering from tuberculosis
- all the records remain, because any diagnosis will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- patients suffering from bronchitis and tuberculosis at the same time
- all the records remain, because in this table all the records fit to these conditions

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
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Agresti	Tuberculosis	42
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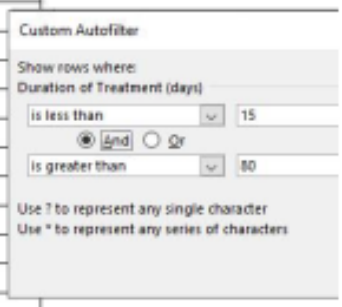
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose treatment lasts more than 15 days but less than 80 days
- patients, whose treatment lasts less than 15 days, and patients, whose treatment lasts longer than 80 days
- all the records remain, because any duration of treatment will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- patients, whose treatment lasts no longer than 15 days, and patients, whose treatment lasts 80 days or less
- all the records remain, because in this table all the records fit to these conditions

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
Jameson	Arthritis	80
Pepper	Arthritis	9
Draiper	Bronchitis	44
Oldman	Bronchitis	57
Smith	Bronchitis	14
Willis	Bronchitis	57
Agresti	Tuberculosis	42
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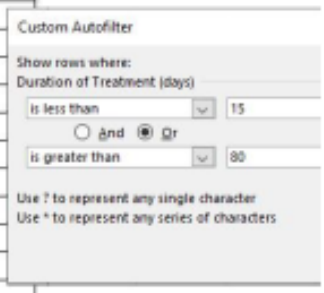
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose treatment lasts more than 15 days but less than 80 days
- patients, whose treatment lasts less than 15 days, and patients, whose treatment lasts longer than 80 days
- all the records remain, because any duration of treatment will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- patients, whose treatment lasts no longer than 15 days, and patients, whose treatment lasts 80 days or less
- all the records remain, because in this table all the records fit to these conditions

Patient	Diagnosis	Duration of Treatment (days)
Baker	Arthritis	70
Brithman	Arthritis	61
Cooper	Arthritis	67
Eastbrook	Arthritis	55
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Willis	Bronchitis	57
Agresti	Tuberculosis	42
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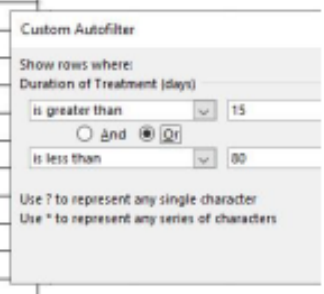
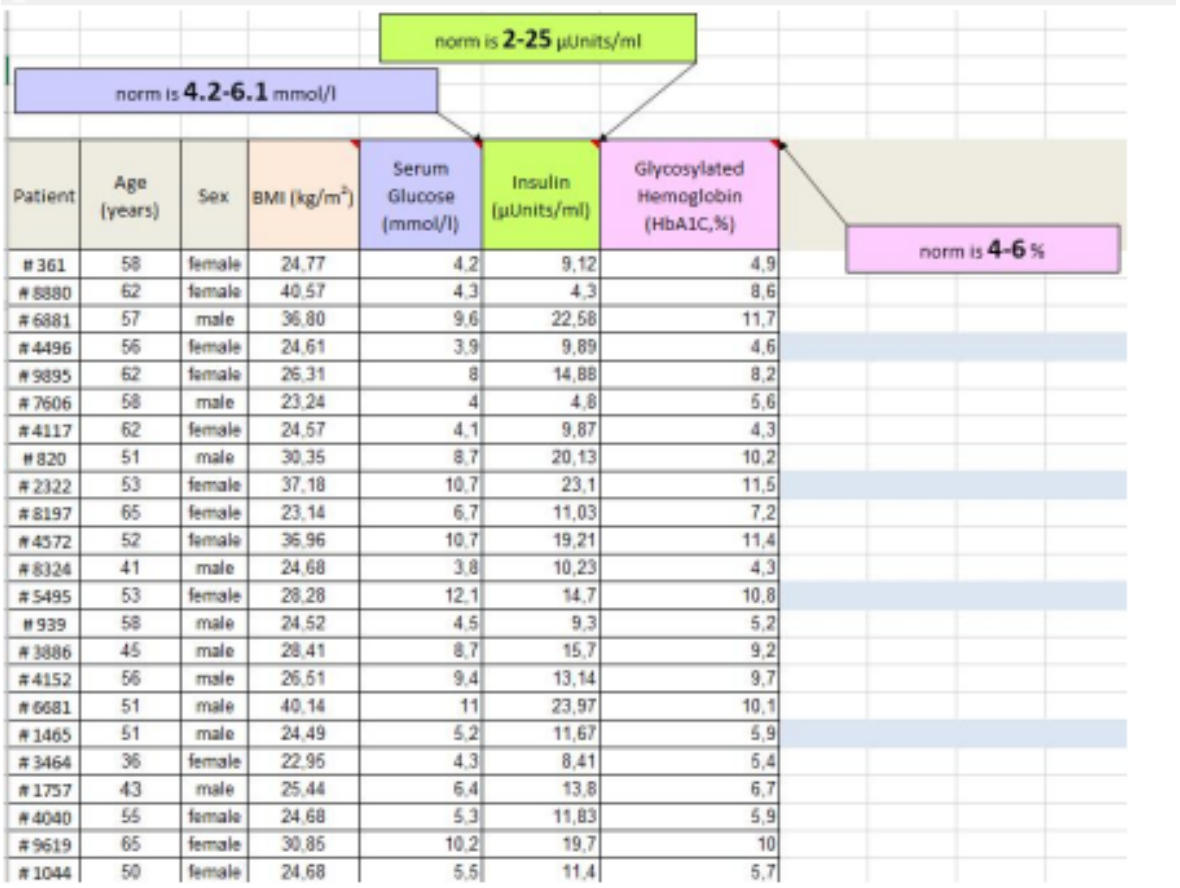
Downson	Tuberculosis	76
Maddison	Tuberculosis	29
Robbinson	Tuberculosis	33
Trueman	Tuberculosis	95
Young	Tuberculosis	36



Which records remain in the datatable after applying the filter shown in the picture?

- patients, whose treatment lasts more than 15 days but less than 80 days
- patients, whose treatment lasts less than 15 days, and patients, whose treatment lasts longer than 80 days
- all the records remain, because any duration of treatment will fit to these conditions
- none of the records remain, because these filtering conditions are incompatible
- none of the records remain, because there are no patients in this table that fit to these filtering conditions
- patients, whose treatment lasts no longer than 15 days, and patients, whose treatment lasts 80 days or less
- all the records remain, because in this table all the records fit to these conditions



Patient	Age (years)	Sex	BMI (kg/m^2)	Serum Glucose (mmol/l)	Insulin (µUnits/ml)	Glycosylated Hemoglobin (HbA1C,%)
# 361	58	female	24,77	4,2	9,12	4,9
# 8880	62	female	40,57	4,3	4,3	8,6
# 6881	57	male	36,80	9,6	22,58	11,7
# 4496	56	female	24,61	3,9	9,89	4,6
# 9895	62	female	26,31	8	14,88	8,2
# 7606	58	male	23,24	4	4,8	5,6
# 4117	62	female	24,57	4,1	9,87	4,3
# 820	51	male	30,35	8,7	20,13	10,2
# 2322	53	female	37,18	10,7	23,1	11,5
# 8197	65	female	23,14	6,7	11,03	7,2
# 4572	52	female	36,96	10,7	19,21	11,4
# 8324	41	male	24,68	3,8	10,23	4,3
# 5495	53	female	28,28	12,1	14,7	10,8
# 939	58	male	24,52	4,5	9,3	5,2
# 3886	45	male	28,41	8,7	15,7	9,2
# 4152	56	male	26,51	9,4	13,14	9,7
# 6681	51	male	40,14	11	23,97	10,1
# 1465	51	male	24,49	5,2	11,67	5,9
# 3464	36	female	22,95	4,3	8,41	5,4
# 1757	43	male	25,44	6,4	13,8	6,7
# 4040	55	female	24,68	5,3	11,83	5,9
# 9619	65	female	30,85	10,2	19,7	10
# 1044	50	female	24,68	5,5	11,4	5,7

From the table shown in the picture, you need to select the records about patients with normal glucose level in blood serum.

Which conditions for advanced filter you should use?

○

Patient	Serum Glucose (mmol/l)
#*	<4,2
	>6,1

○

Patient	Serum Glucose (mmol/l)
#*	>=4,2
#*	<=6,1

○

Serum Glucose (mmol/l)	Serum Glucose (mmol/l)
>=4,2	<=6,1

○

Serum Glucose (mmol/l)	Serum Glucose (mmol/l)
<4,2	>6,1

○

Patient	Serum Glucose (mmol/l)
	<>abnormal

○

Serum Glucose (mmol/l)
<>increased
<>decreased

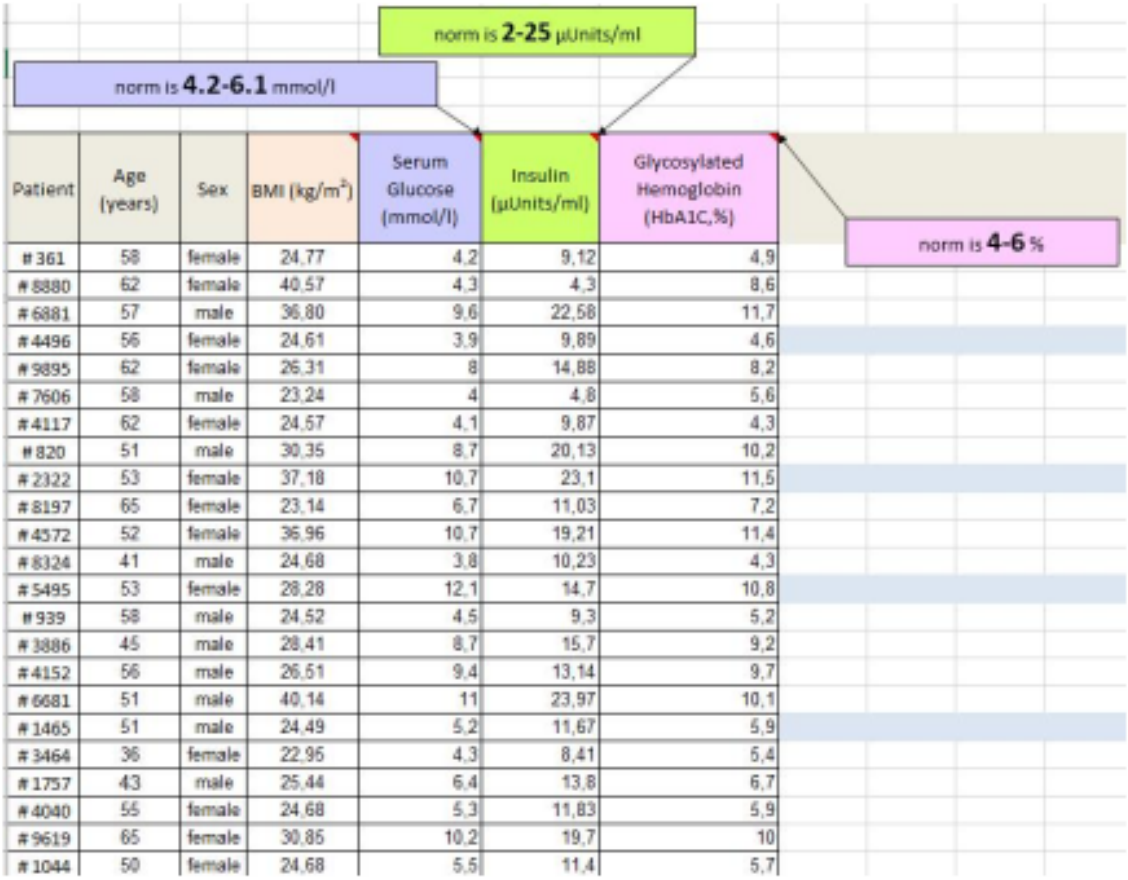
○

Serum Glucose (mmol/l)	Serum Glucose (mmol/l)
<>increased	<>decreased

○

Patient	Serum Glucose (mmol/l)
*	normal

○ none of these (other)



Patient	Age (years)	Sex	BMI (kg/m^2)	Serum Glucose (mmol/l)	Insulin (µUnits/ml)	Glycosylated Hemoglobin (HbA1C,%)
# 361	58	female	24,77	4,2	9,12	4,9
# 8880	62	female	40,57	4,3	4,3	8,6
# 6881	57	male	36,80	9,6	22,58	11,7
# 4496	56	female	24,61	3,9	9,89	4,6
# 9895	62	female	26,31	8	14,88	8,2
# 7606	58	male	23,24	4	4,8	5,6
# 4117	62	female	24,57	4,1	9,87	4,3
# 820	51	male	30,35	8,7	20,13	10,2
# 2322	53	female	37,18	10,7	23,1	11,5
# 8197	65	female	23,14	6,7	11,03	7,2
# 4572	52	female	36,96	10,7	19,21	11,4
# 8324	41	male	24,68	3,8	10,23	4,3
# 5495	53	female	28,28	12,1	14,7	10,8
# 939	58	male	24,52	4,5	9,3	5,2
# 3886	45	male	28,41	8,7	15,7	9,2
# 4152	56	male	26,51	9,4	13,14	9,7
# 6681	51	male	40,14	11	23,97	10,1
# 1465	51	male	24,49	5,2	11,67	5,9
# 3464	36	female	22,95	4,3	8,41	5,4
# 1757	43	male	25,44	6,4	13,8	6,7
# 4040	55	female	24,68	5,3	11,83	5,9
# 9619	65	female	30,85	10,2	19,7	10
# 1044	50	female	24,68	5,5	11,4	5,7

From the table shown in the picture, you need to select the records about patients with normal insulin level.

Which conditions for advanced filter you should use?

○

Insulin (µUnits/ml)	Insulin (µUnits/ml)
<2	>25

○

Insulin (µUnits/ml)	Insulin (µUnits/ml)
>=2	<=25

○

Patient	Insulin (µUnits/ml)
#*	>=2
#*	<=25

○

Patient	Insulin (µUnits/ml)
#*	<2
#*	>25

○

Patient	Insulin (µUnits/ml)
,	<2 OR >25

○

Patient	Insulin (µUnits/ml)
normal	>=2 AND <=25

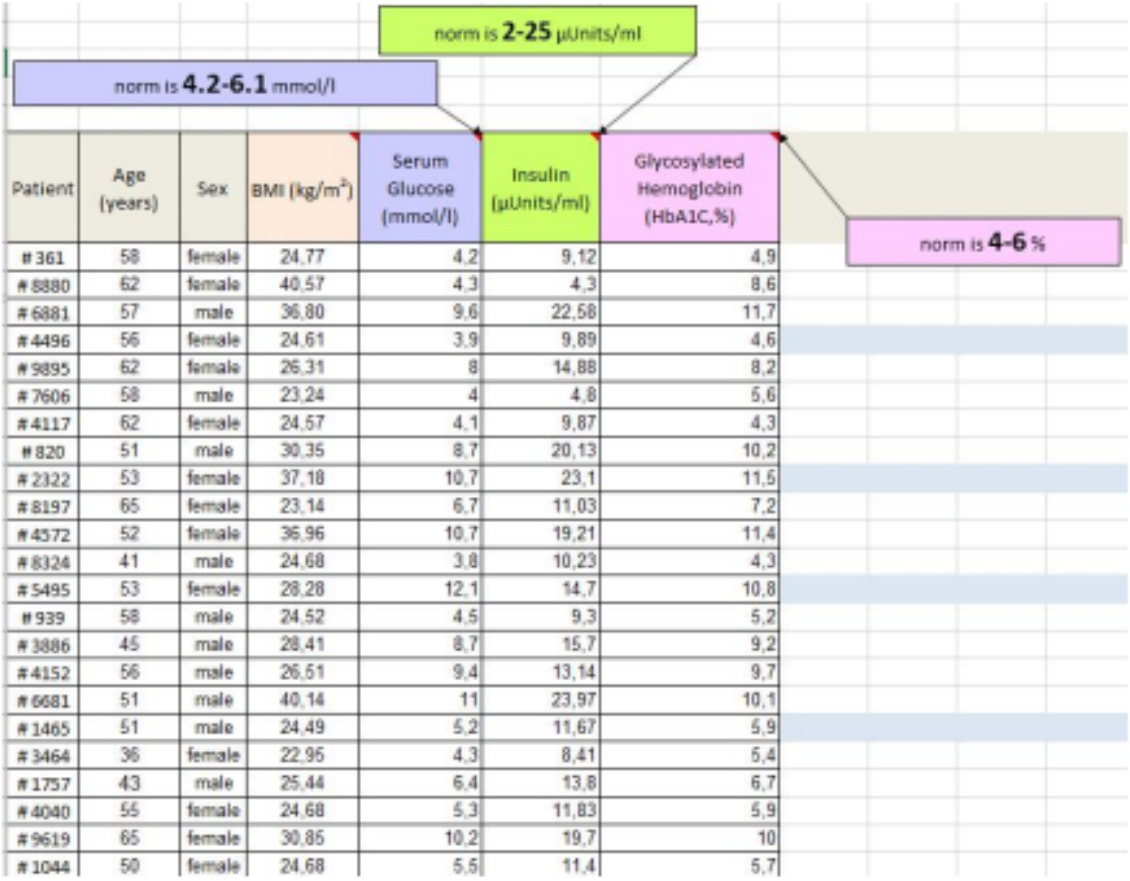
○

Patient	Insulin (µUnits/ml)
*	norm

○

Patient	Insulin (µUnits/ml)
*	abnormal

○ none of these (other)



Patient	Age (years)	Sex	BMI (kg/m^2)	Serum Glucose (mmol/l)	Insulin (µUnits/ml)	Glycosylated Hemoglobin (HbA1C,%)
# 361	58	female	24,77	4,2	9,12	4,9
# 8880	62	female	40,57	4,3	4,3	8,6
# 6881	57	male	36,80	9,6	22,58	11,7
# 4496	56	female	24,61	3,9	9,89	4,6
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# 7606	58	male	23,24	4	4,8	5,6
# 4117	62	female	24,57	4,1	9,87	4,3
# 820	51	male	30,35	8,7	20,13	10,2
# 2322	53	female	37,18	10,7	23,1	11,5
# 8197	65	female	23,14	6,7	11,03	7,2
# 4572	52	female	36,96	10,7	19,21	11,4
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# 3886	45	male	28,41	8,7	15,7	9,2
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# 4040	55	female	24,68	5,3	11,83	5,9
# 9619	65	female	30,85	10,2	19,7	10
# 1044	50	female	24,68	5,5	11,4	5,7

From the table shown in the picture, you need to select the records about patients with normal glycosylated hemoglobin level.

Which conditions for advanced filter you should use?

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	4-6%

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	<> 4-6%

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
#	abnormal

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	norm

○

Glycosylated Hemoglobin (HbA1C,%)	Glycosylated Hemoglobin (HbA1C,%)
>=4%	<=6%

○

Glycosylated Hemoglobin (HbA1C,%)	Glycosylated Hemoglobin (HbA1C,%)
>=4	<=6

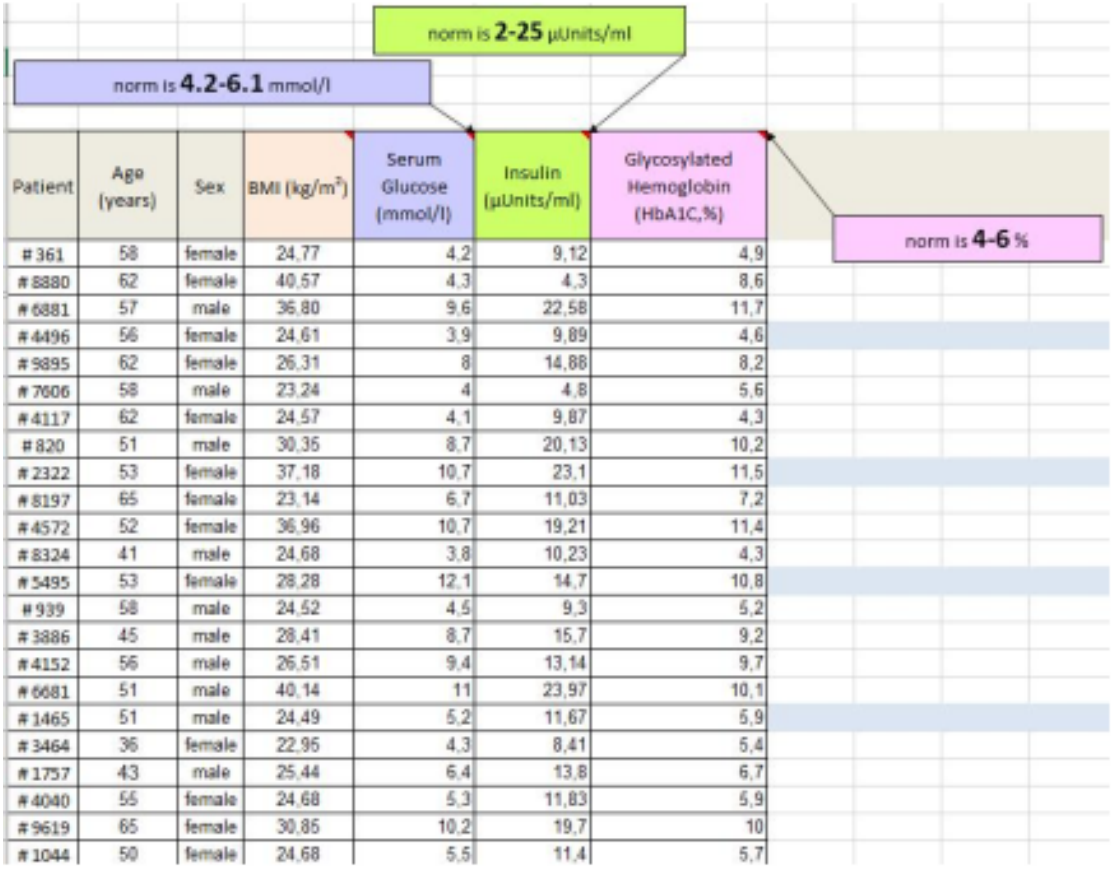
○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	>=4
*	<=6

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	<4
*	>6

○ none of these (other)



Patient	Age (years)	Sex	BMI (kg/m^2)	Serum Glucose (mmol/l)	Insulin (µUnits/ml)	Glycosylated Hemoglobin (HbA1C,%)
# 361	58	female	24,77	4,2	9,12	4,9
# 8880	62	female	40,57	4,3	4,3	8,6
# 6881	57	male	36,80	9,6	22,58	11,7
# 4496	56	female	24,61	3,9	9,89	4,6
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# 4117	62	female	24,57	4,1	9,87	4,3
# 820	51	male	30,35	8,7	20,13	10,2
# 2322	53	female	37,18	10,7	23,1	11,5
# 8197	65	female	23,14	6,7	11,03	7,2
# 4572	52	female	36,96	10,7	19,21	11,4
# 8324	41	male	24,68	3,8	10,23	4,3
# 5495	53	female	28,28	12,1	14,7	10,8
# 939	58	male	24,52	4,5	9,3	5,2
# 3886	45	male	28,41	8,7	15,7	9,2
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# 4040	55	female	24,68	5,3	11,83	5,9
# 9619	65	female	30,85	10,2	19,7	10
# 1044	50	female	24,68	5,5	11,4	5,7

From the table shown in the picture, you need to select the records about patients with abnormal insulin level.

Which conditions for advanced filter you should use?

○

Insulin (µUnits/ml)	Insulin (µUnits/ml)
<2	>25

○

Insulin (µUnits/ml)	Insulin (µUnits/ml)
>=2	<=25

○

Patient	Insulin (µUnits/ml)
#*	>=2
#*	<=25

○

Patient	Insulin (µUnits/ml)
#*	<2
#*	>25

○

Patient	Insulin (µUnits/ml)
.	<2 OR >25

○

Patient	Insulin (µUnits/ml)
normal	>=2 AND <=25

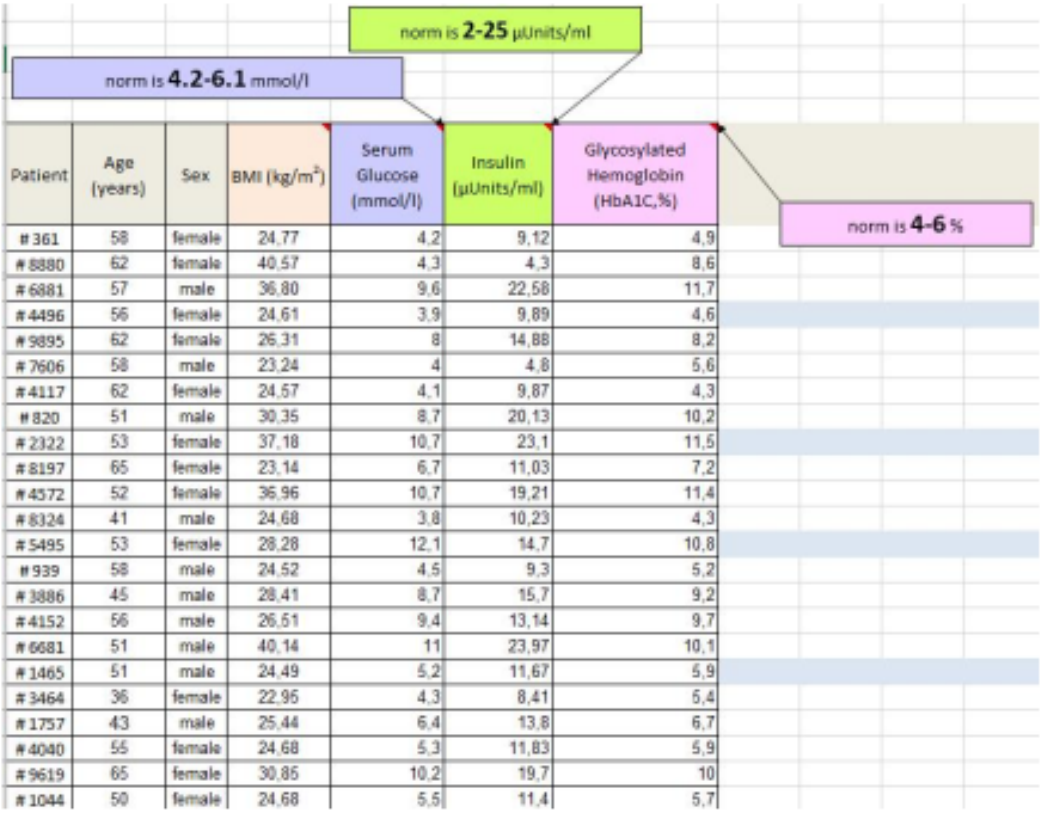
○

Patient	Insulin (µUnits/ml)
*	norm

○

Patient	Insulin (µUnits/ml)
*	abnormal

○ none of these (other)



Patient	Age (years)	Sex	BMI (kg/m^2)	Serum Glucose (mmol/l)	Insulin (µUnits/ml)	Glycosylated Hemoglobin (HbA1C,%)
# 361	58	female	24,77	4,2	9,12	4,9
# 8880	62	female	40,57	4,3	4,3	8,6
# 6881	57	male	36,80	9,6	22,58	11,7
# 4496	56	female	24,61	3,9	9,89	4,6
# 9895	62	female	26,31	8	14,88	8,2
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# 820	51	male	30,35	8,7	20,13	10,2
# 2322	53	female	37,18	10,7	23,1	11,5
# 8197	65	female	23,14	6,7	11,03	7,2
# 4572	52	female	36,96	10,7	19,21	11,4
# 8324	41	male	24,68	3,8	10,23	4,3
# 5495	53	female	28,28	12,1	14,7	10,8
# 939	58	male	24,52	4,5	9,3	5,2
# 3886	45	male	28,41	8,7	15,7	9,2
# 4152	56	male	26,51	9,4	13,14	9,7
# 6681	51	male	40,14	11	23,97	10,1
# 1465	51	male	24,49	5,2	11,67	5,9
# 3464	36	female	22,95	4,3	8,41	5,4
# 1757	43	male	25,44	6,4	13,8	6,7
# 4040	55	female	24,68	5,3	11,83	5,9
# 9619	65	female	30,85	10,2	19,7	10
# 1044	50	female	24,68	5,5	11,4	5,7

From the table shown in the picture, you need to select the records about patients with abnormal glycosylated hemoglobin level.

Which conditions for advanced filter you should use?

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	4-6%

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	<>4-6%

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
#	abnormal

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	norm

○

Glycosylated Hemoglobin (HbA1C,%)	Glycosylated Hemoglobin (HbA1C,%)
>=4%	<=6%

○

Glycosylated Hemoglobin (HbA1C,%)	Glycosylated Hemoglobin (HbA1C,%)
>=4	<=6

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	>=4
*	<=6

○

Patient	Glycosylated Hemoglobin (HbA1C,%)
*	<4
*	>6

○ none of these (other)

Форми контролю самостійної роботи:

1. Контроль правильності виконання практичних завдань з теми.
2. Контроль правильності відповідей на тестові запитання

Вид навчальних занять, під час яких проводиться контроль самостійної роботи:

Самостійна робота виконується студентами і перевіряється викладачем у позааудиторний час. У разі виникнення суперечливих питань щодо виконання завдань або оцінювання самостійної роботи, ці питання вирішуються під час консультацій.

Критерії оцінювання самостійної роботи:

a. Оцінка за розв'язок практичних завдань включається до оцінки за практичні заняття з теми. Оцінюється пропорційно до обсягу виконаних завдань, ступеня автоматизації, самостійності виконання.
b. Проходження тесту оцінюється виходячи з максимальної оцінки 5 балів. Для зарахування тесту необхідно отримання не менше 60% правильних відповідей (3 балів). Тест є тренувальним і кількість спроб проходження тесту необмежена. Зараховується результат найкращої спроби.

МЕТОДИЧНА КАРТКА ОРГАНІЗАЦІЇ САМОСТІЙНОЇ РОБОТИ

Тема: Conditional subtotals functions in spreadsheets. Database functions for medical data analytics

Ключові терміни та поняття теми: subtotals, conditional subtotals, spreadsheets built-in functions: COUNTIF(S), SUMIF(S), AVERAGEIF(S), MAXIFS, MINIFS, database functions: DCOUNT(A), DSUM, DAVERAGE, DMIN, DMAX, DGET.

Методичні рекомендації до виконання самостійної роботи:

Самостійна робота з даної теми передбачає виконання студентами практичних завдань за темою.

Рекомендовано користуватися конспектом, зробленим під час розв'язку типових завдань з теми на практичних заняттях, конспектом і слайдами лекції з поточної теми, власними файлами з виконаними завданнями на аудиторному практичному занятті.

Інші джерела, рекомендовані для використання під час самостійної роботи з теми:

1. Hoyt R.E. Health informatics: practical guide / Robert E. Hoyt, William R. Hersh. – 7th ed. – [S. l.] : Lulu.com, Informatics Education, 2018. – 475 p.
2. Essentials of Clinical Informatics / ed. by M.E. Frisse, K.E. Misulis. – [S. l.] : Oxford University Press, 2019. – 366 p.
3. Medical informatics: textbook for students of higher medical education establishments / I. Ye. Bulakh [et al.]. – 4th ed., rev.– Kyiv : Medicine, 2018. – 368 p.
4. Medical Informatics / S.J Singer [et al.]. – New York : Springer Science + Business Media, 2001. – 780 p.
5. Musen M.A. Handbook of Medical Informatics / ed. by M.A. Musen, J. van Bemmel. – [S. l.] : Springer, 2002. – 628 p.

Самостійна робота передбачає вдосконалення практичних навичок з теми та набуття професійних компетентностей у двох напрямках:

A. Використання функцій умовного підрахунку і функцій баз даних для вирішення завдань управління охороною здоров'я (набір завдань виконується на модельній базі даних з файлу '*med-network-report-example.xlsx*');

B. Використання функцій умовного підрахунку і функцій баз даних для вирішення завдань аналізу клінічних даних пацієнтів (набір завдань виконується на модельній базі даних з файлу '*diets.xlsx*').

Практичні завдання виконуються студентами за варіантами, для оцінювання кожним студентом надається власний варіант завдання.

Нижче наведено перелік варіантів завдань для самостійної роботи з теми.

Завдання для самостійної (домашньої) роботи:

Напрямок А

Варіант 1.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find average expenses of medical center located in Zurich.	1
Task 2.	Find total fee paid for medications prescriptions.	1
Task 3.	Find the highest income in Vienna.	1
Task 4.	Find the number of instrumental diagnostics procedures with expenses in the range from 300 € up to 500 €.	2
Task 5.	Find the lowest fee paid this year.	2
Task 6.	Find total fee paid for Dr. James in Warsaw, Bratislava and Prague.	3
Task 7.	Find average income for physical examinations made in Vienna and Zurich.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 3 additionally find the type of service, for which this highest income was obtained, and when it happens.	2
Task 10.	For task 5 additionally find the name of doctor, to whom this lowest fee was paid, and the type of service he/she provided in this case.	2
	Total for database functions (max pts) =	18

Варіант 2.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find average income of physical examinations.	1
Task 2.	Find total fee paid for Dr. McFish.	1
Task 3.	Find the lowest expenses in medical center located in Prague.	1
Task 4.	Find the number of surgeries with fees in the range from 200 € up to 700 €.	2
Task 5.	Find the highest expenses in spring 2022.	2
Task 6.	Find, how many physical examinations, physiotherapeutic and diagnostical procedures were made by Dr. Backer.	3
Task 7.	Find average income for medications prescriptions made in Sofia and Prague.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 3 additionally find the type of service, for which these lowest expenses were obtained, and when it happens.	2
Task 10.	For task 5 additionally find the city, in which these highest expenses were paid, and the fee obtained in this case.	2
	Total for database functions (max pts) =	18

Варіант 3.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find average expenses on surgeries.	1
Task 2.	Find highest fee paid for Dr. Nickson.	1
Task 3.	Find, how many physical examinations were provided.	1
Task 4.	Find total income obtained from physiotherapeutic procedures in Kharkiv.	2
Task 5.	Find the lowest income obtained in Lviv in August 2022.	2
Task 6.	Find, total expenses on services provided in Lviv, Gdansk and Bratislava by Dr. James.	3
Task 7.	Find average income for consultations provided by doctors Meddison, Priest and Larry.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 2 additionally find the type of service, for which this highest fee was obtained, when and in which city it happens.	2
Task 10.	For task 5 additionally find the record # of the service with this lowest income, and the name of the doctor, who provided this service.	2
	Total for database functions (max pts) =	18

Варіант 4.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find the lowest expenses on instrumental diagnostics.	1
Task 2.	Find average fee paid in Lviv.	1
Task 3.	Find total income obtained from services provided by Dr. Smith.	1
Task 4.	Find the number of consultations with fees in the range from 200 € up to 700 €.	2
Task 5.	Find the highest clinic expenses paid in Paris in September 2021.	2
Task 6.	Find total income from services provided by Dr. Nickson in Ukraine.	3
Task 7.	Find average fee for physical examinations and consultations provided by Dr. Larry.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 1 additionally find the city, where these lowest expenses were paid, when it happens, and the fee obtained in this case.	2
Task 10.	For task 5 additionally find the type of service with these lowest expenses, and the name of the doctor, who provided this service.	2
	Total for database functions (max pts) =	18

Варіант 5.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find total expenses of medical center located in Bratislava.	1
Task 2.	Find average fee paid for Dr. Backer.	1
Task 3.	Find the highest income obtained in Kyiv.	1
Task 4.	Find the number of diagnostical procedures with expenses in the range from 50 € up to 120 €.	2
Task 5.	Find the lowest fee paid in summer 2020 for surgery.	2
Task 6.	Find total income for instrumental diagnostics and physiotherapeutic procedures provided in Warsaw.	3
Task 7.	Find average fee paid for Dr. Priest for surgeries in Lviv and Gdansk.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 3 additionally find the type of service, for which this highest income was obtained, when it happens, and which doctor provided this service.	2
Task 10.	For task 5 additionally find the city, where this lowest fee was paid, and the income in this case.	2
	Total for database functions (max pts) =	18

Варіант 6.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find Dr. Meddison's average fee.	1
Task 2.	Find total expenses on physiotherapeutic procedures.	1
Task 3.	Find the highest income obtained in medical center located in Sofia.	1
Task 4.	Find the number of consultations provided in Prague with positive income.	2
Task 5.	Find the lowest fee paid in December 2022.	2
Task 6.	Find the highest fee paid for Dr. McFish in Poland.	3
Task 7.	Find average income for consultations and drug prescriptions made in Zurich.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 3 additionally find the type of service, for which this highest income was obtained, and when it happens.	2
Task 10.	For task 5 additionally find the name of doctor, to whom this lowest fee was paid, and the type of service he/she provided in this case.	2
	Total for database functions (max pts) =	18

Варіант 7.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find average income of instrumental diagnostics.	1
Task 2.	Find total fee paid for Dr. Backer.	1
Task 3.	Find the lowest expenses for medical center located in Sofia.	1
Task 4.	Find the number of Dr. Meddison's services with fees in the range from 750 € up to 1,000 €.	2
Task 5.	Find the highest income obtained from physiotherapy in winter 2021.	2
Task 6.	Find, how many physical examinations and medications prescriptions were made by Dr. James.	3
Task 7.	Find average income for surgeries made in Kharkiv and Dnipro.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 3 additionally find the type of service, for which these lowest expenses were obtained, and when it happens.	2
Task 10.	For task 5 additionally find the city, in which this highest income was obtained, the name of the doctor, who provided this service, and the fee she/he was paid for this.	2
	Total for database functions (max pts) =	18

Варіант 8.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find average expenses on instrumental diagnostics.	1
Task 2.	Find highest fee paid for Dr. Larry.	1
Task 3.	Find, how many diagnostical procedures were provided.	1
Task 4.	Find total income obtained by medical center located in Warsaw from consultations with expenses over 200 €.	2
Task 5.	Find the lowest income obtained in Warsaw in December 2020.	2
Task 6.	Find, total expenses on services provided in Prague, Sofia and Zurich by Dr. Smith.	3
Task 7.	Find average income for physiotherapeutic procedures provided by doctors Meddison, Priest and Backer.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 2 additionally find the type of service, for which this highest fee was obtained, when and in which city it happens.	2
Task 10.	For task 5 additionally find the record # of the service with this lowest income, and the name of the doctor, who provided this service.	2
	Total for database functions (max pts) =	18

Варіант 9.

Task 0.

- Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

In tasks 1—7 use conditional subtotal functions (i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**) to answer the questions		max pts
Task 1.	Find the lowest expenses on consultations.	1
Task 2.	Find average fee paid in Kharkiv.	1
Task 3.	Find total income obtained from services provided by Dr. Larry.	1
Task 4.	Find the number of physical examinations with fees in the range from 550 € up to 900 €.	2
Task 5.	Find the highest clinic expenses paid in Gdansk in May 2021.	2
Task 6.	Find total income from services provided by Dr. Priest in Poland.	3
Task 7.	Find average fee for diagnostical procedures and medications prescriptions made by Dr. Smith and Dr. Meddison.	4
	Total for conditional subtotals functions (max pts) =	14
In tasks 8—10 use database functions to answer the questions		
Task 8.	Use database functions to answer the questions of tasks 1—7.	14
Task 9.	For task 1 additionally find the city, where these lowest expenses were paid, when it happens, and the fee obtained in this case.	2
Task 10.	For task 5 additionally find the type of service with these lowest expenses, and the name of the doctor, who provided this service.	2
	Total for database functions (max pts) =	18

Напрямок В

Варіант 1.

Task 0. (max = 3 pts)

- ☐ Open '*diets*' spreadsheet and save it to your work folder.
- ☐ Rename '*Sheet 1*' to '*full diets data*'.
- ☐ Assume that duration of each diet is 94 days. Write this value into cell B2.
- ☐ Calculate the end dates of each diet in the corresponding column using formula expression.
- ☐ Calculate the weight loss for each patient in the corresponding column using formula expression;
  apply percentage format with two decimals to the result of your calculations.

  Note: $$weight\ loss(\%) = 100\% - \frac{final\ weight}{weight\ before\ the\ diet}$$

- ☐ Calculate Body Mass Index (BMI) for each patient before the diet in the corresponding column using formula expression.

  Note: $$BMI = \frac{weight\ in\ kg}{(height\ in\ m)^2}$$

- ☐ Add three empty columns after the columns with patients' weights change, name this triple similarly (i.e. 'change in BMI' : 'BMI 1st month', 'BMI 2nd month', 'BMI 3rd month'), and calculate BMIs for each patient after the 1st, 2nd and 3rd months of the diet using formula expression.
- ☐ Find effectiveness of the diet for each patient according to the rule:
  if the weight loss is less than 1%, the diet has ***no effectiveness***;
  if the weight loss is greater than 20%, the diet has ***very good*** effectiveness;
  if the weight loss is between 7% and 20%, the diet has ***satisfactory*** effectiveness;
  if the weight loss is between 1% and 7%, the diet has ***low*** effectiveness.

  Use logical function(s) to find the diets effectiveness !

In tasks 1—7 use conditional subtotal functions
(i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**)
to answer the questions.

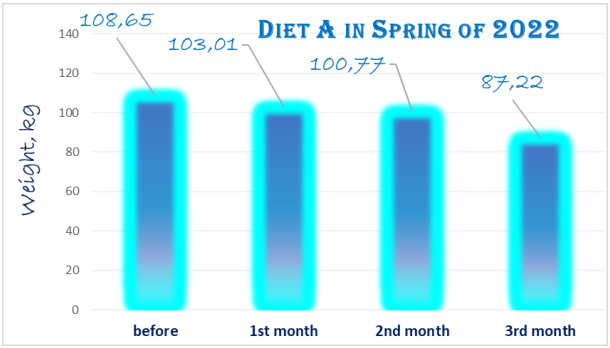
Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

Task 1. (max = 2 pts)

- ☐ How many patients were treated by Dr. Allheal?
- ☐ How many women were among them?

Task 2. (max = 5 pts)

- ☐ What was the average weight before the diet for patients, who started diet A in spring of 2022?
- ☐ How their average weight change during three months of the diet?
- ☐ Plot the results of your calculations in a columnar chart. Format the chart as per sample:



Task 3. (max = 1 pts)

- Find the highest weight at the 1st month of the diet among patients, for whom diets were no effective.

Task 4. (max = 2 pts)

- Find total weight at the end of the diet for Dr. Nopain and Dr. House patients, for whom the diet was of satisfactory effectiveness.
- What was the lowest BMI before the diet among these patients?

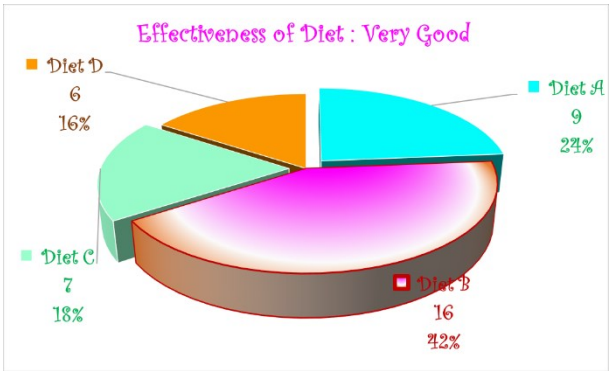
Task 5. (max = 2 pts)

- How many patients have normal weight before the diet?
- How many of them keep the normal weight after the diet?

Hint: *Look at the patients' BMI values to determine the overweight or normal conditions.*

Task 6. (max = 5 pts)

- For how many patients their diets were of very good effectiveness?
- How these results are distributed among different types of diets?
- Plot your result in the pie chart. Format this chart as per sample:



Task 7. (max = 3 pts)

- How many patients among those who used diets C and D weighted over 100 kg at the 2nd month of a diet?
- What is their average BMI before the diet?

In task 8 use database functions
to answer the questions.

Task 8.

- ☐ **Do tasks 1—7 using database functions.** (max = 2 pts × 7 tasks = 14 pts)
- ☐ **Compare results of calculations (! they should coincide !).**
- ☐ **In task 3 additionally** find the name of the patient with the highest weight at the 1st month of the diet, and the name of her/his doctor. (max = 2 pts)
- ☐ **In task 4 additionally** find the name of the patient with the lowest BMI before the diet, his/her final weight, and the name of the doctor who treats him/her. (max = 2 pts)

Варіант 2.

Task 0. (max = 3 pts)

- ☐ Open '*diets*' spreadsheet and save it to your work folder.
- ☐ Rename '*Sheet 1*' to '*all diets*'.
- ☐ Assume that duration of each diet is 96 days. Write this value into cell B2.
- ☐ Calculate the end dates of each diet in the corresponding column using formula expression.
- ☐ Calculate the weight loss for each patient in the corresponding column using formula expression;
  apply percentage format with two decimals to the result of your calculations.

  Note: $weight\ loss(\%) = 100\% - \frac{final\ weight}{weight\ before\ the\ diet}$

- ☐ Calculate Body Mass Index (BMI) for each patient before the diet in the corresponding column using formula expression.

  Note: $BMI = \frac{weight\ in\ kg}{(height\ in\ m)^2}$

- ☐ Add three empty columns after the columns with patients' weights change, name this triple similarly (i.e. 'change in BMI' : 'BMI 1st month', 'BMI 2nd month', 'BMI 3rd month'), and calculate BMIs for each patient after the 1st, 2nd and 3rd months of the diet using formula expression.
- ☐ Find effectiveness of the diet for each patient according to the rule:
  if the weight loss is greater than 17%, the diet has ***good*** effectiveness;
  if the weight loss is between 10% and 17%, the diet has ***moderate*** effectiveness;
  if the weight loss is between 2% and 10%, the diet has ***small*** effectiveness;
  otherwise the diet is ***not effective***.

  Use logical function(s) to find the diets effectiveness !

In tasks 1—7 use conditional subtotal functions
(i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**)
to answer the questions.

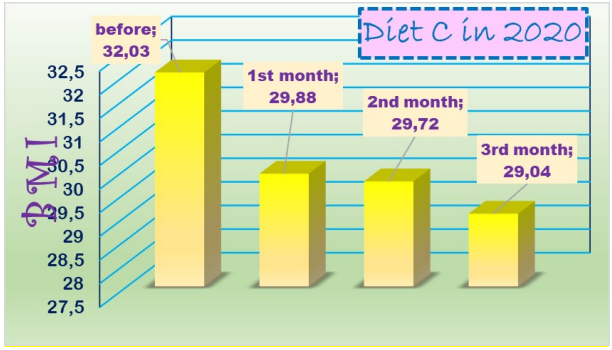
***Note**: In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

Task 1. (max = 2 pts)

- For how many of patients the diet was not effective?
- How many of them used the diet of type D?

Task 2. (max = 5 pts)

- What was the average BMI at the end of the diet for patients, who started diet C in 2020?
- How their BMI change during three months of the diet? What BMI they have before the diet?
- Plot the results of your calculations in a columnar chart. Format the chart as per sample:



Task 3. (max = 1 pts)

- Find the lowest weight at the 1st month of the diet among Dr. Astroff's patients.

Task 4. (max = 2 pts)

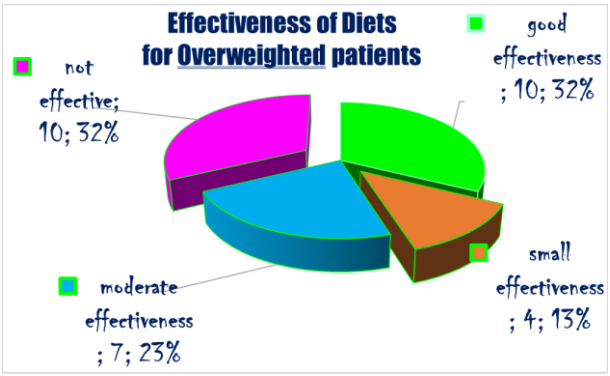
- Find total weight before the diet of type B of those patients, who were treated by Dr. Treatman.
- Find how many men and women were among them.

Task 5. (max = 5 pts)

- How many patients were overweighted after the diet?
- How their results were distributed among different grades of diets effectiveness?

Hint: Look at the patients' BMI values to determine the overweight.

- Plot your result in the pie chart. Format this chart as per sample:



Task 6. (max = 2 pts)

- For how many patients the diet of type C has small or moderate effectiveness?
- What is the highest BMI before the diet among them?

Task 7. (max = 3 pts)

- How many patients on diet A were treated by doctors Curewizard and Cuddy?
- What is their average weight loss?
- Who of these patients starts his/her diet earlier than the others?

In task 8 use database functions
to answer the questions.

Task 8.

- **Do tasks 1—7 using database functions.** (max = 2 pts × 7 tasks = 14 pts)
- **Compare results of calculations (! they should coincide !).**
- **In task 3 additionally** find the name of the patient with the lowest BMI at the end of the diet, and when she/he starts the diet. (max = 2 pts)
- **In task 6 additionally** find the name of the patient with the highest BMI before the diet, his/her final weight, and the name of the doctor who treats him/her. (max = 2 pts)

Варіант 3.

Task 0. (max = 3 pts)

- Open '*diets*' spreadsheet and save it to your work folder.
- Rename '*Sheet 1*' to '*data on diets*'.
- Assume that duration of each diet is 91 days. Write this value into cell B2.
- Calculate the end dates of each diet in the corresponding column using formula expression.
- Calculate the weight loss for each patient in the corresponding column using formula expression;
  apply percentage format with two decimals to the result of your calculations.

  Note: $weight\ loss(\%) = 100\% - \frac{final\ weight}{weight\ before\ the\ diet}$

- Calculate Body Mass Index (BMI) for each patient before the diet in the corresponding column using formula expression.

  Note: $BMI = \frac{weight\ in\ kg}{(height\ in\ m)^2}$

- Add three empty columns after the columns with patients' weights change, name this triple similarly (i.e. 'change in BMI' : 'BMI 1st month', 'BMI 2nd month', 'BMI 3rd month'), and calculate BMIs for each patient after the 1st, 2nd and 3rd months of the diet using formula expression.
- Find effectiveness of the diet for each patient according to the rule:
  if the patient gained the weight instead of losing it, the diet has ***negative*** effectiveness;
  if the weight loss is greater than 18%, the diet has ***high*** effectiveness;
  if the weight loss is between 6% and 18%, the diet has ***satisfactory*** effectiveness;
  otherwise the diet has ***low*** effectiveness.

  Use logical function(s) to find the diets effectiveness !

In tasks 1—7 use conditional subtotal functions
(i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**)
to answer the questions.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

Task 1. (max = 2 pts)

- How many of patients used diet C?
- For how many of them the effectiveness of the diet was negative?

Task 2. (max =5 pts)

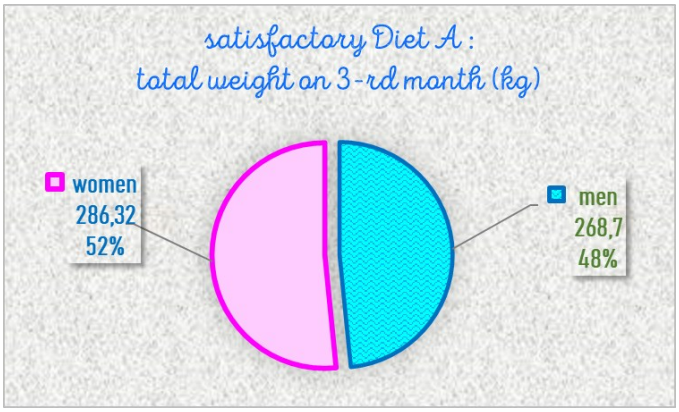
- What was the average BMI before the diet for patients, who ended diet B in 2021?
- How their BMI change during three months of the diet?
- Plot the results of your calculations in a columnar chart. Format the chart as per sample:

Task 3. (max = 1 pts)

- Find the highest weight at the 2nd month of the diet among Dr. Astroff's patients with negative effectiveness of the diet.

Task 4. (max = 5 pts)

- Find total weight at the 3rd month of the diet A of those patients, for whom the diet was of satisfactory effectiveness.
- Find the same separately for men and women.
- Plot your result in the pie chart. Format this chart as per sample:



Task 5. (max = 2 pts)

- How many patients has weight between 85 kg and 105 kg after the 1st month of the diet?
- How many of them reach the normal weight after the diet?

Hint: *Look at the patients' BMI values to determine the range of normal weight.*

Task 6. (max = 2 pts)

- For how many patients their diets were of low and negative effectiveness?
- What is the lowest BMI at the end of the diet among them?

Task 7. (max = 3 pts)

- How many among the patients, who used diets A, C and D, were treated by doctor Cuddy?
- What is their average weight after one month of the diet?
- What was the highest BMI before the diet among these patients?

In task 8 use database functions
to answer the questions.

Task 8.

- **Do tasks 1—7 using database functions.** (max = 2 pts × 7 tasks = 14 pts)
- **Compare results of calculations (! they should coincide !).**
- **In task 3 additionally** find the name of the patient with the highest weight at the 2nd month of the diet, his/her weight before the diet, and when she/he starts the diet. (max = 2 pts)
- **In task 6 additionally** find the name of the patient with the lowest BMI after the diet, his/her weight before the diet, and the name of the doctor who treats him/her. (max = 2 pts)

Варіант 4.

Task 0. (max = 3 pts)

- Open '*diets*' spreadsheet and save it to your work folder.
- Rename '*Sheet 1*' to '*diets report*'.
- Assume that duration of each diet is 89 days. Write this value into cell B2.
- Calculate the end dates of each diet in the corresponding column using formula expression.
- Calculate the weight loss for each patient in the corresponding column using formula expression;
  apply percentage format with two decimals to the result of your calculations.

  Note: $weight\ loss(\%) = 100\% - \frac{final\ weight}{weight\ before\ the\ diet}$

- Calculate Body Mass Index (BMI) for each patient before the diet in the corresponding column using formula expression.

  Note: $BMI = \frac{weight\ in\ kg}{(height\ in\ m)^2}$

- Add three empty columns after the columns with patients' weights change, name this triple similarly (i.e. 'change in BMI' : 'BMI 1st month', 'BMI 2nd month', 'BMI 3rd month'), and calculate BMIs for each patient after the 1st, 2nd and 3rd months of the diet using formula expression.
- Find effectiveness of the diet for each patient according to the rule:

  if the weight loss is greater than 16%, the diet has ***high*** effectiveness;
  if the weight loss is less than 3%, the diet has ***small*** effectiveness;
  if the weight loss is between 3% and 9%, the diet has ***salient*** effectiveness;
  otherwise the diet has ***good*** effectiveness.

Use logical function(s) to find the diets effectiveness !

In tasks 1—7 use conditional subtotal functions
(i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**)
to answer the questions.

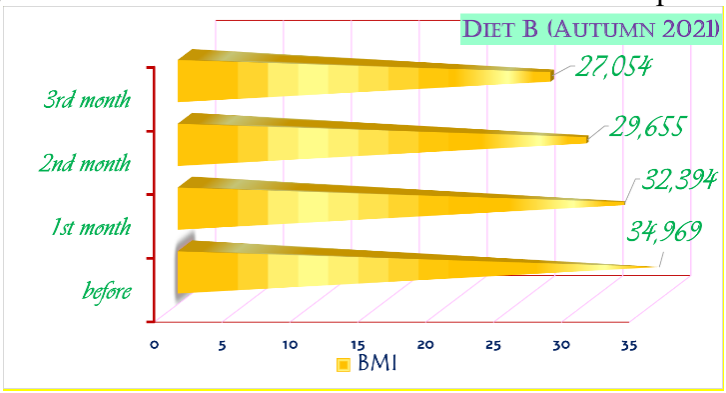
Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

Task 1. (max = 2 pts)

- For how many of patients the effectiveness of the diet was good?
- How many of them were treated by Dr. Astroff?

Task 2. (max = 5 pts)

- What was the average BMI before the diet for patients, who ended diet B in the autumn of 2021?
- How their BMI change during three months of the diet?
- Plot the results of your calculations in a bar chart. Format the chart as per sample:



Task 3. (max = 1 pts)

- Find the highest weight at the end of the diet among Dr. Treatman's patients with the high effectiveness of the diet.

Task 4. (max = 2 pts)

- How many patients were overweighted before they start their diets?
- How many of them reach the normal weight after the 2nd month of the diet?

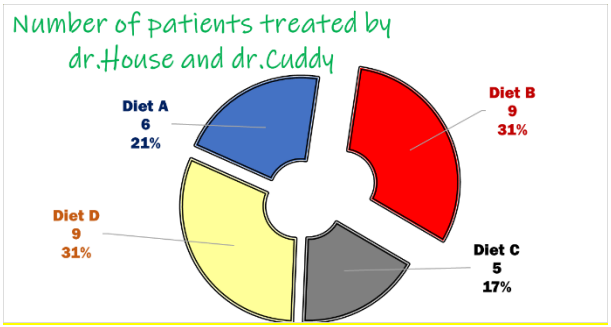
Hint: *Look at the patients' BMI values to determine the overweight or normal conditions.*

Task 5. (max = 3 pts)

- Find total weight at the 1st month of the diet C of those patients, for whom this diet was of good effectiveness.
- Find the same separately for men and women.
- What is the lowest BMI at the end of the diet among these women, for whom the diet C has good effectiveness?

Task 6. (max = 5 pts)

- How many patients were treated by doctors Cuddy and House?
- How their quantity is distributed between the diets of different types?
- Plot your result in the doughnut chart. Format this chart as per sample:



Task 7. (max = 2 pts)

- How many patients treated by Dr. Richards used diets A and B?
- What is their average BMI at the 2nd month of the diet?
- What is the most recent date of diet start among these patients?

In task 8 use database functions
to answer the questions.

Task 8.

- **Do tasks 1—7 using database functions.** (max = 2 pts × 7 tasks = 14 pts)
- **Compare results of calculations (! they should coincide !).**
- **In task 3 additionally** find the name of the patient with the highest weight at the end of the diet, and the name of the doctor who treats him/her. (max = 2 pts)
- **In task 5 additionally** find the name of the woman with the lowest BMI at the end of the diet, his/her initial weight, and when she/he ends the diet. (max = 2 pts)

Варіант 5.

Task 0. (max = 3 pts)

- Open '*diets*' spreadsheet and save it to your work folder.
- Rename '*Sheet 1*' to '*patients data*'.
- Assume that duration of each diet is 90 days. Write this value into cell B2.
- Calculate the end dates of each diet in the corresponding column using formula expression.

- Calculate the weight loss for each patient in the corresponding column using formula expression;
  apply percentage format with two decimals to the result of your calculations.

  Note: $weight\ loss(\%) = 100\% - \frac{final\ weight}{weight\ before\ the\ diet}$

- Calculate Body Mass Index (BMI) for each patient before the diet in the corresponding column using formula expression.

  Note: $BMI = \frac{weight\ in\ kg}{(height\ in\ m)^2}$

- Add three empty columns after the columns with patients' weights change, name this triple similarly (i.e. 'change in BMI' : 'BMI 1st month', 'BMI 2nd month', 'BMI 3rd month'), and calculate BMIs for each patient after the 1st, 2nd and 3rd months of the diet using formula expression.
- Find effectiveness of the diet for each patient according to the rule:
  if the weight loss is less than 1%, the diet has ***negligible*** effectiveness;
  if the weight loss is greater than 15%, the diet has ***high*** effectiveness;
  if the weight loss is between 8% and 19%, the diet has ***normal*** effectiveness;
  otherwise the diet is of ***little*** effectiveness.

  Use logical function(s) to find the diets effectiveness !

In tasks 1—7 use conditional subtotal functions
(i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**)
to answer the questions.

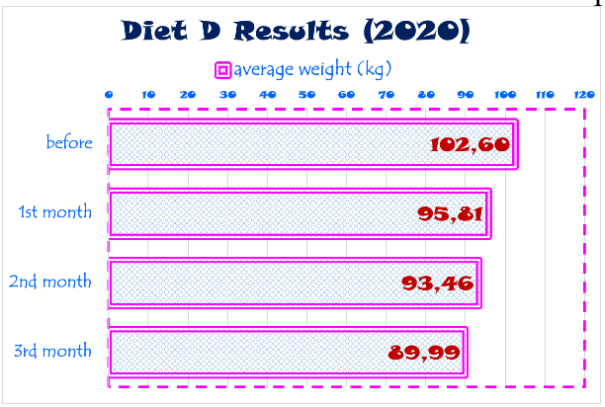
Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

Task 1. (max = 2 pts)

- How many of patients used diet B?
- For how many of them the effectiveness of the diet was negligible?

Task 2. (max = 5 pts)

- What was the average weight before the diet for patients, who started diet D in 2020?
- How their weight change during three months of the diet?
- Plot the results of your calculations in a bar chart. Format the chart as per sample:



Task 3. (max = 1 pts)

- Find the highest BMI at the end of the diet among the patients whose weight loss is between 3% and 17%.

Task 4. (max = 3 pts)

- Find average weight loss (%) of those patients, who used the diet of type C and were overweighted before the diet.

  Hint: *Look at the patients' BMI values to determine the overweight.*

- What is the highest weight at the end of the diet among these patients?
- What is the lowest weight at the 2nd month of the diet among these patients?

Task 5. (max = 2 pts)

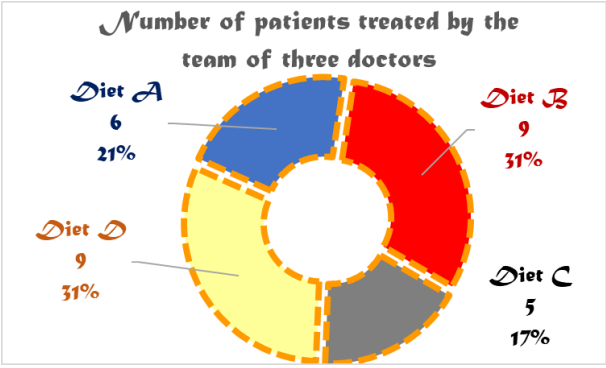
- How many patients have the normal weight at the 1st month of the diet?

  Hint: *Look at the patients' BMI values to determine the criteria for normal weight.*

- How many of these patients used type A diet?

Task 6. (max = 5 pts)

- How many patients were treated by doctors Curewizard, Allheal and Nopain?
- How the quantity of these patients is distributed between different types of diets?
- Plot your result in the doughnut chart. Format this chart as per sample:



Task 7. (max = 2 pts)

- How many patients among those, who used diets A and C, have bad results (i.e. negligible effectiveness of a diet)?
- What is their average BMI at 1st month of the diet?
- What was the lowest weight after the diet among these patients?

In task 8 use database functions
to answer the questions.

Task 8.

- **Do tasks 1—7 using database functions.** (max = 2 pts × 7 tasks = 14 pts)
- **Compare results of calculations (! they should coincide !).**
- **In task 3 additionally** find the name of the patient with the highest BMI at the 2nd month of the diet, the effectiveness of her/his diet, and the name of his/her doctor. (max = 2 pts)
- **In task 7 additionally** find the name of the patient with the lowest weight after the diet, his/her BMI before the diet, and the name of the doctor, who treated him/her. (max = 2 pts)

Варіант 6.

Task 0. (max = 3 pts)

- ☐ Open '*diets*' spreadsheet and save it to your work folder.
- ☐ Rename '*Sheet 1*' to '*diets data*'.
- ☐ Assume that duration of each diet is 93 days. Write this value into cell B2.
- ☐ Calculate the end dates of each diet in the corresponding column using formula expression.
- ☐ Calculate the weight loss for each patient in the corresponding column using formula expression;
  apply percentage format with two decimals to the result of your calculations.

  Note: $$weight\ loss(\%) = 100\% - \frac{final\ weight}{weight\ before\ the\ diet}$$

- ☐ Calculate Body Mass Index (BMI) for each patient before the diet in the corresponding column using formula expression.

  Note: $$BMI = \frac{weight\ in\ kg}{(height\ in\ m)^2}$$

- ☐ Add three empty columns after the columns with patients' weights change, name this triple similarly (i.e. 'change in BMI' : 'BMI 1st month', 'BMI 2nd month', 'BMI 3rd month'), and calculate BMIs for each patient after the 1st, 2nd and 3rd months of the diet using formula expression.
- ☐ Find effectiveness of the diet for each patient according to the rule:
  if the weight loss is less than 4%, the diet has ***low*** effectiveness;
  if the weight loss is between 4% and 10%, the diet has ***satisfactory*** effectiveness;
  if the weight loss is between 10% and 22%, the diet has ***moderate*** effectiveness;
  otherwise the diet has ***good*** effectiveness.

  Use logical function(s) to find the diets effectiveness !

In tasks 1—7 use conditional subtotal functions
(i.e. **COUNTIF(S)**, **SUMIF(S)**, **AVERAGEIF(S)**, **MINIFS** or **MAXIFS**)
to answer the questions.

Note: *In the further tasks make your calculations in empty cells aside the data table or in a separate sheet(s). For each result of calculations give a comment with the explanation of the obtained number.*

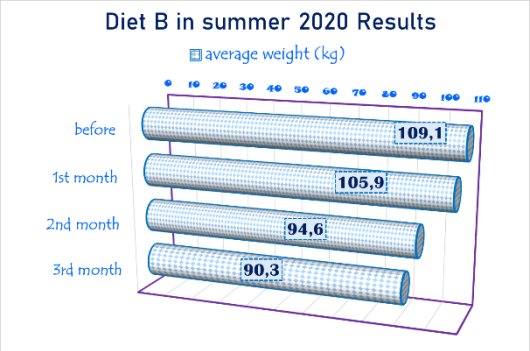
Task 1. (max = 2 pts)

- ☐ How many patients were treated by Dr. Curewizard?
- ☐ For how many of them the effectiveness of the diet was moderate?

Task 2. (max = 5 pts)

- ☐ What was the average weight before the diet for patients, who started diet B in the summer of 2020?
- ☐ How their weight change during three months of the diet?

☐ Plot the results of your calculations in a bar chart. Format the chart as per sample:

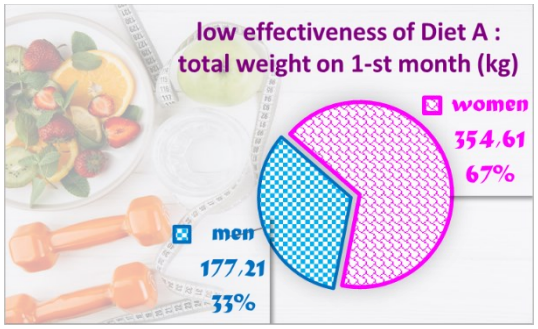


Task 3. (max = 1 pts)

☐ Find the lowest BMI at the end of the diet among Dr. Richards's patients, who used diet of type C.

Task 4. (max = 5 pts)

☐ Find total weight at the 1st month of the diet A of those patients, for whom this diet was of low effectiveness.
☐ Find the same separately for men and women.
☐ Plot your result in the pie chart. Format this chart as per sample:



Task 5. (max = 2 pts)

☐ How many patients were underweighted before the diet?
☐ How many of them reach the normal weight after the 3rd month of the diet?

Hint: *Look at the patients' BMI values to determine the overweight or normal conditions.*

Task 6. (max = 2 pts)

☐ How many patients treated by Dr. House used diets C and D?
☐ What was the highest weight before the diet among them?

Task 7. (max = 3 pts)

☐ How many patients with moderate effectiveness of diet B were treated by doctors Astroff and Treatman?
☐ What is their average weight loss?
☐ What was the highest BMI before the diet among these patients?

In task 8 use database functions
to answer the questions.

Task 8.

- **Do tasks 1—7 using database functions.** (max = 2 pts × 7 tasks = 14 pts)
- **Compare results of calculations (! they should coincide !).**
- **In task 3 additionally** find the name of the patient with the lowest BMI at the end of the diet, and when she/he starts the diet. (max = 2 pts)
- **In task 6 additionally** find the name of the patient with the highest weight before the diet, his/her final weight and BMI. (max = 2 pts)

Форми контролю самостійної роботи:

Контроль правильності виконання практичних завдань з теми.

Вид навчальних занять, під час яких проводиться контроль самостійної роботи:

Самостійна робота виконується студентами і перевіряється викладачем у позааудиторний час. У разі виникнення суперечливих питань щодо виконання завдань або оцінювання самостійної роботи, ці питання вирішуються під час консультацій.

Критерії оцінювання самостійної роботи:

Максимальний бал за кожне завдання самостійної роботи наведено поруч із кожним завданням. Бал, необхідний для зарахування практичного завдання самостійної роботи, повинен становити не менше, ніж 60% від максимально можливої оцінки.

МЕТОДИЧНА КАРТКА ОРГАНІЗАЦІЇ САМОСТІЙНОЇ РОБОТИ

Тема: Using pivot tables for analytics in medicine and healthcare. Subtotals and structuring datasheets

Ключові терміни та поняття теми: subtotals tools in spreadsheet, grouping data, levels of data grouping, pivot tables, pivot table fields, row / column fields, filter fields, values fields, value field functions, pivot charts.

Методичні рекомендації до виконання самостійної роботи:

Самостійна робота з даної теми передбачає виконання студентами практичних завдань за темою.

Рекомендовано користуватися конспектом, зробленим під час розв'язку типових завдань з теми на практичних заняттях, конспектом і слайдами лекції з поточної теми, власними файлами з виконаними завданнями на аудиторному практичному занятті.

Інші джерела, рекомендовані для використання під час самостійної роботи з теми:

1. Hoyt R.E. Health informatics: practical guide / Robert E. Hoyt, William R. Hersh. – 7th ed. – [S. l.] : Lulu.com, Informatics Education, 2018. – 475 p.
2. Essentials of Clinical Informatics / ed. by M.E. Frisse, K.E. Misulis. – [S. l.] : Oxford University Press, 2019. – 366 p.
3. Medical informatics: textbook for students of higher medical education establishments / I. Ye. Bulakh [et al.]. – 4th ed., rev.– Kyiv : Medicine, 2018. – 368 p.
4. Medical Informatics / S.J Singer [et al.]. – New York : Springer Science + Business Media, 2001. – 780 p.
5. Musen M.A. Handbook of Medical Informatics / ed. by M.A. Musen, J. van Bemmel. – [S. l.] : Springer, 2002. – 628 p.

Самостійна робота передбачає вдосконалення практичних навичок з теми та набуття професійних компетентностей у двох напрямках:

A. Використання інструментів підведення проміжних підсумків, групування даних і структурування електронних таблиць (набір завдань виконується на модельній базі даних з файлу '*med-network-report-example.xlsx*');

B. Використання зведених таблиць і діаграм для вирішення завдань управління охороною здоров'я і аналізу клінічних даних пацієнтів (набір завдань виконується на модельних базах даних з файлів '*med-network-report-example.xlsx*' і '*diets.xlsx*').

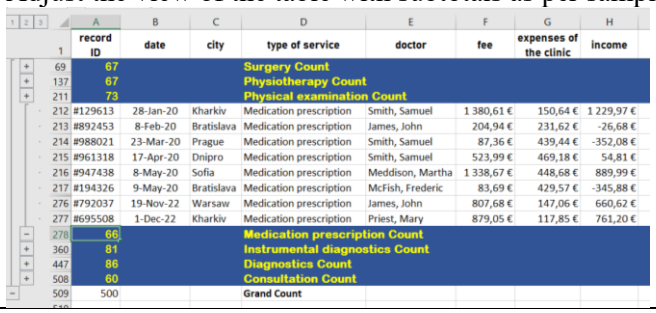
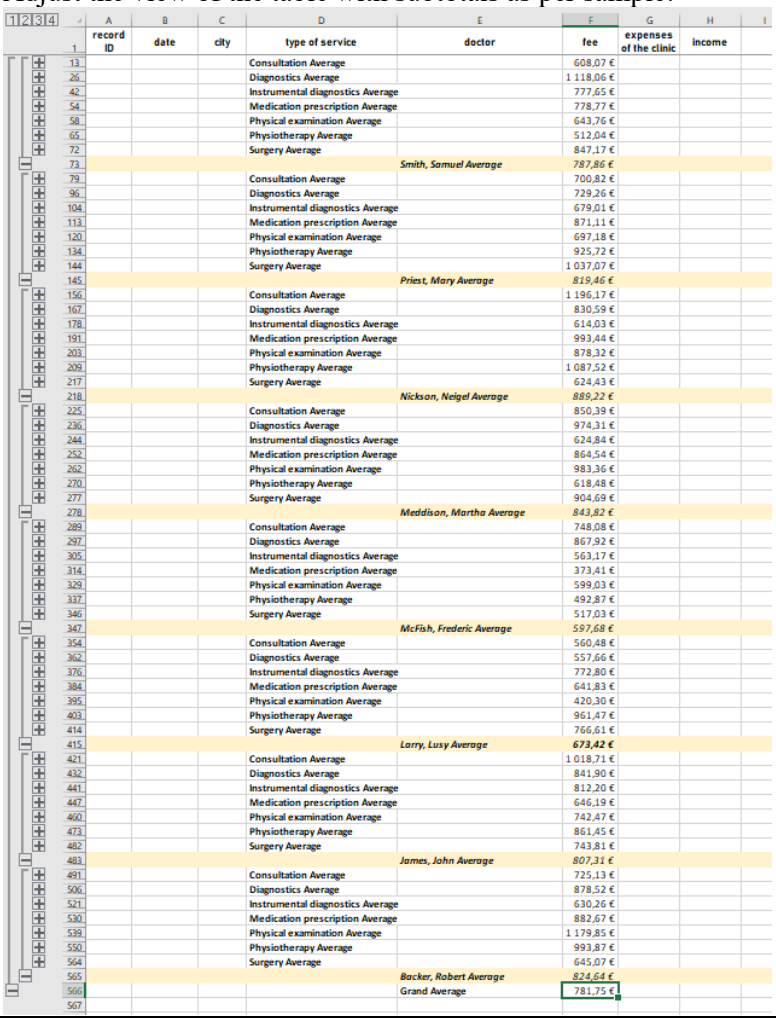
Практичні завдання виконуються студентами за варіантами, для оцінювання кожним студентом надається власний варіант завдання.

Нижче наведено перелік варіантів завдань для самостійної роботи з теми.

Завдання для самостійної (домашньої) роботи:

Напрямок А

Варіант 1.

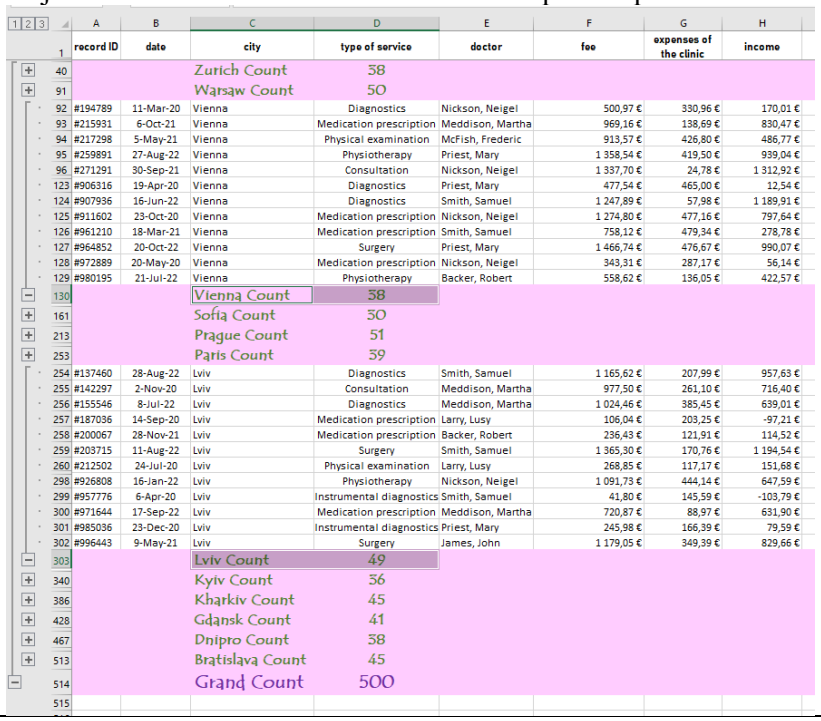
	max pts
Task 0. ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder. ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.	
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show how many records about different types of services are there in the datatable. Adjust the view of the table with subtotals as per sample: 	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show average fees for each type of service provided by different doctors. Adjust the view of the table with subtotals as per sample: 	3
Total (max pts) =	5

Варіант 2.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show how many services were provided in different cities. Adjust the view of the table with subtotals as per sample:	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show total fees obtained by each doctor for different types of services. Adjust the view of the table with subtotals as per sample:	3
Total (max pts) =	5



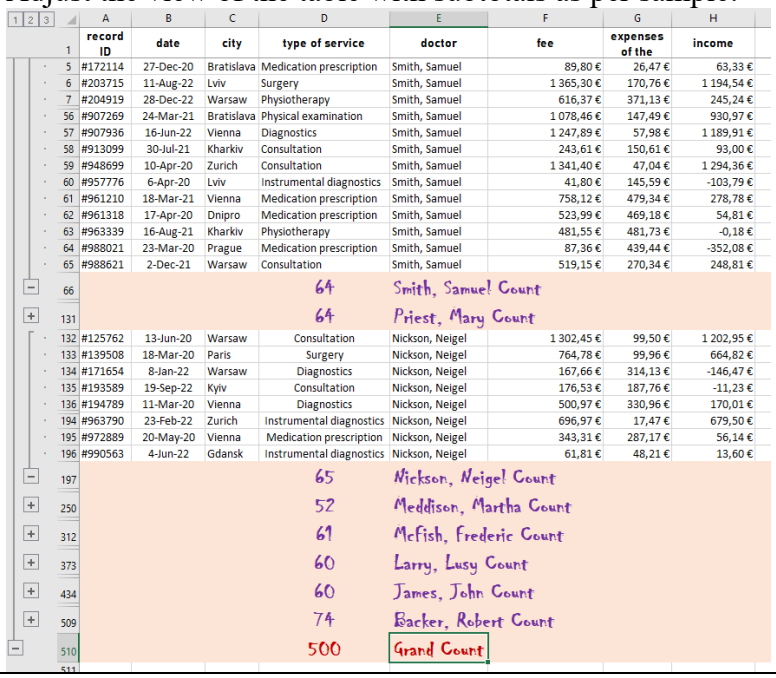
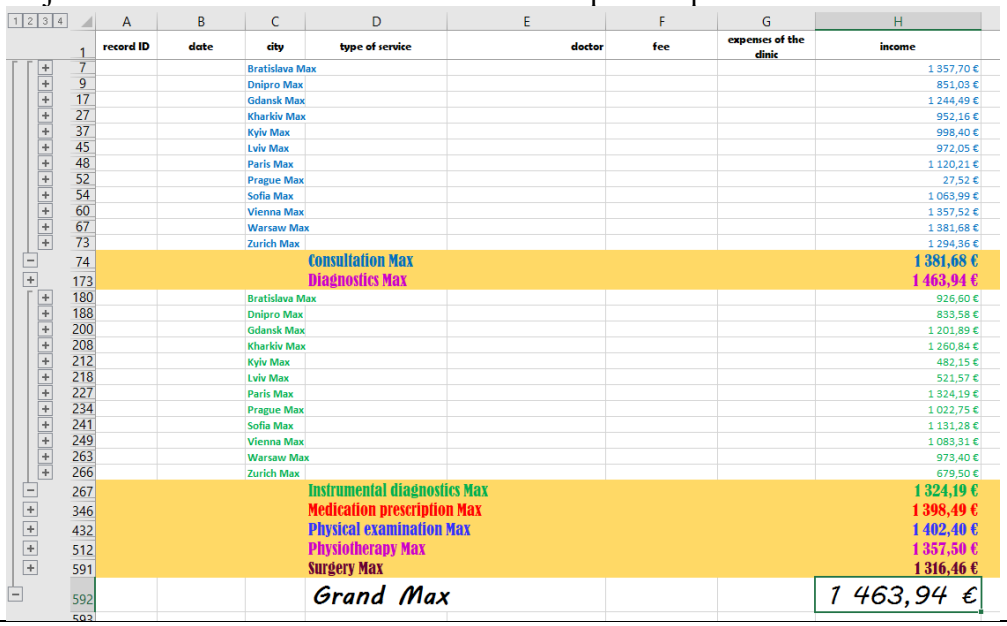
	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
40			Zurich Count	58				
91			Warsaw Count	50				
92	#194789	11-Mar-20	Vienna	Diagnostics	Nickson, Neigel	500,97 €	330,96 €	170,01 €
93	#215931	6-Oct-21	Vienna	Medication prescription	Meddison, Martha	969,16 €	138,69 €	830,47 €
94	#217298	5-May-21	Vienna	Physical examination	McFish, Frederic	913,57 €	426,80 €	486,77 €
95	#259891	27-Aug-22	Vienna	Physiotherapy	Priest, Mary	1 358,54 €	419,50 €	939,04 €
96	#271291	30-Sep-21	Vienna	Consultation	Nickson, Neigel	1 337,70 €	24,78 €	1 312,92 €
123	#906316	19-Apr-20	Vienna	Diagnostics	Priest, Mary	477,54 €	465,00 €	12,54 €
124	#907936	16-Jun-22	Vienna	Diagnostics	Smith, Samuel	1 247,89 €	57,98 €	1 189,91 €
125	#911602	23-Oct-20	Vienna	Medication prescription	Nickson, Neigel	1 274,80 €	477,16 €	797,64 €
126	#961210	18-Mar-21	Vienna	Medication prescription	Smith, Samuel	758,12 €	479,34 €	278,78 €
127	#964852	20-Oct-22	Vienna	Surgery	Priest, Mary	1 466,74 €	476,67 €	990,07 €
128	#972889	20-May-20	Vienna	Medication prescription	Nickson, Neigel	343,31 €	287,17 €	56,14 €
129	#980195	21-Jul-22	Vienna	Physiotherapy	Backer, Robert	558,62 €	136,05 €	422,57 €
130			Vienna Count	38				
161			Sofia Count	50				
213			Prague Count	51				
253			Paris Count	39				
254	#137460	28-Aug-22	Lviv	Diagnostics	Smith, Samuel	1 165,62 €	207,99 €	957,63 €
255	#142297	2-Nov-20	Lviv	Consultation	Meddison, Martha	977,50 €	261,10 €	716,40 €
256	#155546	8-Jul-22	Lviv	Diagnostics	Meddison, Martha	1 024,46 €	385,45 €	639,01 €
257	#187036	14-Sep-20	Lviv	Medication prescription	Larry, Lusy	106,04 €	203,25 €	-97,21 €
258	#200067	28-Nov-21	Lviv	Medication prescription	Backer, Robert	236,43 €	121,91 €	114,52 €
259	#203715	11-Aug-22	Lviv	Surgery	Smith, Samuel	1 365,30 €	170,76 €	1 194,54 €
260	#212502	24-Jul-20	Lviv	Physical examination	Larry, Lusy	268,85 €	117,17 €	151,68 €
298	#926808	16-Jan-22	Lviv	Physiotherapy	Nickson, Neigel	1 091,73 €	444,14 €	647,59 €
299	#957776	6-Apr-20	Lviv	Instrumental diagnostics	Smith, Samuel	41,80 €	145,59 €	-103,79 €
300	#971644	17-Sep-22	Lviv	Medication prescription	Meddison, Martha	720,87 €	88,97 €	631,90 €
301	#985036	23-Dec-20	Lviv	Instrumental diagnostics	Priest, Mary	245,98 €	166,39 €	79,59 €
302	#996443	9-May-21	Lviv	Surgery	James, John	1 179,05 €	349,39 €	829,66 €
303			Lviv Count	49				
340			Kyiv Count	56				
386			Kharkiv Count	45				
428			Gdansk Count	41				
467			Dnipro Count	38				
513			Bratislava Count	45				
514			Grand Count	500				
515								

	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
73					Smith, Samuel Total	50 423,27 €		
145					Priest, Mary Total	52 445,26 €		
156				Consultation Total		11 961,73 €		
167				Diagnostics Total		8 305,90 €		
178				Instrumental diagnostics Total		6 140,31 €		
191				Medication prescription Total		11 921,23 €		
203				Physical examination Total		9 661,54 €		
209				Physiotherapy Total		5 437,62 €		
217				Surgery Total		4 371,02 €		
218					Nickson, Neigel Total	57 799,35 €		
278					Meddison, Martha Total	43 878,89 €		
347					McFish, Frederic Total	36 458,44 €		
354				Consultation Total		3 362,87 €		
362				Diagnostics Total		3 903,65 €		
376				Instrumental diagnostics Total		10 046,42 €		
377	#170915	30-Jul-21	Zurich	Medication prescription	Larry, Lusy	392,47 €	297,61 €	94,86 €
378	#499168	11-Jan-22	Prague	Medication prescription	Larry, Lusy	1 081,10 €	255,90 €	825,20 €
379	#839819	15-Mar-21	Paris	Medication prescription	Larry, Lusy	1 081,18 €	74,08 €	1 007,10 €
380	#187036	14-Sep-20	Lviv	Medication prescription	Larry, Lusy	106,04 €	203,25 €	-97,21 €
381	#277564	3-Jun-22	Kyiv	Medication prescription	Larry, Lusy	668,45 €	253,98 €	414,47 €
382	#891716	2-Sep-22	Kyiv	Medication prescription	Larry, Lusy	352,76 €	111,89 €	240,87 €
383	#350936	21-Aug-20	Dnipro	Medication prescription	Larry, Lusy	810,78 €	96,34 €	714,44 €
384				Medication prescription Total		4 492,78 €		
395				Physical examination Total		4 202,95 €		
403				Physiotherapy Total		6 730,29 €		
414				Surgery Total		7 666,13 €		
415					Larry, Lusy Total	40 405,09 €		
483					James, John Total	48 438,63 €		
491				Consultation Total		5 075,90 €		
506				Diagnostics Total		12 299,22 €		
521				Instrumental diagnostics Total		8 823,67 €		
530				Medication prescription Total		7 061,34 €		
539				Physical examination Total		9 438,80 €		
550				Physiotherapy Total		9 938,70 €		
564				Surgery Total		8 385,96 €		
565					Backer, Robert Total	61 023,59 €		
566					Grand Total	390 872,52 €		
567								

Варіант 3.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show how many services were provided by each doctor. Adjust the view of the table with subtotals as per sample: 	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show highest incomes obtained from each type of service in different cities. Adjust the view of the table with subtotals as per sample: 	3
Total (max pts) =	5

Варіант 4.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

		max pts
Task 1.	Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show total incomes of medical centers in each city. Adjust the view of the table with subtotals as per sample:	2
Task 2.	Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show how many services of each type were provided by different doctors. Adjust the view of the table with subtotals as per sample:	3
	Total (max pts) =	5

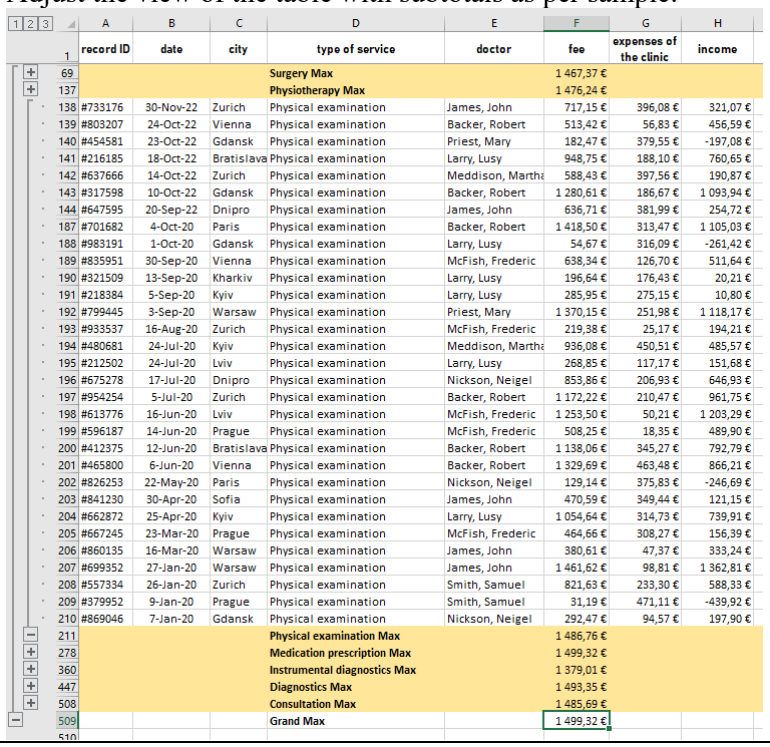
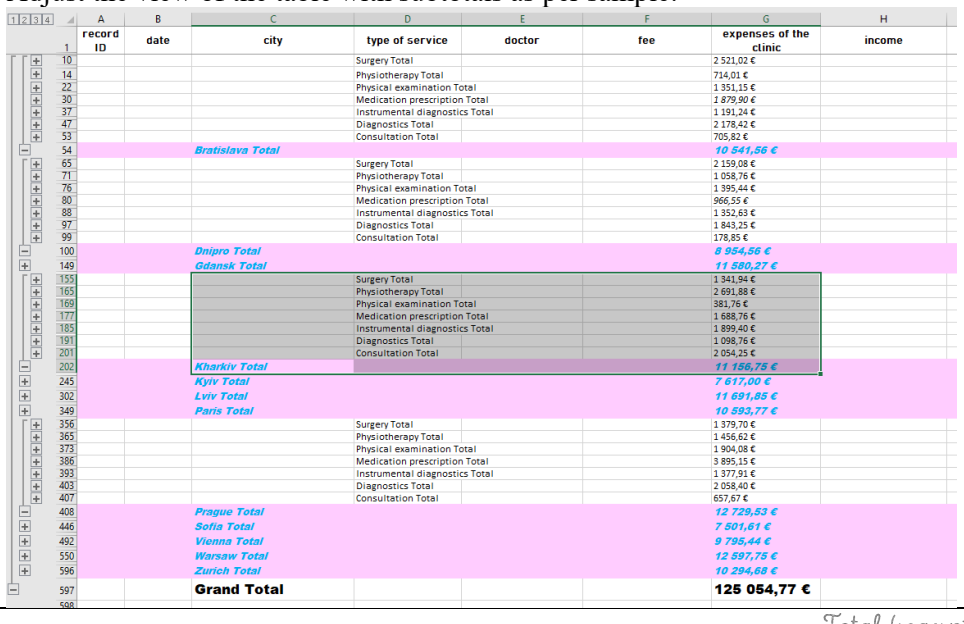
	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
47			Bratislava Total					26 715,53 €
86			Dnipro Total					17 795,92 €
128			Gdansk Total					18 441,98 €
174			Kharkiv Total					25 098,12 €
175	#590513	15-Apr-22	Kyiv	Diagnostics	Meddison, Martha	1 419,19 €	20,82 €	1 398,37 €
176	#364294	28-Oct-20	Kyiv	Medication prescription	Meddison, Martha	1 094,54 €	101,41 €	993,13 €
177	#218206	26-Dec-22	Kyiv	Consultation	Backer, Robert	260,59 €	349,30 €	-88,71 €
178	#233279	5-Dec-22	Kyiv	Diagnostics	Backer, Robert	166,95 €	284,20 €	-117,25 €
179	#933414	25-Oct-20	Kyiv	Consultation	Priest, Mary	548,66 €	145,16 €	403,50 €
180	#277564	3-Jun-22	Kyiv	Medication prescription	Larry, Lusy	668,45 €	253,98 €	414,47 €
181	#827386	14-Sep-20	Kyiv	Diagnostics	Nickson, Neigel	1 001,44 €	377,63 €	623,81 €
182	#844749	26-Feb-21	Kyiv	Physical examination	James, John	1 061,44 €	14,51 €	1 046,93 €
183	#662872	25-Apr-20	Kyiv	Physical examination	Larry, Lusy	1 054,64 €	314,73 €	739,91 €
184	#389619	29-Jun-22	Kyiv	Diagnostics	James, John	196,43 €	70,32 €	126,11 €
185	#427003	4-Mar-22	Kyiv	Diagnostics	Backer, Robert	1 135,00 €	131,29 €	1 003,71 €
186	#359265	15-Aug-20	Kyiv	Diagnostics	Nickson, Neigel	1 493,35 €	29,41 €	1 463,94 €
187	#480681	24-Jul-20	Kyiv	Physical examination	Meddison, Martha	936,08 €	450,51 €	485,57 €
188	#193589	19-Sep-22	Kyiv	Consultation	Nickson, Neigel	176,53 €	187,76 €	-11,23 €
189	#492428	12-Aug-21	Kyiv	Diagnostics	Backer, Robert	928,16 €	31,20 €	896,96 €
190	#700372	17-Nov-20	Kyiv	Physiotherapy	Meddison, Martha	125,82 €	308,07 €	-182,25 €
191	#252487	26-Aug-22	Kyiv	Medication prescription	Nickson, Neigel	1 318,11 €	350,24 €	967,87 €
192	#247969	26-Jun-20	Kyiv	Consultation	James, John	621,14 €	254,87 €	366,27 €
193	#458316	4-Dec-21	Kyiv	Physiotherapy	McFish, Frederic	1 072,69 €	134,06 €	938,63 €
194	#486598	7-Aug-22	Kyiv	Diagnostics	Meddison, Martha	743,28 €	12,61 €	730,67 €
195	#811061	27-Apr-21	Kyiv	Consultation	Nickson, Neigel	1 252,42 €	367,96 €	884,46 €
196	#887686	20-Dec-20	Kyiv	Consultation	Smith, Samuel	180,28 €	123,26 €	57,02 €
197	#805188	15-May-20	Kyiv	Medication prescription	Priest, Mary	865,60 €	82,34 €	783,26 €
198	#199448	26-Apr-22	Kyiv	Physiotherapy	McFish, Frederic	207,82 €	18,02 €	189,80 €
199	#913921	29-Apr-20	Kyiv	Instrumental diagnostics	Backer, Robert	551,57 €	69,42 €	482,15 €
200	#840863	20-Jan-22	Kyiv	Consultation	Smith, Samuel	791,08 €	99,44 €	691,64 €
201	#798290	26-Aug-21	Kyiv	Medication prescription	Priest, Mary	537,62 €	428,08 €	109,54 €
202	#218384	5-Sep-20	Kyiv	Physical examination	Larry, Lusy	285,95 €	275,15 €	10,80 €
203	#225546	1-Feb-20	Kyiv	Consultation	Smith, Samuel	247,61 €	170,73 €	76,88 €
204	#347425	13-Oct-21	Kyiv	Instrumental diagnostics	Larry, Lusy	210,46 €	413,96 €	-203,50 €
205	#847157	20-Feb-22	Kyiv	Medication prescription	McFish, Frederic	1 091,60 €	335,72 €	755,88 €
206	#867011	20-Mar-20	Kyiv	Instrumental diagnostics	James, John	659,41 €	410,49 €	248,92 €
207	#891716	2-Sep-22	Kyiv	Medication prescription	Larry, Lusy	352,76 €	111,89 €	240,87 €
208	#969014	9-Oct-21	Kyiv	Diagnostics	Backer, Robert	827,15 €	134,03 €	693,12 €
209	#978966	13-Feb-22	Kyiv	Consultation	Backer, Robert	1 342,51 €	344,11 €	998,40 €
210	#678032	8-Jan-20	Kyiv	Diagnostics	Nickson, Neigel	1 397,10 €	410,32 €	986,78 €
211			Kyiv Total					19 206,43 €
261			Lviv Total					27 611,93 €
301			Paris Total					23 039,55 €
353			Prague Total					19 352,04 €
384			Sofia Total					15 923,56 €
423			Vienna Total					20 276,53 €
474			Warsaw Total					31 639,27 €
513			Zurich Total					20 716,89 €
514			Grand Total					265 817,75 €

	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
15				13	Backer, Robert Count			
24				8	James, John Count			
35				10	Larry, Lusy Count			
44				8	McFish, Frederic Count			
51				6	Meddison, Martha Count			
59				7	Nickson, Neigel Count			
69				9	Priest, Mary Count			
76				6	Smith, Samuel Count			
77			Surgery Count	67				
88				10	Backer, Robert Count			
101				12	James, John Count			
109				7	Larry, Lusy Count			
117				7	McFish, Frederic Count			
125				7	Meddison, Martha Count			
131				5	Nickson, Neigel Count			
145				13	Priest, Mary Count			
152				6	Smith, Samuel Count			
153			Physiotherapy Count	67				
235			Physical examination Count	73				
310			Medication prescription Count	66				
400			Instrumental diagnostics Count	81				
495			Diagnostics Count	86				
503				7	Backer, Robert Count			
509				5	James, John Count			
516				6	Larry, Lusy Count			
527				10	McFish, Frederic Count			
534				6	Meddison, Martha Count			
545				10	Nickson, Neigel Count			
551				5	Priest, Mary Count			
563				11	Smith, Samuel Count			
564			Consultation Count	60				
565			Grand Count	500				

Варіант 5.

Task 0.

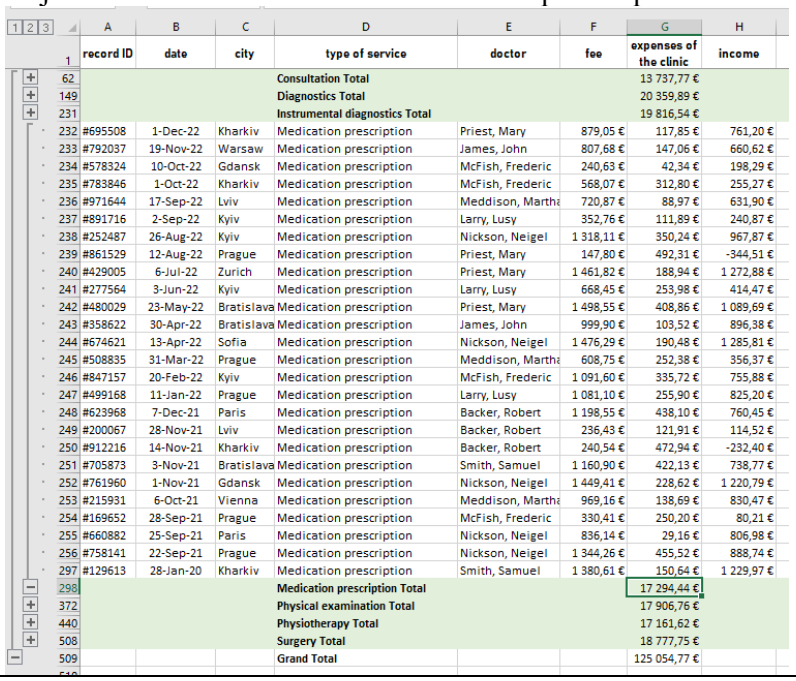
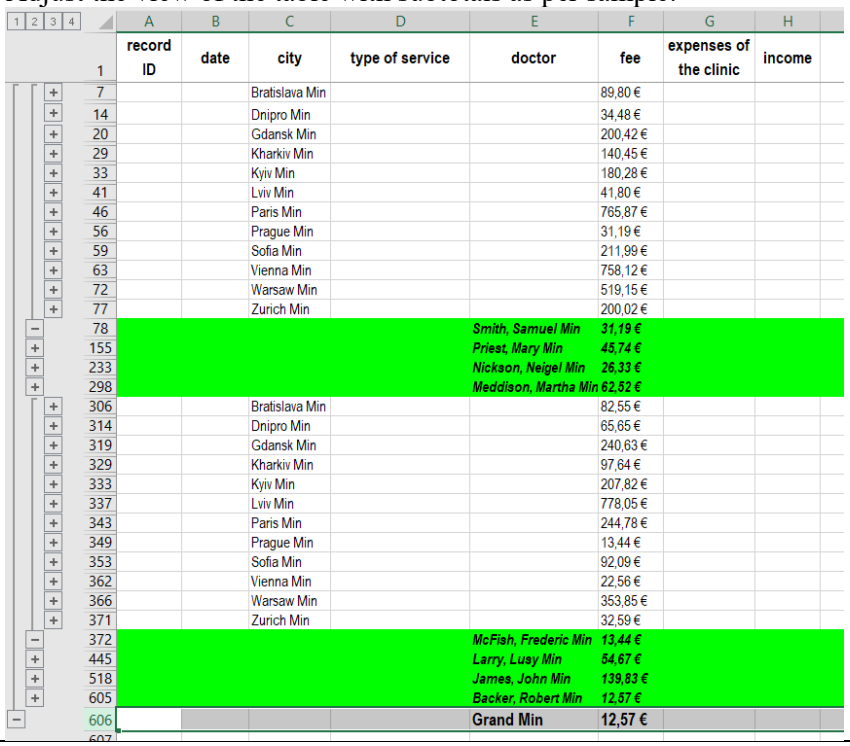
- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

		max pts
Task 1.	Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show highest fees obtained for each type of service. Adjust the view of the table with subtotals as per sample: 	2
Task 2.	Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show total expenses paid for different types of services in each city. Adjust the view of the table with subtotals as per sample: 	3
	Total (max pts) =	5

Варіант 6.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

		max pts
Task 1.	Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show total clinic expenses for each type of service. Adjust the view of the table with subtotals as per sample: 	2
Task 2.	Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show lowest fees obtained by each doctor in different cities. Adjust the view of the table with subtotals as per sample: 	3
	Total (max pts) =	5

Варіант 7.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show average income for each type of service. Adjust the view of the table with subtotals as per sample:	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show how many services were provided by each doctor in different cities. Adjust the view of the table with subtotals as per sample:	3
	Total (max pts) = 5

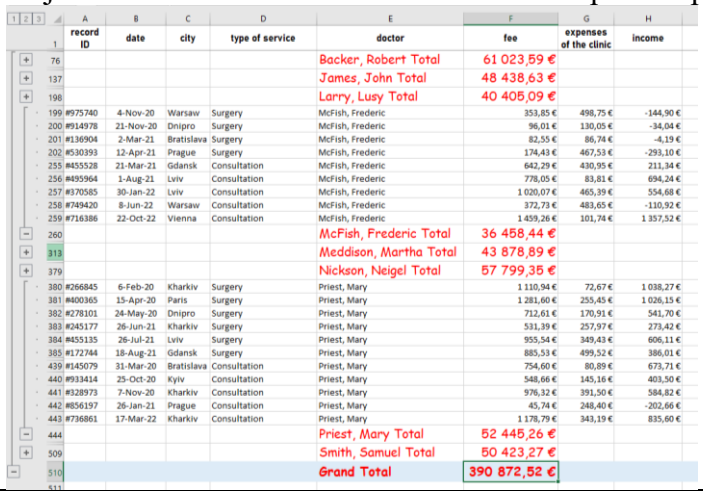
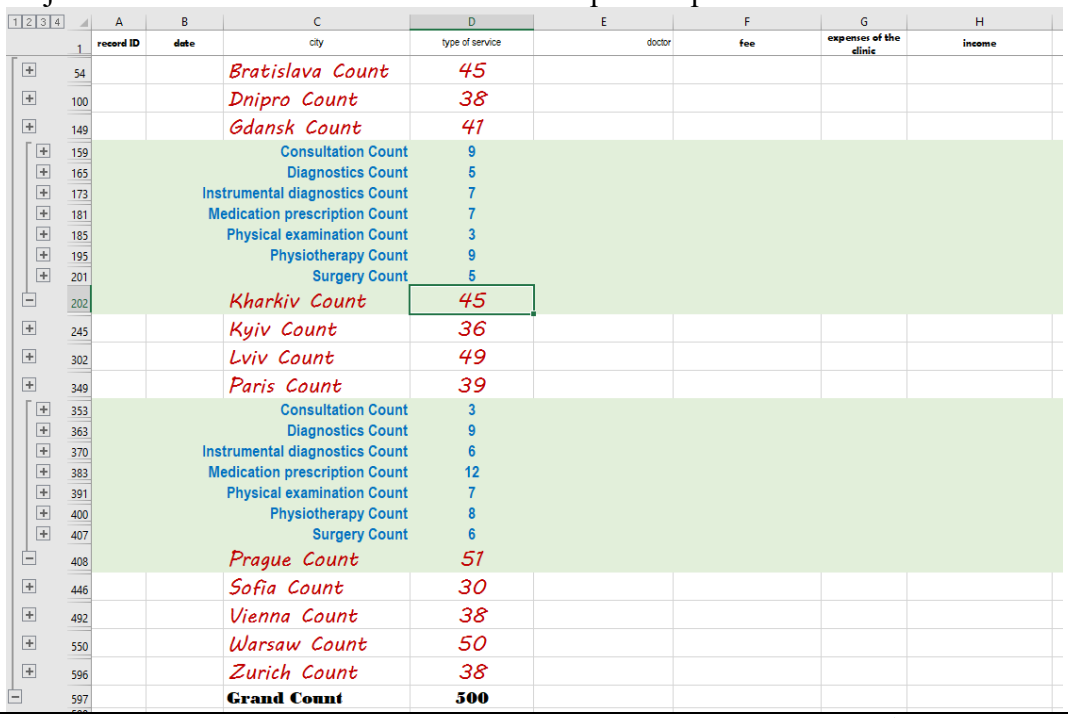
	A	B	C	D	E	F	G	H
1	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
69				*Surgery Average*				*471,30 €*
137				*Physiotherapy Average*				*569,68 €*
211				*Physical examination Average*				*515,85 €*
278				*Medication prescription Average*				*514,94 €*
279	#323480	2-Jan-20	Warsaw	Instrumental diagnostics	Larry, Lusy	943,18 €	347,43 €	595,75 €
280	#194542	8-Jan-20	Dnipro	Instrumental diagnostics	Backer, Robert	523,49 €	108,15 €	415,34 €
299	#491265	2-Sep-20	Lviv	Instrumental diagnostics	Larry, Lusy	580,20 €	179,39 €	400,81 €
300	#244575	24-Sep-20	Prague	Instrumental diagnostics	Smith, Samuel	1 232,00 €	209,25 €	1 022,75 €
301	#439428	28-Sep-20	Paris	Instrumental diagnostics	Nickson, Neigel	1 352,31 €	28,12 €	1 324,19 €
311	#292895	11-Jan-21	Warsaw	Instrumental diagnostics	Larry, Lusy	593,42 €	391,60 €	201,82 €
312	#310882	28-Jan-21	Kharkiv	Instrumental diagnostics	McFish, Frederic	1 176,64 €	25,57 €	1 151,07 €
313	#387453	7-Feb-21	Warsaw	Instrumental diagnostics	Smith, Samuel	765,63 €	221,84 €	543,79 €
314	#423270	19-Feb-21	Sofia	Instrumental diagnostics	Backer, Robert	1 182,30 €	51,02 €	1 131,28 €
315	#169662	2-Mar-21	Gdansk	Instrumental diagnostics	Backer, Robert	434,73 €	435,03 €	-0,30 €
316	#741086	5-Mar-21	Kharkiv	Instrumental diagnostics	Meddison, Martha	806,53 €	104,79 €	701,74 €
317	#997374	29-Mar-21	Warsaw	Instrumental diagnostics	Larry, Lusy	817,62 €	350,18 €	467,44 €
318	#753812	28-May-21	Paris	Instrumental diagnostics	Smith, Samuel	765,87 €	489,05 €	276,82 €
356	#270766	21-Sep-22	Lviv	Instrumental diagnostics	James, John	493,44 €	383,56 €	109,88 €
357	#696615	27-Sep-22	Paris	Instrumental diagnostics	Nickson, Neigel	656,72 €	318,22 €	338,50 €
358	#379262	23-Nov-22	Dnipro	Instrumental diagnostics	James, John	678,01 €	362,71 €	315,30 €
359	#409542	14-Dec-22	Prague	Instrumental diagnostics	Backer, Robert	315,53 €	137,88 €	177,65 €
360				*Instrumental diagnostics Average*				*449,70 €*
447				*Diagnostics Average*				*621,76 €*
508				*Consultation Average*				*575,54 €*
509				Grand Average				531,64 €

	A	B	C	D	E	F	G	H
1	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
88				74	Backer, Robert Count			
96			Bratislava Count	7				
101			Dnipro Count	4				
106			Gdansk Count	4				
111			Kharkiv Count	4				
116			Kyiv Count	4				
122			Lviv Count	5				
125			Paris Count	2				
132			Prague Count	6				
137			Sofia Count	4				
141			Vienna Count	3				
155			Warsaw Count	13				
160			Zurich Count	4				
161				60	James, John Count			
234				60	Larry, Lusy Count			
308				61	McFish, Frederic Count			
373				52	Meddison, Martha Count			
378			Bratislava Count	4				
382			Dnipro Count	3				
388			Gdansk Count	5				
392			Kharkiv Count	3				
399			Kyiv Count	6				
405			Lviv Count	5				
414			Paris Count	8				
422			Prague Count	7				
430			Sofia Count	7				
436			Vienna Count	5				
441			Warsaw Count	4				
450			Zurich Count	8				
451				65	Nickson, Neigel Count			
528				64	Priest, Mary Count			
605				64	Smith, Samuel Count			
606				500	Grand Count			

Варіант 8.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

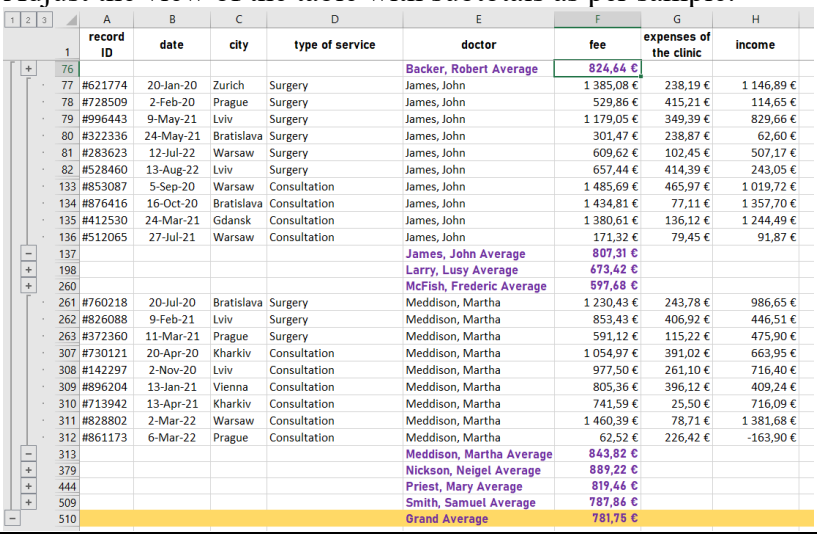
	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show total fees obtained by each doctor. Adjust the view of the table with subtotals as per sample: 	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show how many services of each type were provided in different cities. Adjust the view of the table with subtotals as per sample: 	3
Total (max pts) =	5

Варіант 9.

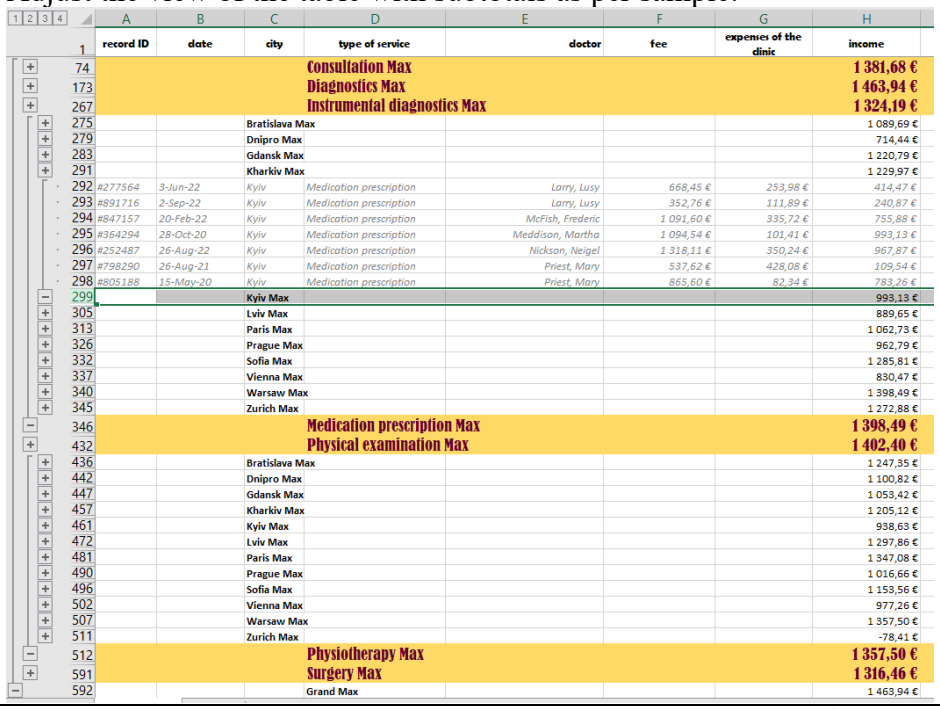
Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show average fee obtained by each doctor. Adjust the view of the table with subtotals as per sample:	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show highest incomes obtained from each type of service in different cities. Adjust the view of the table with subtotals as per sample:	3
Total (max pts) =	5



	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
76					Backer, Robert Average	824,64 €		
77	#621774	20-Jan-20	Zurich	Surgery	James, John	1 385,08 €	238,19 €	1 146,89 €
78	#728509	2-Feb-20	Prague	Surgery	James, John	529,86 €	415,21 €	114,65 €
79	#996443	9-May-21	Lviv	Surgery	James, John	1 179,05 €	349,39 €	829,66 €
80	#322336	24-May-21	Bratislava	Surgery	James, John	301,47 €	238,87 €	62,60 €
81	#283623	12-Jul-22	Warsaw	Surgery	James, John	609,62 €	102,45 €	507,17 €
82	#528460	13-Aug-22	Lviv	Surgery	James, John	657,44 €	414,39 €	243,05 €
133	#853087	5-Sep-20	Warsaw	Consultation	James, John	1 485,69 €	465,97 €	1 019,72 €
134	#876416	16-Oct-20	Bratislava	Consultation	James, John	1 434,81 €	77,11 €	1 357,70 €
135	#412530	24-Mar-21	Gdansk	Consultation	James, John	1 380,61 €	136,12 €	1 244,49 €
136	#512065	27-Jul-21	Warsaw	Consultation	James, John	171,32 €	79,45 €	91,87 €
137					James, John Average	807,31 €		
198					Larry, Lusy Average	673,42 €		
260					McFish, Frederic Average	597,68 €		
261	#760218	20-Jul-20	Bratislava	Surgery	Meddison, Martha	1 230,43 €	243,78 €	986,65 €
262	#826088	9-Feb-21	Lviv	Surgery	Meddison, Martha	853,43 €	406,92 €	446,51 €
263	#372360	11-Mar-21	Prague	Surgery	Meddison, Martha	591,12 €	115,22 €	475,90 €
307	#730121	20-Apr-20	Kharkiv	Consultation	Meddison, Martha	1 054,97 €	391,02 €	663,95 €
308	#142297	2-Nov-20	Lviv	Consultation	Meddison, Martha	977,50 €	261,10 €	716,40 €
309	#896204	13-Jan-21	Vienna	Consultation	Meddison, Martha	805,36 €	396,12 €	409,24 €
310	#713942	13-Apr-21	Kharkiv	Consultation	Meddison, Martha	741,59 €	25,50 €	716,09 €
311	#828802	2-Mar-22	Warsaw	Consultation	Meddison, Martha	1 460,39 €	78,71 €	1 381,68 €
312	#861173	6-Mar-22	Prague	Consultation	Meddison, Martha	62,52 €	226,42 €	-163,90 €
313					Meddison, Martha Average	843,82 €		
379					Nickson, Neigel Average	889,22 €		
444					Priest, Mary Average	819,46 €		
509					Smith, Samuel Average	787,86 €		
510					Grand Average	781,75 €		



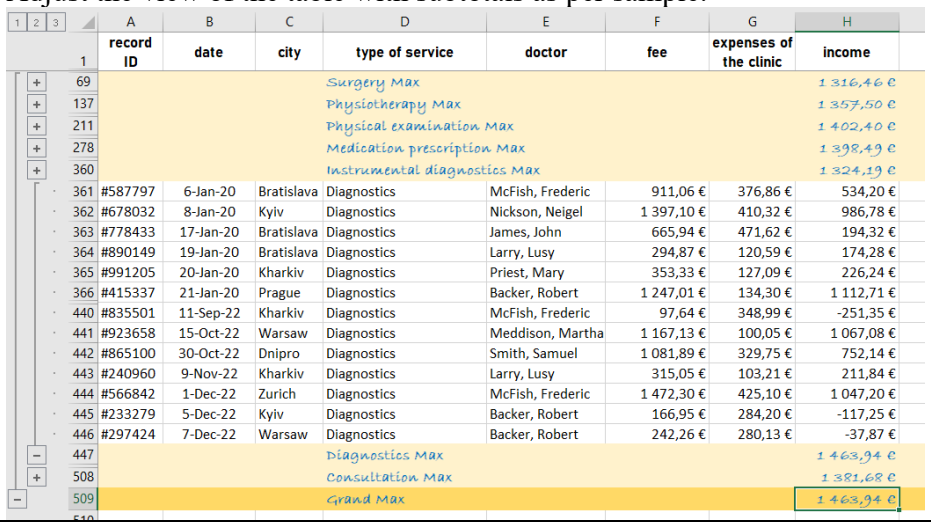
	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
74				Consultation Max				1 381,68 €
173				Diagnostics Max				1 463,94 €
267				Instrumental diagnostics Max				1 324,19 €
275			Bratislava Max					1 089,69 €
279			Dnipro Max					714,44 €
283			Gdansk Max					1 220,79 €
291			Kharkiv Max					1 229,97 €
292	#277564	3-Jun-22	Kyiv	Medication prescription	Larry, Lusy	668,45 €	253,98 €	414,47 €
293	#891716	2-Sep-22	Kyiv	Medication prescription	Larry, Lusy	352,76 €	111,89 €	240,87 €
294	#847157	20-Feb-22	Kyiv	Medication prescription	McFish, Frederic	1 091,60 €	335,72 €	755,88 €
295	#364294	28-Oct-20	Kyiv	Medication prescription	Meddison, Martha	1 094,54 €	101,41 €	993,13 €
296	#252487	26-Aug-22	Kyiv	Medication prescription	Nickson, Neigel	1 318,11 €	350,24 €	967,87 €
297	#798290	26-Aug-21	Kyiv	Medication prescription	Priest, Mary	537,62 €	428,08 €	109,54 €
298	#805188	15-May-20	Kyiv	Medication prescription	Priest, Mary	865,60 €	82,34 €	783,26 €
299			Kyiv Max					993,13 €
305			Lviv Max					889,65 €
313			Paris Max					1 062,73 €
326			Prague Max					962,79 €
332			Sofia Max					1 285,81 €
337			Vienna Max					830,47 €
340			Warsaw Max					1 398,49 €
345			Zurich Max					1 272,88 €
346				Medication prescription Max				1 398,49 €
432				Physical examination Max				1 402,40 €
436			Bratislava Max					1 247,35 €
442			Dnipro Max					1 100,82 €
447			Gdansk Max					1 053,42 €
457			Kharkiv Max					1 205,12 €
461			Kyiv Max					938,63 €
472			Lviv Max					1 297,86 €
481			Paris Max					1 347,08 €
490			Prague Max					1 016,66 €
496			Sofia Max					1 153,56 €
502			Vienna Max					977,26 €
507			Warsaw Max					1 357,50 €
511			Zurich Max					-78,41 €
512				Physiotherapy Max				1 357,50 €
591				Surgery Max				1 316,46 €
592				Grand Max				1 463,94 €

Варіант 10.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show highest incomes obtained from different types of services. Adjust the view of the table with subtotals as per sample:	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show average fees obtained by each doctor in different cities. Adjust the view of the table with subtotals as per sample:	3
Total (max pts) =	5



	A	B	C	D	E	F	G	H
1	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
69				Surgery Max				1 316,46 €
137				Physiotherapy Max				1 357,50 €
211				Physical examination Max				1 402,40 €
278				Medication prescription Max				1 398,49 €
360				Instrumental diagnostics Max				1 324,19 €
361	#587797	6-Jan-20	Bratislava	Diagnostics	McFish, Frederic	911,06 €	376,86 €	534,20 €
362	#678032	8-Jan-20	Kyiv	Diagnostics	Nickson, Neigel	1 397,10 €	410,32 €	986,78 €
363	#778433	17-Jan-20	Bratislava	Diagnostics	James, John	665,94 €	471,62 €	194,32 €
364	#890149	19-Jan-20	Bratislava	Diagnostics	Larry, Lusy	294,87 €	120,59 €	174,28 €
365	#991205	20-Jan-20	Kharkiv	Diagnostics	Priest, Mary	353,33 €	127,09 €	226,24 €
366	#415337	21-Jan-20	Prague	Diagnostics	Backer, Robert	1 247,01 €	134,30 €	1 112,71 €
440	#835501	11-Sep-22	Kharkiv	Diagnostics	McFish, Frederic	97,64 €	348,99 €	-251,35 €
441	#923658	15-Oct-22	Warsaw	Diagnostics	Meddison, Martha	1 167,13 €	100,05 €	1 067,08 €
442	#865100	30-Oct-22	Dnipro	Diagnostics	Smith, Samuel	1 081,89 €	329,75 €	752,14 €
443	#240960	9-Nov-22	Kharkiv	Diagnostics	Larry, Lusy	315,05 €	103,21 €	211,84 €
444	#566842	1-Dec-22	Zurich	Diagnostics	McFish, Frederic	1 472,30 €	425,10 €	1 047,20 €
445	#233279	5-Dec-22	Kyiv	Diagnostics	Backer, Robert	166,95 €	284,20 €	-117,25 €
446	#297424	7-Dec-22	Warsaw	Diagnostics	Backer, Robert	242,26 €	280,13 €	-37,87 €
447				Diagnostics Max				1 463,94 €
508				Consultation Max				1 381,68 €
509				Grand Max				1 463,94 €

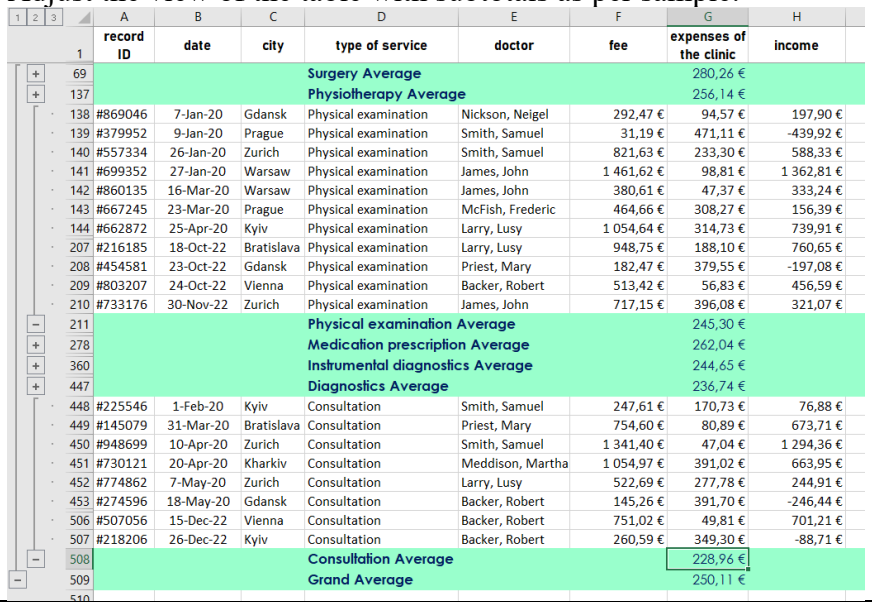
	A	B	C	D	E	F	G
1	record ID	date	city	type of service	doctor	fee	expenses of the clinic
29			Kharkiv Average			863,37 €	
33			Kyiv Average			406,32 €	
41			Lviv Average			918,44 €	
46			Paris Average			1 258,87 €	
56			Prague Average			607,29 €	
59			Sofia Average			611,24 €	
63			Vienna Average			985,11 €	
72			Warsaw Average			914,78 €	
77			Zurich Average			698,52 €	
78					Smith, Samuel Average	787,86 €	
84			Bratislava Average			980,91 €	
87			Dnipro Average			478,93 €	
96			Gdansk Average			844,69 €	
107			Kharkiv Average			847,35 €	
111			Kyiv Average			650,63 €	
122			Lviv Average			739,39 €	
126			Paris Average			1 022,79 €	
135			Prague Average			359,92 €	
138			Sofia Average			355,60 €	
142			Vienna Average			1 100,94 €	
151			Warsaw Average			1 137,46 €	
154			Zurich Average			1 472,32 €	
155					Priest, Mary Average	819,46 €	
233					Nickson, Neigel Average	889,22 €	
241			Bratislava Average			887,69 €	
246			Dnipro Average			826,47 €	
249			Gdansk Average			731,82 €	
253			Kharkiv Average			867,70 €	
259			Kyiv Average			863,78 €	
264			Lviv Average			894,07 €	
267			Paris Average			366,67 €	
273			Prague Average			508,04 €	
279			Sofia Average			1 027,18 €	
285			Vienna Average			970,81 €	
291			Warsaw Average			937,16 €	
297			Zurich Average			889,60 €	
298					Meddison, Martha Average	843,82 €	
372					McFish, Frederic Average	597,68 €	
445					Larry, Lusy Average	673,42 €	
518					James, John Average	807,31 €	
605					Backer, Robert Average	824,64 €	
606					Grand Average	781.75 €	

Варіант 11.

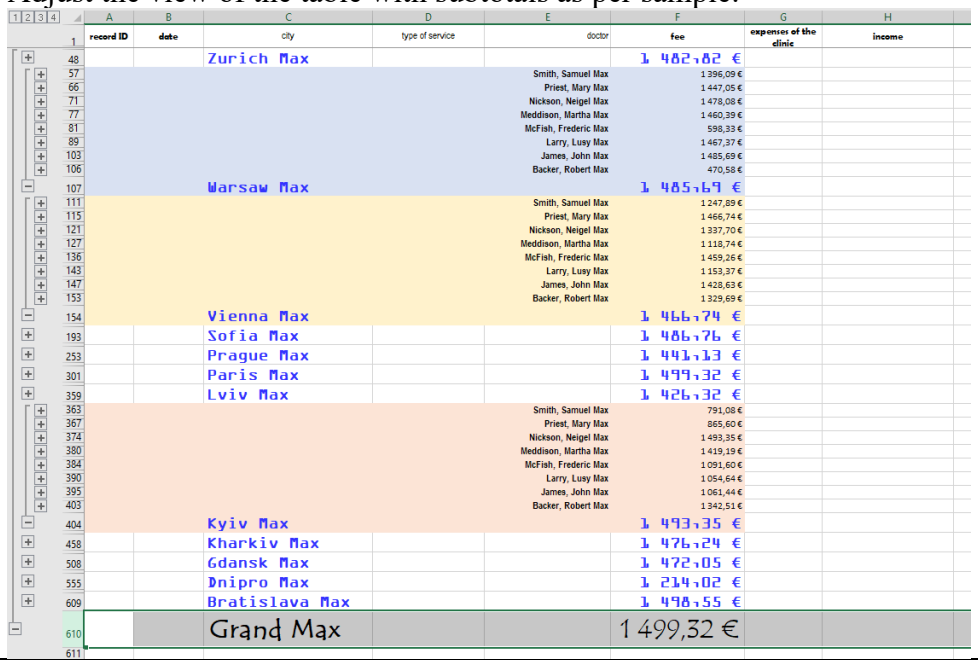
Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show average clinic expenses for different types of services. Adjust the view of the table with subtotals as per sample:	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show highest fees obtained in each city by different doctors. Adjust the view of the table with subtotals as per sample:	3
	Total (max pts) = 5



	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
69				Surgery Average			280,26 €	
137				Physiotherapy Average			256,14 €	
138	#869046	7-Jan-20	Gdansk	Physical examination	Nickson, Neigel	292,47 €	94,57 €	197,90 €
139	#379952	9-Jan-20	Prague	Physical examination	Smith, Samuel	31,19 €	471,11 €	-439,92 €
140	#557334	26-Jan-20	Zurich	Physical examination	Smith, Samuel	821,63 €	233,30 €	588,33 €
141	#699352	27-Jan-20	Warsaw	Physical examination	James, John	1 461,62 €	98,81 €	1 362,81 €
142	#860135	16-Mar-20	Warsaw	Physical examination	James, John	380,61 €	47,37 €	333,24 €
143	#667245	23-Mar-20	Prague	Physical examination	McFish, Frederic	464,66 €	308,27 €	156,39 €
144	#662872	25-Apr-20	Kyiv	Physical examination	Larry, Lusy	1 054,64 €	314,73 €	739,91 €
207	#216185	18-Oct-22	Bratislava	Physical examination	Larry, Lusy	948,75 €	188,10 €	760,65 €
208	#454581	23-Oct-22	Gdansk	Physical examination	Priest, Mary	182,47 €	379,55 €	-197,08 €
209	#803207	24-Oct-22	Vienna	Physical examination	Backer, Robert	513,42 €	56,83 €	456,59 €
210	#733176	30-Nov-22	Zurich	Physical examination	James, John	717,15 €	396,08 €	321,07 €
211				Physical examination Average			245,30 €	
278				Medication prescription Average			262,04 €	
360				Instrumental diagnostics Average			244,65 €	
447				Diagnostics Average			236,74 €	
448	#225546	1-Feb-20	Kyiv	Consultation	Smith, Samuel	247,61 €	170,73 €	76,88 €
449	#145079	31-Mar-20	Bratislava	Consultation	Priest, Mary	754,60 €	80,89 €	673,71 €
450	#948699	10-Apr-20	Zurich	Consultation	Smith, Samuel	1 341,40 €	47,04 €	1 294,36 €
451	#730121	20-Apr-20	Kharkiv	Consultation	Meddison, Martha	1 054,97 €	391,02 €	663,95 €
452	#774862	7-May-20	Zurich	Consultation	Larry, Lusy	522,69 €	277,78 €	244,91 €
453	#274596	18-May-20	Gdansk	Consultation	Backer, Robert	145,26 €	391,70 €	-246,44 €
506	#507056	15-Dec-22	Vienna	Consultation	Backer, Robert	751,02 €	49,81 €	701,21 €
507	#218206	26-Dec-22	Kyiv	Consultation	Backer, Robert	260,59 €	349,30 €	-88,71 €
508				Consultation Average			228,96 €	
509				Grand Average			250,11 €	



	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
48			Zurich Max			1 482,82 €		
57					Smith, Samuel Max	1 396,09 €		
66					Priest, Mary Max	1 447,05 €		
71					Nickson, Neigel Max	1 478,08 €		
77					Meddison, Martha Max	1 460,39 €		
81					McFish, Frederic Max	598,33 €		
89					Larry, Lusy Max	1 467,37 €		
103					James, John Max	1 485,69 €		
106					Backer, Robert Max	470,58 €		
107			Warsaw Max			1 485,69 €		
111					Smith, Samuel Max	1 247,89 €		
115					Priest, Mary Max	1 466,74 €		
121					Nickson, Neigel Max	1 337,70 €		
127					Meddison, Martha Max	1 118,74 €		
136					McFish, Frederic Max	1 459,26 €		
143					Larry, Lusy Max	1 153,37 €		
147					James, John Max	1 428,63 €		
153					Backer, Robert Max	1 329,69 €		
154			Vienna Max			1 466,74 €		
193			Sofia Max			1 486,76 €		
253			Prague Max			1 441,13 €		
301			Paris Max			1 499,32 €		
359			Lviv Max			1 426,32 €		
363					Smith, Samuel Max	791,08 €		
367					Priest, Mary Max	865,60 €		
374					Nickson, Neigel Max	1 493,35 €		
380					Meddison, Martha Max	1 419,19 €		
384					McFish, Frederic Max	1 091,60 €		
390					Larry, Lusy Max	1 054,64 €		
395					James, John Max	1 061,44 €		
403					Backer, Robert Max	1 342,51 €		
404			Kyiv Max			1 493,35 €		
458			Kharkiv Max			1 476,24 €		
508			Gdansk Max			1 472,05 €		
555			Dnipro Max			1 214,02 €		
609			Bratislava Max			1 498,55 €		
610			Grand Max			1 499,32 €		

Варіант 12.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show total fees obtained from different types of services. Adjust the view of the table with subtotals as per sample:	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show how many services were provided by different doctors in each city. Adjust the view of the table with subtotals as per sample:	3
Total (max pts) =	5

	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
2	#225546	1-Feb-20	Kyiv	Consultation	Smith, Samuel	247,61 €	170,73 €	76,88 €
3	#145079	31-Mar-20	Bratislava	Consultation	Priest, Mary	754,60 €	80,89 €	673,71 €
4	#948699	10-Apr-20	Zurich	Consultation	Smith, Samuel	1 341,40 €	47,04 €	1 294,36 €
5	#730121	20-Apr-20	Kharkiv	Consultation	Meddison, Martha	1 054,97 €	391,02 €	663,95 €
6	#774862	7-May-20	Zurich	Consultation	Larry, Lusy	522,69 €	277,78 €	244,91 €
58	#806225	17-Nov-22	Kharkiv	Consultation	Backer, Robert	864,91 €	55,82 €	809,09 €
59	#526621	27-Nov-22	Lviv	Consultation	Larry, Lusy	364,16 €	222,24 €	141,92 €
60	#507056	15-Dec-22	Vienna	Consultation	Backer, Robert	751,02 €	49,81 €	701,21 €
61	#218206	26-Dec-22	Kyiv	Consultation	Backer, Robert	260,59 €	349,30 €	-88,71 €
62				Consultation Total		48 270,03 €		
149				Diagnostics Total		73 831,22 €		
231				Instrumental diagnostics Total		56 241,86 €		
298				Medication prescription Total		51 280,80 €		
372				Physical examination Total		55 563,98 €		
373	#439196	27-Jan-20	Prague	Physiotherapy	Nickson, Neigel	1 303,41 €	286,75 €	1 016,66 €
374	#235349	30-Jan-20	Lviv	Physiotherapy	James, John	874,67 €	108,73 €	765,94 €
375	#923072	12-Feb-20	Lviv	Physiotherapy	Nickson, Neigel	383,23 €	38,80 €	344,43 €
376	#533155	27-Feb-20	Dnipro	Physiotherapy	Meddison, Martha	758,81 €	72,98 €	685,83 €
377	#246399	9-Mar-20	Lviv	Physiotherapy	Larry, Lusy	905,55 €	59,45 €	846,10 €
378	#160800	15-Jun-20	Prague	Physiotherapy	Priest, Mary	585,15 €	34,42 €	550,73 €
379	#210646	4-Jul-20	Gdansk	Physiotherapy	Priest, Mary	1 329,15 €	275,73 €	1 053,42 €
380	#739444	14-Jul-20	Lviv	Physiotherapy	Larry, Lusy	560,27 €	362,00 €	198,27 €
437	#987545	19-Dec-22	Bratislava	Physiotherapy	James, John	987,80 €	408,56 €	579,24 €
438	#758970	26-Dec-22	Gdansk	Physiotherapy	Smith, Samuel	200,42 €	265,80 €	-65,38 €
439	#204919	28-Dec-22	Warsaw	Physiotherapy	Smith, Samuel	616,37 €	371,13 €	245,24 €
440				Physiotherapy Total		55 330,04 €		
508				Surgery Total		50 354,59 €		
509				Grand Total		390 872,52 €		

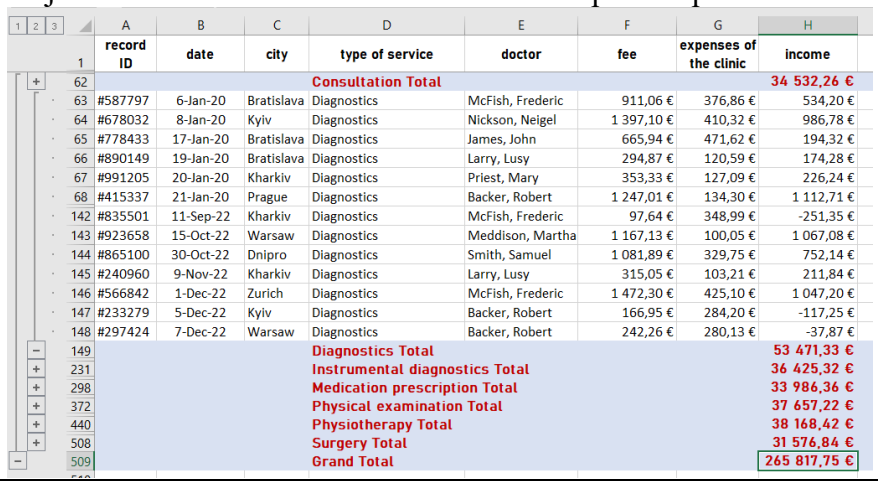
	record ID	date	city	type of service	doctor	fee	expenses of the cl
55	45		Bratislava Count				
62	6				Smith, Samuel Count		
65	2				Priest, Mary Count		
69	3				Nickson, Neigel Count		
74	4				Meddison, Martha Count		
82	7				McFish, Frederic Count		
88	5				Larry, Lusy Count		
93	4				James, John Count		
101	7				Backer, Robert Count		
102	38		Dnipro Count				
152	41		Gdansk Count				
206	45		Kharkiv Count				
251	36		Kyiv Count				
259	7				Smith, Samuel Count		
270	10				Priest, Mary Count		
276	5				Nickson, Neigel Count		
281	4				Meddison, Martha Count		
285	3				McFish, Frederic Count		
297	11				Larry, Lusy Count		
303	5				James, John Count		
308	4				Backer, Robert Count		
309	49		Lviv Count				
357	39		Paris Count				
417	51		Prague Count				
456	30		Sofia Count				
503	38		Vienna Count				
562	50		Warsaw Count				
609	38		Zurich Count				
610	500		Grand Count				

Варіант 13.

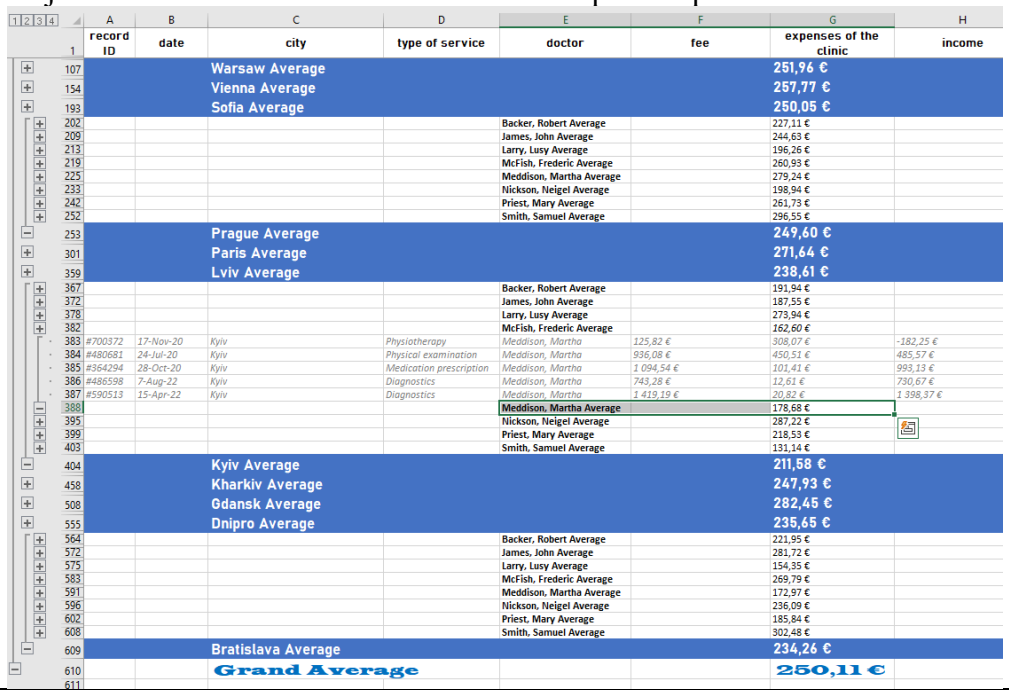
Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

		max pts
Task 1.	Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show total income obtained for each type of service. Adjust the view of the table with subtotals as per sample:	2
Task 2.	Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show average clinic expenses for services provided by different doctors in each city. Adjust the view of the table with subtotals as per sample:	3
	Total (max pts) =	5



	A	B	C	D	E	F	G	H
1	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
62				Consultation Total				34 532,26 €
63	#587797	6-Jan-20	Bratislava	Diagnostics	McFish, Frederic	911,06 €	376,86 €	534,20 €
64	#678032	8-Jan-20	Kyiv	Diagnostics	Nickson, Neigel	1 397,10 €	410,32 €	986,78 €
65	#778433	17-Jan-20	Bratislava	Diagnostics	James, John	665,94 €	471,62 €	194,32 €
66	#890149	19-Jan-20	Bratislava	Diagnostics	Larry, Lusy	294,87 €	120,59 €	174,28 €
67	#991205	20-Jan-20	Kharkiv	Diagnostics	Priest, Mary	353,33 €	127,09 €	226,24 €
68	#415337	21-Jan-20	Prague	Diagnostics	Backer, Robert	1 247,01 €	134,30 €	1 112,71 €
142	#835501	11-Sep-22	Kharkiv	Diagnostics	McFish, Frederic	97,64 €	348,99 €	-251,35 €
143	#923658	15-Oct-22	Warsaw	Diagnostics	Meddison, Martha	1 167,13 €	100,05 €	1 067,08 €
144	#865100	30-Oct-22	Dnipro	Diagnostics	Smith, Samuel	1 081,89 €	329,75 €	752,14 €
145	#240960	9-Nov-22	Kharkiv	Diagnostics	Larry, Lusy	315,05 €	103,21 €	211,84 €
146	#566842	1-Dec-22	Zurich	Diagnostics	McFish, Frederic	1 472,30 €	425,10 €	1 047,20 €
147	#233279	5-Dec-22	Kyiv	Diagnostics	Backer, Robert	166,95 €	284,20 €	-117,25 €
148	#297424	7-Dec-22	Warsaw	Diagnostics	Backer, Robert	242,26 €	280,13 €	-37,87 €
149				Diagnostics Total				53 471,33 €
231				Instrumental diagnostics Total				36 425,32 €
298				Medication prescription Total				33 986,36 €
372				Physical examination Total				37 657,22 €
440				Physiotherapy Total				38 168,42 €
508				Surgery Total				31 576,84 €
509				Grand Total				265 817,75 €

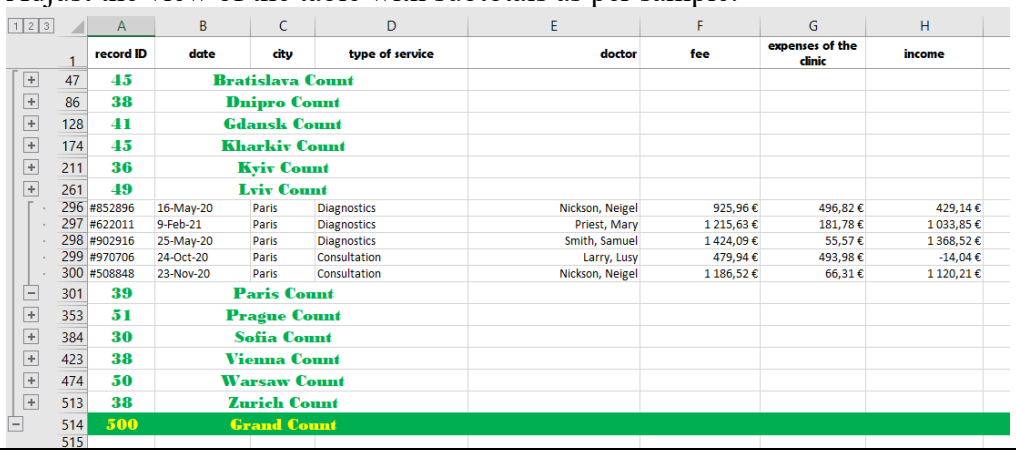
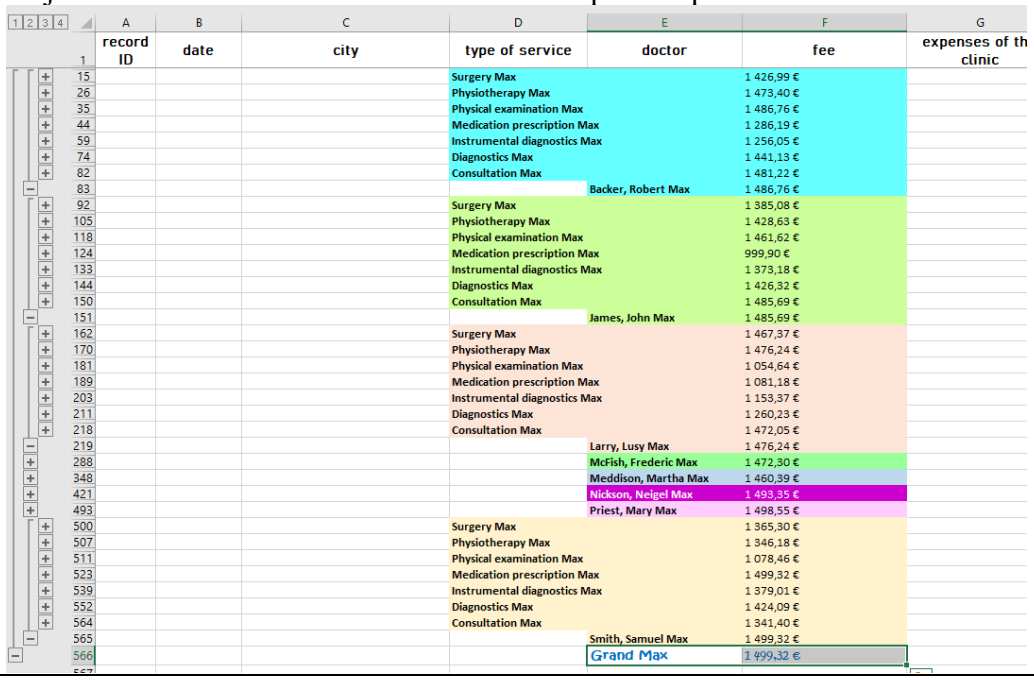


	A	B	C	D	E	F	G	H
1	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
107			Warsaw Average				251,96 €	
154			Vienna Average				257,77 €	
193			Sofia Average				250,05 €	
202					Backer, Robert Average		227,11 €	
209					James, John Average		244,63 €	
213					Larry, Lusy Average		196,26 €	
219					McFish, Frederic Average		260,93 €	
225					Meddison, Martha Average		279,24 €	
233					Nickson, Neigel Average		198,94 €	
242					Priest, Mary Average		261,73 €	
252					Smith, Samuel Average		296,55 €	
253			Prague Average				249,60 €	
301			Paris Average				271,64 €	
359			Lviv Average				238,61 €	
367					Backer, Robert Average		191,94 €	
372					James, John Average		187,55 €	
378					Larry, Lusy Average		273,94 €	
382					McFish, Frederic Average		162,60 €	
383	#700372	17-Nov-20	Kyiv	Physiotherapy	Meddison, Martha	125,82 €	308,07 €	-182,25 €
384	#480681	24-Jul-20	Kyiv	Physical examination	Meddison, Martha	936,08 €	450,51 €	485,57 €
385	#364294	28-Oct-20	Kyiv	Medication prescription	Meddison, Martha	1 094,54 €	101,41 €	993,13 €
386	#486598	7-Aug-22	Kyiv	Diagnostics	Meddison, Martha	743,28 €	12,61 €	730,67 €
387	#590513	15-Apr-22	Kyiv	Diagnostics	Meddison, Martha	1 419,19 €	20,82 €	1 398,37 €
388					Meddison, Martha Average		178,68 €	
395					Nickson, Neigel Average		287,22 €	
399					Priest, Mary Average		218,53 €	
403					Smith, Samuel Average		131,14 €	
404			Kyiv Average				211,58 €	
458			Kharkiv Average				247,93 €	
508			Gdansk Average				282,45 €	
555			Dnipro Average				235,65 €	
564					Backer, Robert Average		221,95 €	
572					James, John Average		281,72 €	
575					Larry, Lusy Average		154,35 €	
583					McFish, Frederic Average		269,79 €	
591					Meddison, Martha Average		172,97 €	
596					Nickson, Neigel Average		236,09 €	
602					Priest, Mary Average		185,84 €	
608					Smith, Samuel Average		302,48 €	
609			Bratislava Average				234,26 €	
610			Grand Average				250,11 €	

Варіант 14.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

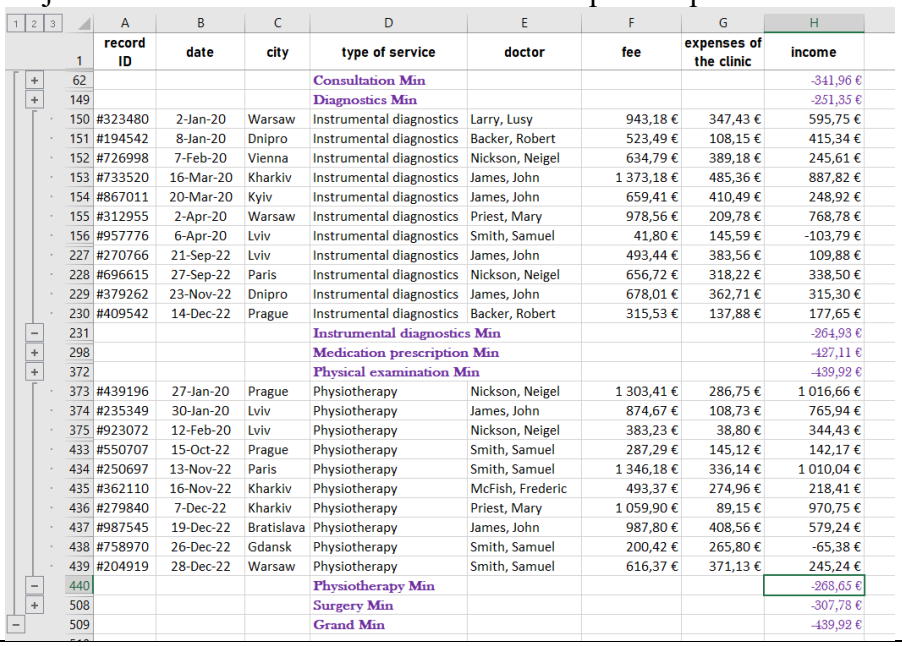
	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show how many records about services in medical centers located in different cities are there in the datatable. Adjust the view of the table with subtotals as per sample: 	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show highest fees obtained by each doctor for different types of services. Adjust the view of the table with subtotals as per sample: 	3
Total (max pts) =	5

Варіант 15.

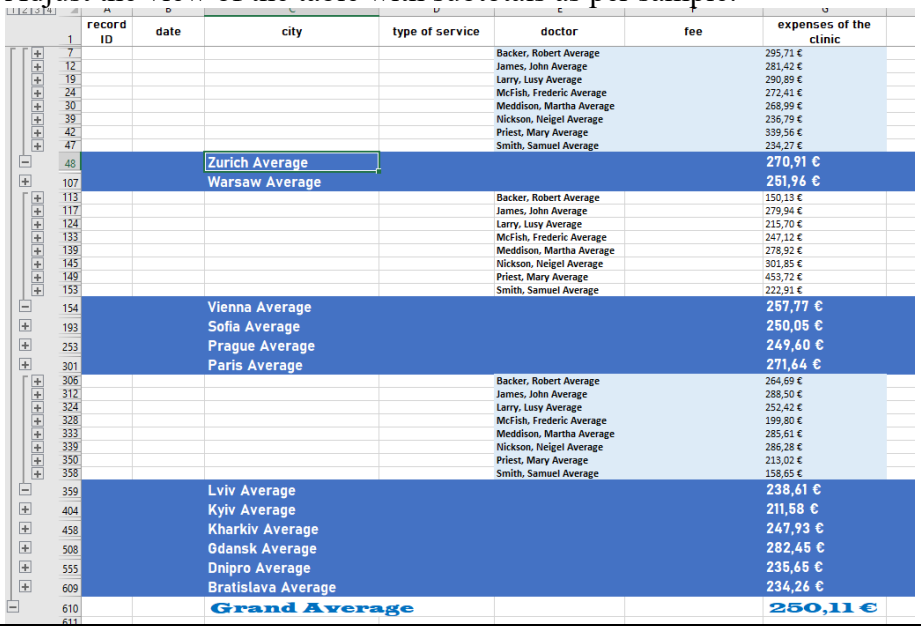
Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show lowest incomes obtained for each type of service. Adjust the view of the table with subtotals as per sample:	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show average clinic expenses in each city for services provided by different doctors. Adjust the view of the table with subtotals as per sample:	3
Total (max pts) =	5



	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
62				Consultation Min				-341,96 €
149				Diagnostics Min				-251,35 €
150	#323480	2-Jan-20	Warsaw	Instrumental diagnostics	Larry, Lusy	943,18 €	347,43 €	595,75 €
151	#194542	8-Jan-20	Dnipro	Instrumental diagnostics	Backer, Robert	523,49 €	108,15 €	415,34 €
152	#726998	7-Feb-20	Vienna	Instrumental diagnostics	Nickson, Neigel	634,79 €	389,18 €	245,61 €
153	#733520	16-Mar-20	Kharkiv	Instrumental diagnostics	James, John	1 373,18 €	485,36 €	887,82 €
154	#867011	20-Mar-20	Kyiv	Instrumental diagnostics	James, John	659,41 €	410,49 €	248,92 €
155	#312955	2-Apr-20	Warsaw	Instrumental diagnostics	Priest, Mary	978,56 €	209,78 €	768,78 €
156	#957776	6-Apr-20	Lviv	Instrumental diagnostics	Smith, Samuel	41,80 €	145,59 €	-103,79 €
227	#270766	21-Sep-22	Lviv	Instrumental diagnostics	James, John	493,44 €	383,56 €	109,88 €
228	#696615	27-Sep-22	Paris	Instrumental diagnostics	Nickson, Neigel	656,72 €	318,22 €	338,50 €
229	#379262	23-Nov-22	Dnipro	Instrumental diagnostics	James, John	678,01 €	362,71 €	315,30 €
230	#409542	14-Dec-22	Prague	Instrumental diagnostics	Backer, Robert	315,53 €	137,88 €	177,65 €
231				Instrumental diagnostics Min				-264,93 €
298				Medication prescription Min				-427,11 €
372				Physical examination Min				-439,92 €
373	#439196	27-Jan-20	Prague	Physiotherapy	Nickson, Neigel	1 303,41 €	286,75 €	1 016,66 €
374	#235349	30-Jan-20	Lviv	Physiotherapy	James, John	874,67 €	108,73 €	765,94 €
375	#923072	12-Feb-20	Lviv	Physiotherapy	Nickson, Neigel	383,23 €	38,80 €	344,43 €
433	#550707	15-Oct-22	Prague	Physiotherapy	Smith, Samuel	287,29 €	145,12 €	142,17 €
434	#250697	13-Nov-22	Paris	Physiotherapy	Smith, Samuel	1 346,18 €	336,14 €	1 010,04 €
435	#362110	16-Nov-22	Kharkiv	Physiotherapy	McFish, Frederic	493,37 €	274,96 €	218,41 €
436	#279840	7-Dec-22	Kharkiv	Physiotherapy	Priest, Mary	1 059,90 €	89,15 €	970,75 €
437	#987545	19-Dec-22	Bratislava	Physiotherapy	James, John	987,80 €	408,56 €	579,24 €
438	#758970	26-Dec-22	Gdansk	Physiotherapy	Smith, Samuel	200,42 €	265,80 €	-65,38 €
439	#204919	28-Dec-22	Warsaw	Physiotherapy	Smith, Samuel	616,37 €	371,13 €	245,24 €
440				Physiotherapy Min				-268,65 €
508				Surgery Min				-307,78 €
509				Grand Min				-439,92 €



	record ID	date	city	type of service	doctor	fee	expenses of the clinic
7					Backer, Robert Average		295,71 €
12					James, John Average		281,42 €
19					Larry, Lusy Average		290,89 €
24					McFish, Frederic Average		272,41 €
30					Meddison, Martha Average		268,99 €
39					Nickson, Neigel Average		236,79 €
42					Priest, Mary Average		339,56 €
47					Smith, Samuel Average		234,27 €
48			Zurich Average				270,91 €
107			Warsaw Average				251,96 €
113					Backer, Robert Average		150,13 €
117					James, John Average		279,94 €
124					Larry, Lusy Average		215,70 €
133					McFish, Frederic Average		247,12 €
139					Meddison, Martha Average		278,92 €
145					Nickson, Neigel Average		301,85 €
149					Priest, Mary Average		453,72 €
153					Smith, Samuel Average		222,91 €
154			Vienna Average				257,77 €
193			Sofia Average				250,05 €
253			Prague Average				249,60 €
301			Paris Average				271,64 €
306					Backer, Robert Average		264,69 €
312					James, John Average		288,50 €
324					Larry, Lusy Average		252,42 €
328					McFish, Frederic Average		199,80 €
333					Meddison, Martha Average		285,61 €
339					Nickson, Neigel Average		286,28 €
350					Priest, Mary Average		213,02 €
358					Smith, Samuel Average		158,65 €
359			Lviv Average				238,61 €
404			Kyiv Average				211,58 €
458			Kharkiv Average				247,93 €
508			Gdansk Average				282,45 €
555			Dnipro Average				235,65 €
609			Bratislava Average				234,26 €
610			Grand Average				250,11 €

Варіант 16.

Task 0.

- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show average clinic expenses of medical centers located in different cities. Adjust the view of the table with subtotals as per sample:	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show total fees obtained by each doctor for different types of services. Adjust the view of the table with subtotals as per sample:	3
Total (max pts) =	5

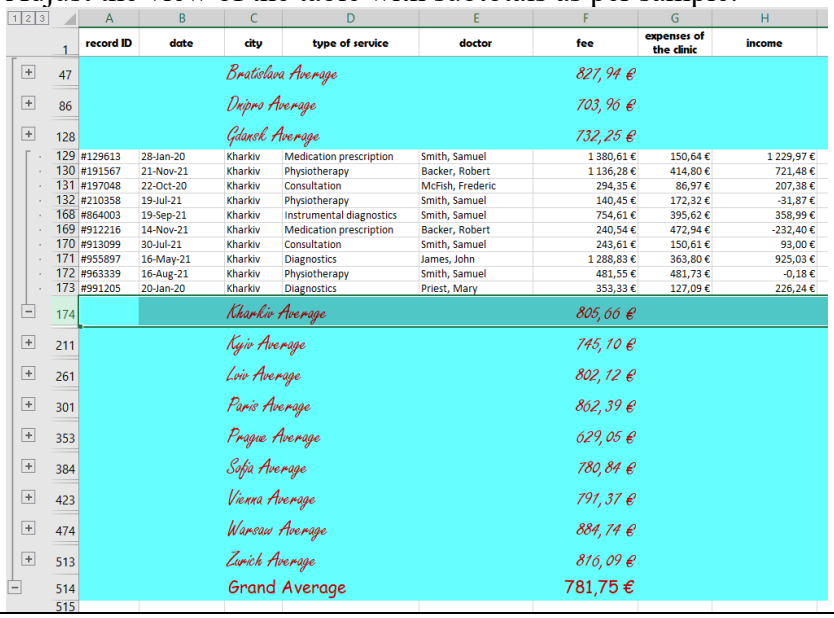
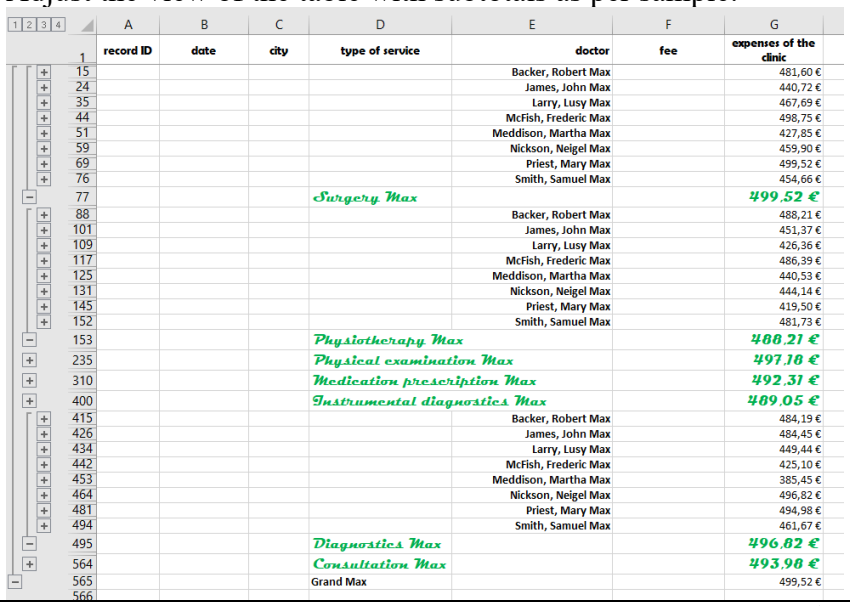
	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
40			Zurich Average				270,91 €	
91			Warsaw Average				251,96 €	
130			Vienna Average				257,77 €	
161			Sofia Average				250,05 €	
162	#124051	20-Nov-22	Prague	Surgery	Backer, Robert	12,57 €	217,76 €	-205,19 €
163	#159336	23-Mar-21	Prague	Physical examination	Meddison, Martha	1 131,07 €	464,13 €	666,94 €
164	#160800	15-Jun-20	Prague	Physiotherapy	Priest, Mary	585,15 €	34,42 €	550,73 €
165	#165839	7-Oct-22	Prague	Physiotherapy	James, John	495,41 €	142,25 €	353,16 €
166	#169652	28-Sep-21	Prague	Medication prescription	McFish, Frederic	330,41 €	250,20 €	80,21 €
202	#844605	18-Feb-21	Prague	Consultation	Smith, Samuel	210,37 €	182,85 €	27,52 €
203	#848540	26-Dec-20	Prague	Diagnostics	Nickson, Neigel	1 085,45 €	118,73 €	966,72 €
204	#851994	24-May-20	Prague	Instrumental diagnostics	Priest, Mary	274,98 €	463,23 €	-188,25 €
205	#856197	26-Jan-21	Prague	Consultation	Priest, Mary	45,74 €	248,40 €	-202,66 €
206	#861173	6-Mar-22	Prague	Consultation	Meddison, Martha	62,52 €	226,42 €	-163,90 €
207	#861529	12-Aug-22	Prague	Medication prescription	Priest, Mary	147,80 €	492,31 €	-344,51 €
208	#900788	20-Apr-21	Prague	Physiotherapy	Priest, Mary	680,40 €	271,87 €	408,53 €
209	#935041	3-Oct-21	Prague	Surgery	Nickson, Neigel	706,62 €	53,45 €	653,17 €
210	#936241	6-Nov-20	Prague	Diagnostics	Priest, Mary	341,98 €	494,98 €	-153,00 €
211	#973384	22-Jul-21	Prague	Diagnostics	Priest, Mary	448,67 €	25,09 €	423,58 €
212	#988021	23-Mar-20	Prague	Medication prescription	Smith, Samuel	87,36 €	439,44 €	-352,08 €
213			Prague Average				249,60 €	
253			Paris Average				271,64 €	
303			Lviv Average				238,61 €	
340			Kyiv Average				211,58 €	
386			Kharkiv Average				247,93 €	
428			Gdansk Average				282,45 €	
467			Dnipro Average				235,65 €	
513			Bratislava Average				234,26 €	
514			GRAND AVERAGE				250,11 €	

	record ID	date	city	type of service	doctor	fee	expenses of the clinic	income
73					Smith, Samuel Total	50 423,27 €		
145					Priest, Mary Total	52 445,26 €		
218					Nickson, Neigel Total	57 799,35 €		
278					Meddison, Martha Total	43 878,89 €		
347					McFish, Frederic Total	36 458,44 €		
415					Larry, Lusy Total	40 405,09 €		
421				Consultation Total		5 093,57 €		
432				Diagnostics Total		8 418,95 €		
441				Instrumental diagnostics Total		6 497,59 €		
442	#792037	19-Nov-22	Warsaw	Medication prescription	James, John	807,68 €	147,06 €	660,62 €
443	#992388	15-Mar-21	Sofia	Medication prescription	James, John	589,62 €	185,67 €	403,95 €
444	#783740	8-Jun-21	Prague	Medication prescription	James, John	628,83 €	229,58 €	399,25 €
445	#358622	30-Apr-22	Bratislava	Medication prescription	James, John	999,90 €	103,52 €	896,38 €
446	#892453	8-Feb-20	Bratislava	Medication prescription	James, John	204,94 €	231,62 €	-26,68 €
447				Medication prescription Total		3 230,97 €		
460				Physical examination Total		8 909,66 €		
473				Physiotherapy Total		10 337,39 €		
482				Surgery Total		5 950,50 €		
483					James, John Total	48 438,63 €		
565					Backer, Robert Total	61 023,59 €		
566					Grand Total	390 872,52 €		
567								

Варіант 17.

Task 0.

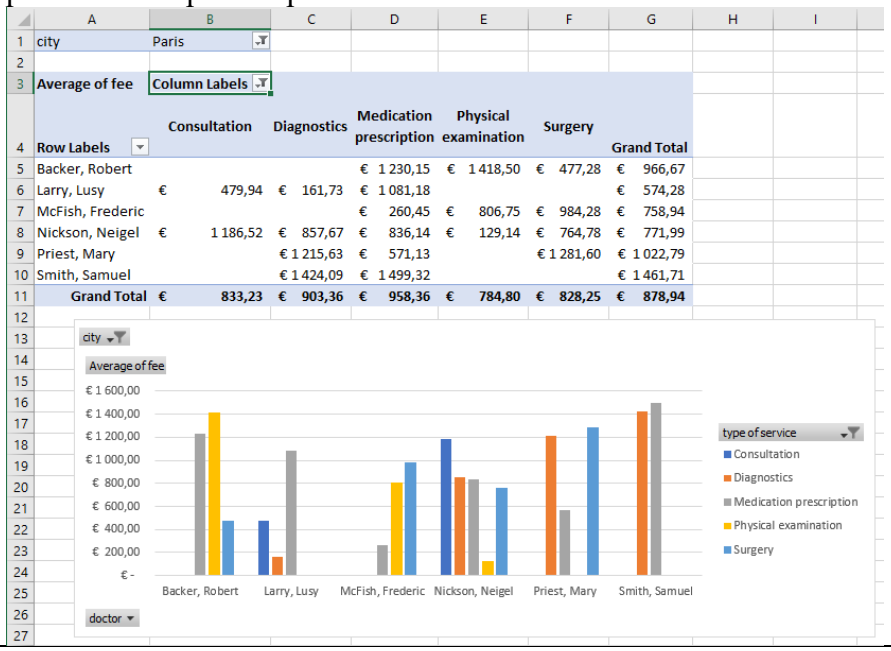
- ☐ Open '*med-network-report-example.xlsx*' spreadsheet and save it to your work folder.
- ☐ Calculate the income obtained from each of the procedures in the corresponding column using formula expression.

	max pts
Task 1. Make a copy of 'sample_data' sheet and rename this copy to 'simple_subtotals'. In the 'simple_subtotals' sheet display subtotals that show average fees obtained in each city. Adjust the view of the table with subtotals as per sample: 	2
Task 2. Make a copy of 'sample_data' sheet and rename this copy to '2_level_subtotals'. In the '2_level_subtotals' sheet display subtotals that show highest expenses for each type of service provided by different doctors. Adjust the view of the table with subtotals as per sample: 	3
Total (max pts) =	5

Напрямок В

Варіант 1.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5
Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	2+2
Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	3
	Total (max pts) =	12



city	Paris						
Average of fee	Column Labels						
Row Labels	Consultation	Diagnostics	Medication prescription	Physical examination	Surgery	Grand Total	
Backer, Robert			€ 1 230,15	€ 1 418,50	€ 477,28	€ 966,67	
Larry, Lusy	€ 479,94	€ 161,73	€ 1 081,18			€ 574,28	
McFish, Frederic			€ 260,45	€ 806,75	€ 984,28	€ 758,94	
Nickson, Neigel	€ 1 186,52	€ 857,67	€ 836,14	€ 129,14	€ 764,78	€ 771,99	
Priest, Mary		€ 1 215,63	€ 571,13		€ 1 281,60	€ 1 022,79	
Smith, Samuel		€ 1 424,09	€ 1 499,32			€ 1 461,71	
Grand Total	**€ 833,23**	**€ 903,36**	**€ 958,36**	**€ 784,80**	**€ 828,25**	**€ 878,94**	

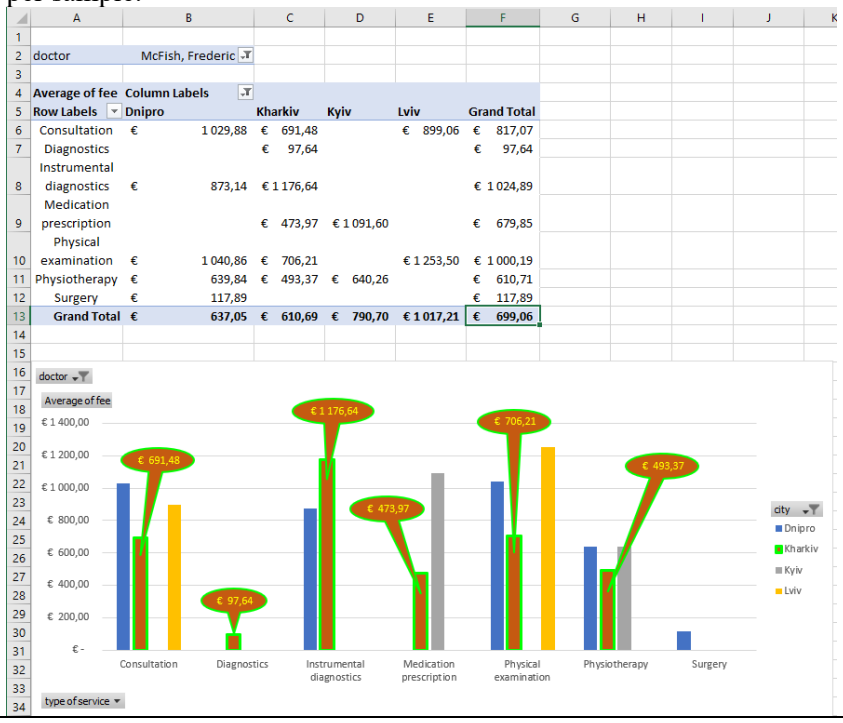
Gender	(All)				
Count of Patient	gender				
Row Labels	Diet A	Diet B	Diet C	Diet D	Grand Total
Cuddy Liza	3	2	3	1	9
House George	3	4	4	2	13
Richards Phillip	1	3	3	1	8
Grand Total	**7**	**9**	**10**	**4**	**30**

Gender	(All)				
Count of Patient	gender				
Row Labels	Diet A	Diet B	Diet C	Diet D	Grand Total
Cuddy Liza	33%	22%	33%	11%	100%
House George	23%	31%	31%	15%	100%
Richards Phillip	13%	38%	38%	13%	100%
Grand Total	**23,33%**	**30,00%**	**33,33%**	**13,33%**	**100,00%**

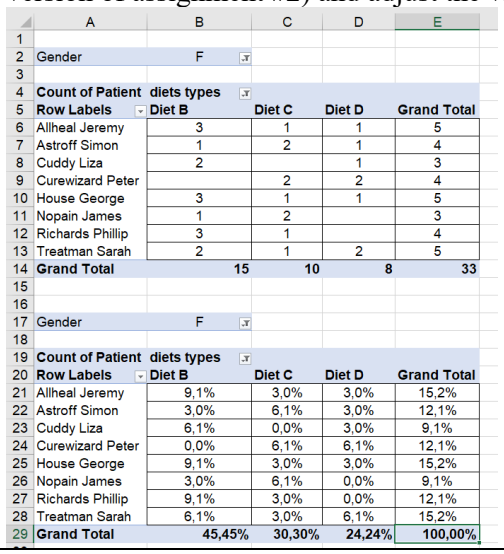
Gender	M				
Max of weight loss %	Column Labels				
End of the diet	Diet A	Diet B	Diet C	Diet D	Grand Total
2020	**21,6%**	**23,8%**	**14,5%**		**23,8%**
May	21,6%		14,5%		21,6%
August	-7,2%				-7,2%
September			12,4%		12,4%
October		23,8%			23,8%
November		5,2%	14,5%		14,5%
2021	**27,2%**	**28,4%**	**17,8%**	**17,1%**	**28,4%**
2022	**35,1%**	**26,7%**	**19,0%**	**13,9%**	**35,1%**
2023		**22,9%**	**26,5%**	**13,8%**	**26,5%**
Grand Total	**35,1%**	**28,4%**	**26,5%**	**17,1%**	**35,1%**

Варіант 2.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5
Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	2+2
Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	3
	Total (max pts) =	12

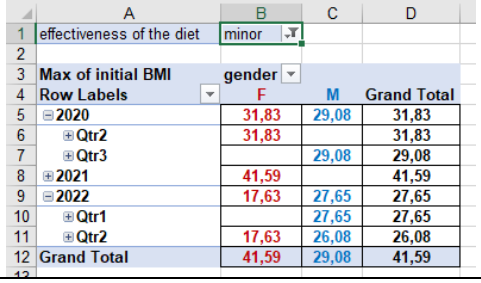


doctor	McFish, Frederic				
Average of fee	Column Labels				
Row Labels	Dnipro	Kharkiv	Kyiv	Lviv	Grand Total
Consultation	€ 1 029,88	€ 691,48		€ 899,06	€ 817,07
Diagnostics		€ 97,64			€ 97,64
Instrumental diagnostics	€ 873,14	€ 1 176,64			€ 1 024,89
Medication prescription		€ 473,97	€ 1 091,60		€ 679,85
Physical examination	€ 1 040,86	€ 706,21		€ 1 253,50	€ 1 000,19
Physiotherapy	€ 639,84	€ 493,37	€ 640,26		€ 610,71
Surgery	€ 117,89				€ 117,89
Grand Total	**€ 637,05**	**€ 610,69**	**€ 790,70**	**€ 1 017,21**	**€ 699,06**



Gender	F			
Count of Patient	diets types			
Row Labels	Diet B	Diet C	Diet D	Grand Total
Allheal Jeremy	3	1	1	5
Astroff Simon	1	2	1	4
Cuddy Liza	2		1	3
Curewizard Peter		2	2	4
House George	3	1	1	5
Nopain James	1	2		3
Richards Phillip	3	1		4
Treatman Sarah	2	1	2	5
Grand Total	**15**	**10**	**8**	**33**

Gender	F			
Count of Patient	diets types			
Row Labels	Diet B	Diet C	Diet D	Grand Total
Allheal Jeremy	9,1%	3,0%	3,0%	15,2%
Astroff Simon	3,0%	6,1%	3,0%	12,1%
Cuddy Liza	6,1%	0,0%	3,0%	9,1%
Curewizard Peter	0,0%	6,1%	6,1%	12,1%
House George	9,1%	3,0%	3,0%	15,2%
Nopain James	3,0%	6,1%	0,0%	9,1%
Richards Phillip	9,1%	3,0%	0,0%	12,1%
Treatman Sarah	6,1%	3,0%	6,1%	15,2%
Grand Total	**45,45%**	**30,30%**	**24,24%**	**100,00%**

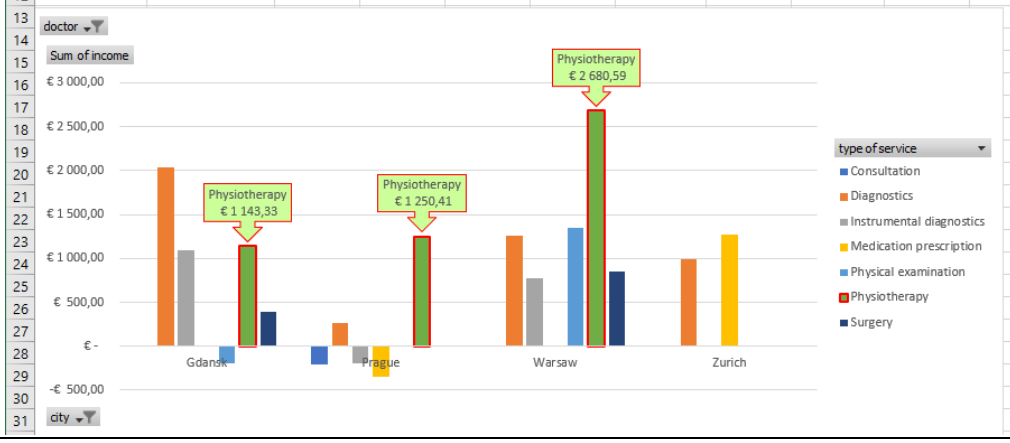


effectiveness of the diet	minor		
Max of initial BMI	gender		
Row Labels	F	M	Grand Total
⊟2020	31,83	29,08	31,83
⊞Qtr2	31,83		31,83
⊞Qtr3		29,08	29,08
⊞2021	41,59		41,59
⊟2022	17,63	27,65	27,65
⊞Qtr1		27,65	27,65
⊞Qtr2	17,63	26,08	26,08
Grand Total	**41,59**	**29,08**	**41,59**

Варіант 3.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5

doctor	Priest, Mary							
Sum of income	Column Labels							
Row Labels	Consultation	Diagnostics	Instrumental diagnostics	Medication prescription	Physical examination	Physiotherapy	Surgery	Grand Total
Gdansk		€ 2 039,56	€ 1 088,93		-€ 197,08	€ 1 143,33	€ 386,01	€ 4 460,75
Prague	-€ 202,66	€ 270,58	-€ 188,25	-€ 344,51		€ 1 250,41		€ 785,57
Warsaw		€ 1 259,65	€ 768,78		€ 1 347,01	€ 2 680,59	€ 854,90	€ 6 910,93
Zurich		€ 992,65		€ 1 272,88				€ 2 265,53
Grand Total	-€ 202,66	€ 4 562,44	€ 1 669,46	€ 928,37	€ 1 149,93	€ 5 074,33	€ 1 240,91	€ 14 422,78



Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:				2+2

family doctor	House George				
Count of Patient					
effectiveness	Diet A	Diet B	Diet C	Diet D	Grand Total
no effectiveness	1	2			3
low		1			1
satisfactory	1	1	4	1	7
very good	1			1	2
Grand Total	3	4	4	2	13

family doctor	House George				
Count of Patient					
effectiveness	Diet A	Diet B	Diet C	Diet D	Grand Total
no effectiveness	33,33%	66,67%	0,00%	0,00%	100%
low	0,00%	100,00%	0,00%	0,00%	100%
satisfactory	14,29%	14,29%	57,14%	14,29%	100%
very good	50,00%	0,00%	0,00%	50,00%	100%
Grand Total	23%	31%	31%	15%	100%

Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:				3

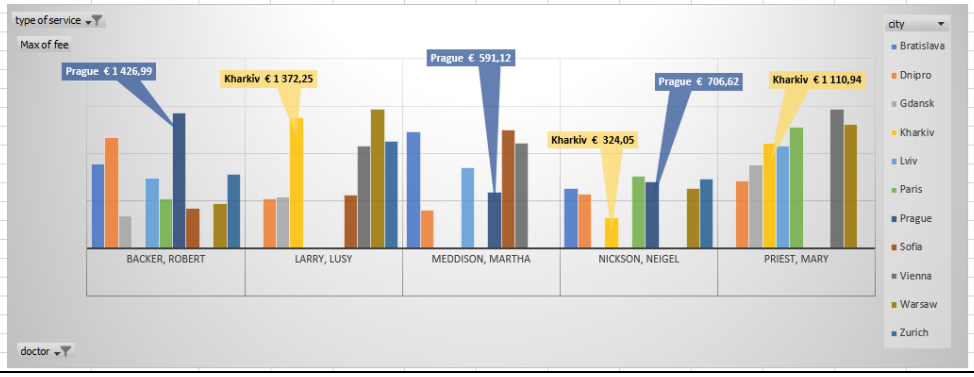
Type of the Diet	Diet A								
Average of 1st month (kg)	when the diet started								
	2020	2021						2021 Total	2022	Grand Total
		Qtr1	Qtr2		Qtr2 Total	Qtr3			
diet effectiveness			April	June					
very good	100,87	108,26	98,28		98,28	101,445		103,538	101,638	102,4318182
satisfactory									78,33333333	78,33333333
low						88,17		88,17	94	91,085
no effectiveness	89,72	90,97		91,28	91,28	91,09		91,11333333	88,725	89,74222222
Grand Total	93,43666667	102,4966667	98,28	91,28	94,78	95,5375		97,68888889	91,69923077	94,064

Total (max pts) =	12

Варіант 4.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5

type of service	Surgery										
Max of fee	Column Labels										
Row Labels	Bratislava	Dnipro	Gdansk	Kharkiv	Lviv	Paris	Prague	Sofia	Vienna	Warsaw	Zurich	Grand Total
Backer, Robert	€ 892,71	€ 1 168,15	€ 340,63		€ 746,01	€ 525,56	€ 1 426,99	€ 422,07		€ 470,58	€ 777,54	€ 1 426,99
Larry, Lusy		€ 524,93	€ 539,87	€ 1 372,25				€ 561,26	€ 1 075,86	€ 1 467,37	€ 1 125,86	€ 1 467,37
Meddison, Martha	€ 1 230,43	€ 402,06			€ 853,43		€ 591,12	€ 1 246,11	€ 1 105,01			€ 1 246,11
Nickson, Neigel	€ 636,38	€ 574,06		€ 324,05		€ 764,78	€ 706,62			€ 631,58	€ 733,55	€ 764,78
Priest, Mary		€ 712,61	€ 885,53	€ 1 110,94	€ 1 079,19	€ 1 281,60			€ 1 466,74	€ 1 310,05		€ 1 466,74
Grand Total	€ 1 230,43	€ 1 168,15	€ 885,53	€ 1 372,25	€ 1 079,19	€ 1 281,60	€ 1 426,99	€ 1 246,11	€ 1 466,74	€ 1 467,37	€ 1 125,86	€ 1 467,37



Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	2+2

Count of Patient					
Height (cm)	Diet A	Diet B	Diet C	Diet D	Grand Total
140-159	7	2	4	3	16
160-179	9	12	12	6	39
180-200	9	14	8	7	38
Grand Total	25	28	24	16	93

Count of Patient					
Height (cm)	Diet A	Diet B	Diet C	Diet D	Grand Total
140-159	28,00%	7,14%	16,67%	18,75%	17,20%
160-179	36,00%	42,86%	50,00%	37,50%	41,94%
180-200	36,00%	50,00%	33,33%	43,75%	40,86%
Grand Total	100%	100%	100%	100%	100%

Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	3

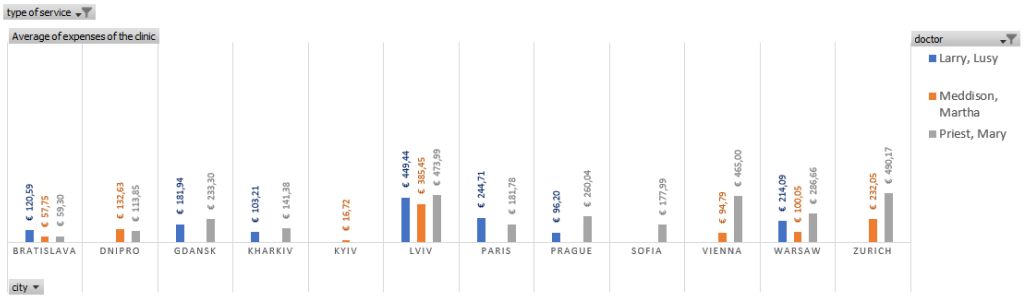
Gender	M				
Average of initial BMI	effectiveness of the diet				
Start of the Diet	excellent	good	minor	negative	Grand Total
⊞2020	31,28	35,26	29,08	40,68	33,85
⊟2021	36,55	29,36		26,09	32,59
Jan	37,68			34,26	36,83
Febr	44,00				44,00
June		31,33		26,90	29,12
July		29,34			29,34
Septmbr	39,98			24,80	34,92
Octbr	26,10			18,42	22,26
Novmbr		27,40			27,40
Decmbr	32,90				32,90
⊞2022	37,77	32,43	26,50	23,14	31,50
Grand Total	36,25	32,58	27,15	26,08	32,30

Total (max pts) =	12

Варіант 5.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5

type of service	Diagnostics				
Average of expenses of the clinic	Column Labels				
Row Labels	Larry, Lusy	Meddison, Martha	Priest, Mary	Grand Total	
Bratislava	€ 120,59	€ 57,75	€ 59,30	€ 79,21	
Dnipro		€ 132,63	€ 113,85	€ 123,24	
Gdansk	€ 181,94		€ 233,30	€ 220,46	
Kharkiv	€ 103,21		€ 141,38	€ 128,66	
Kyiv		€ 16,72		€ 16,72	
Lviv	€ 449,44	€ 385,45	€ 473,99	€ 436,29	
Paris	€ 244,71		€ 181,78	€ 213,25	
Prague	€ 96,20		€ 260,04	€ 205,42	
Sofia			€ 177,99	€ 177,99	
Vienna		€ 94,79	€ 465,00	€ 279,90	
Warsaw	€ 214,09	€ 100,05	€ 286,66	€ 221,86	
Zurich		€ 232,05	€ 490,17	€ 296,58	
Grand Total	€ 201,45	€ 150,03	€ 252,38	€ 210,56	



Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	2+2

Count of Patient	diets				
the Start of the Diet	Diet A	Diet B	Diet C	Diet D	Grand Total
2020	3	6	6	4	19
2021	9	10	7	6	32
Qtr1	3	2	2	2	9
Qtr2	2	2	2		6
Qtr3	4	4		3	11
Qtr4		2	3	1	6
2022	13	12	11	6	42
Grand Total	25	28	24	16	93

Count of Patient	diets				
the Start of the Diet	Diet A	Diet B	Diet C	Diet D	Grand Total
2020	3,23%	6,45%	6,45%	4,30%	20,43%
2021	9,68%	10,75%	7,53%	6,45%	34,41%
2022	13,98%	12,90%	11,83%	6,45%	45,16%
Grand Total	26,88%	30,11%	25,81%	17,20%	100,00%

Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	3

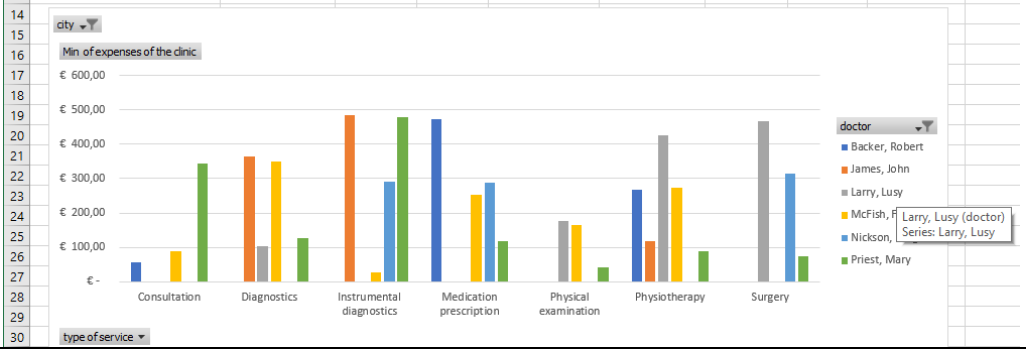
Gender	(All)				
Min of weight loss %	Column Labels				
diet effectiveness	Allheal Jeremy	Cuddy Liza	Nopain James	Treatman Sarah	Grand Total
high	17%	19%	17%	16%	16%
good	11%	10%	14%	11%	10%
salient		5%	5%		5%
small	-16%	-11%	-7%	-7%	-16%
Grand Total	-16%	-11%	-7%	-7%	-16%

Total (max pts) =	12

Варіант 6.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5

city	Kharkiv								
Min of expenses of the clinic	Column Labels								
Row Labels	Backer, Robert	James, John	Larry, Lusy	McFish, Frederic	Nickson, Neigel	Priest, Mary	Grand Total		
Consultation	€ 55,82			€ 86,97		€ 343,19	€ 55,82		
Diagnostics		€ 363,80	€ 103,21	€ 348,99		€ 127,09	€ 103,21		
Instrumental diagnostics		€ 485,36		€ 25,57	€ 291,26	€ 478,63	€ 25,57		
Medication prescription	€ 472,94			€ 251,79	€ 288,38	€ 117,85	€ 117,85		
Physical examination			€ 176,43	€ 164,84		€ 40,49	€ 40,49		
Physiotherapy	€ 268,28	€ 117,55	€ 426,36	€ 274,96		€ 89,15	€ 89,15		
Surgery			€ 467,69		€ 315,19	€ 72,67	€ 72,67		
Grand Total	€ 55,82	€ 117,55	€ 103,21	€ 25,57	€ 288,38	€ 40,49	€ 25,57		



Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:		2+2

Type of the Diet	Diet C		
	gender		
effectiveness	F	M	Grand Total
negative		2	2
low	1	1	2
satisfactory	6	8	14
high	3	3	6
Grand Total	10	14	24

Type of the Diet	Diet C		
	gender		
effectiveness	F	M	Grand Total
negative	0,0%	14,3%	8,33%
low	10,0%	7,1%	8,33%
satisfactory	60,0%	57,1%	58,33%
high	30,0%	21,4%	25,00%
Grand Total	100%	100%	100%

Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:		3

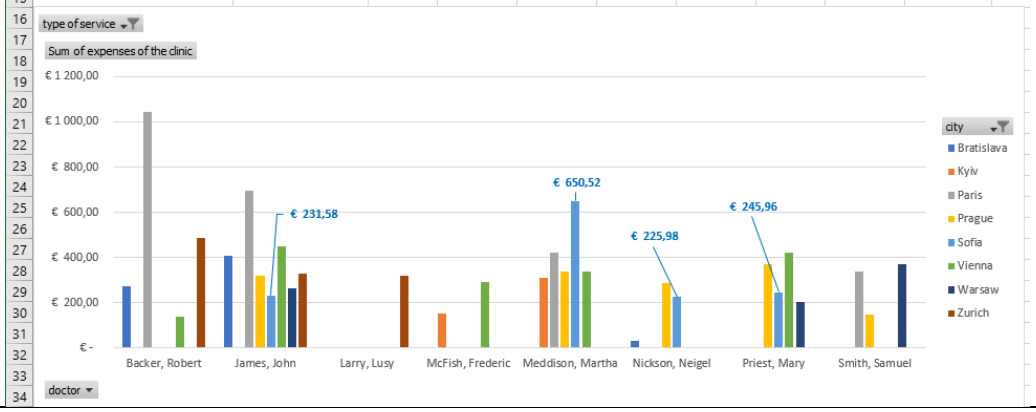
family doctor	House George				
Average BMI of 2nd month	Effectiveness of the Diet				
Start of the Diet	high	satisfactory	low	negative	Grand Total
2020	25,85	28,46	30,35	40,51	30,35
Qtr1	25,85	33,85		40,51	33,40
Qtr2		26,50			26,50
Qtr3			30,35		30,35
Qtr4		25,02			25,02
2021		30,15		25,33	27,74
2022	32,62	32,34		30,91	32,17
Grand Total	30,36	30,03	30,35	32,25	30,65

	Total (max pts) =	12

Варіант 7.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5

	A	B	C	D	E	F	G	H	I	J
1										
2	type of service	Physiotherapy								
3										
4	Sum of expenses of the clinic	Column Labels								
5	Row Labels	Bratislava	Kyiv	Paris	Prague	Sofia	Vienna	Warsaw	Zurich	Grand Total
6	Backer, Robert	€ 273,09		€ 1 041,76			€ 136,05		€ 488,21	€ 1 939,11
7	James, John	€ 408,56		€ 694,10	€ 316,91	€ 231,58	€ 451,37	€ 265,51	€ 326,96	€ 2 694,99
8	Larry, Lusy								€ 320,28	€ 320,28
9	McFish, Frederic		€ 152,08				€ 291,21			€ 443,29
10	Meddison, Martha		€ 308,07	€ 422,53	€ 338,03	€ 650,52	€ 337,16			€ 2 056,31
11	Nickson, Neigel	€ 32,36			€ 286,75	€ 225,98				€ 545,09
12	Priest, Mary				€ 369,81	€ 245,96	€ 419,50	€ 201,33		€ 1 236,60
13	Smith, Samuel			€ 336,14	€ 145,12			€ 371,13		€ 852,39
14	Grand Total	€ 714,01	€ 460,15	€ 2 494,53	€ 1 456,62	€ 1 354,04	€ 1 635,29	€ 837,97	€ 1 135,45	€ 10 088,06



Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	2+2

	A	B	C	D	E	F
1						
2	family doctor	Nopain James				
3						
4	Count of Patient	types				
5	effectiveness	Diet A	Diet B	Diet C	Diet D	Grand Total
6	good		2	1	1	4
7	moderate		1		2	3
8	small			1		1
9	not effective	1				1
10	Grand Total	1	3	2	3	9
11						
12	family doctor	Nopain James				
13						
14	Count of Patient	types				
15	effectiveness	Diet A	Diet B	Diet C	Diet D	Grand Total
16	good	0%	50%	25%	25%	100,00%
17	moderate	0%	33%	0%	67%	100,00%
18	small	0%	0%	100%	0%	100,00%
19	not effective	100%	0%	0%	0%	100,00%
20	Grand Total	11,11%	33,33%	22,22%	33,33%	100,00%

Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	3

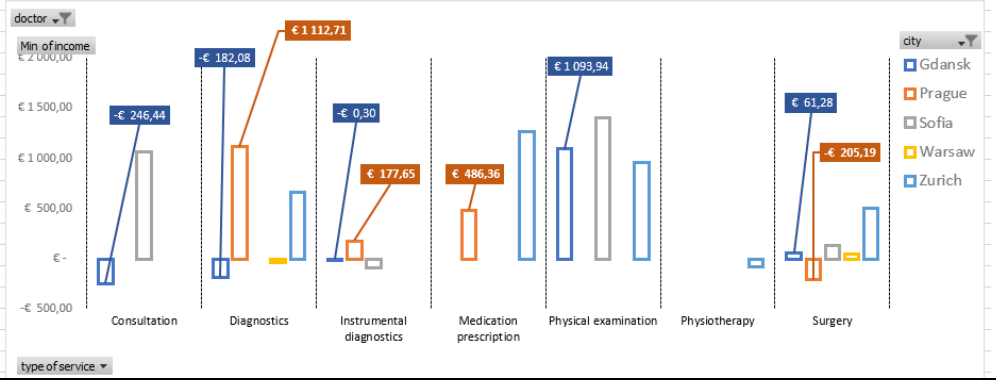
	A	B	C	D	E	F
1	Type of the Diet	Diet D				
2						
3	Min of 3rd month (kg)	Effectiveness of the Diet				
4	End of the Diet	good	moderate	small	not effective	Grand Total
5	⊞2020	76,16	85,30			76,16
6	⊟2021	90,20	82,49	57,00		57
7	*February*	*90,20*				*90,2*
8	*April*		*93,84*			*93,84*
9	*June*		*82,49*			*82,49*
10	*November*	*92,37*		*57,00*		*57*
11	*December*	*99,12*				*99,12*
12	⊞2022		91,60	86,10		86,1
13	⊞2023		81,14	91,67	60,00	60
14	Grand Total	76,16	81,14	57,00	60,00	57,00

Total (max pts) =	12

Варіант 8.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5

	A	B	C	D	E	F	G	H	I	J	K
1											
2	doctor	Backer, Robert									
3											
4	**Min of income**	**Column Labels**									
5	**Row Labels**	**Gdansk**	**Prague**	**Sofia**	**Warsaw**	**Zurich**	**Grand Total**				
6	Consultation	-€ 246,44		€ 1 063,99			-€ 246,44				
7	Diagnostics	-€ 182,08	€ 1 112,71		-€ 37,87	€ 659,89	-€ 182,08				
8	Instrumental diagnostics	-€ 0,30	€ 177,65	-€ 89,93			-€ 89,93				
9	Medication prescription		€ 486,36			€ 1 262,42	€ 486,36				
10	Physical examination	€ 1 093,94		€ 1 402,40		€ 961,75	€ 961,75				
11	Physiotherapy					-€ 78,41	-€ 78,41				
12	Surgery	€ 61,28	-€ 205,19	€ 129,98	€ 50,86	€ 505,63	-€ 205,19				
13	**Grand Total**	**-€ 246,44**	**-€ 205,19**	**-€ 89,93**	**-€ 37,87**	**-€ 78,41**	**-€ 246,44**				



		max pts
Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	2+2

	A	B	C	D	E	F
1	Gender	M				
2						
3	**Count of Patient**	**Effectiveness of the diet**				
4		**negligible**	**little**	**normal**	**high**	**Grand Total**
5	Diet A	7	1	1	4	13
6	Diet B	2	1	3	7	13
7	Diet C	2	2	8	2	14
8	Diet D	1		7		8
9	**Grand Total**	**12**	**4**	**19**	**13**	**48**
10						
11						
12	Gender	M				
13						
14	**Count of Patient**	**Effectiveness of the diet**				
15		**negligible**	**little**	**normal**	**high**	**Grand Total**
16	Diet A	53,85%	7,69%	7,69%	30,77%	100%
17	Diet B	15,38%	7,69%	23,08%	53,85%	100%
18	Diet C	14,29%	14,29%	57,14%	14,29%	100%
19	Diet D	12,50%	0,00%	87,50%	0,00%	100%
20	**Grand Total**	**25,00%**	**8,33%**	**39,58%**	**27,08%**	**100%**

		max pts
Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	3

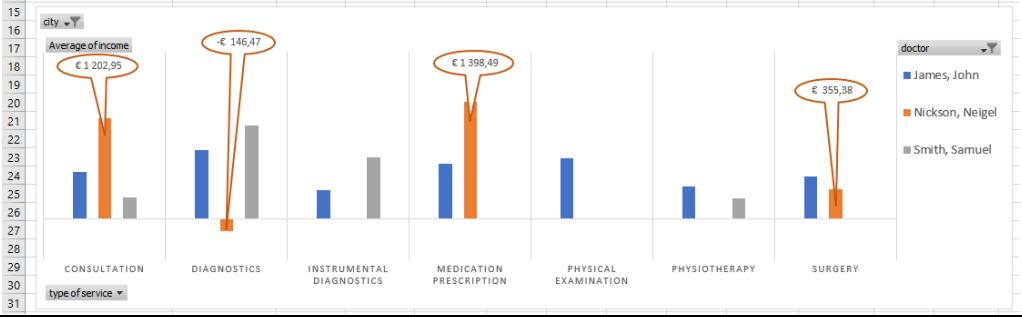
	A	B	C	D	E	F	G	H	I	J
1	family doctor	Richards Phillip								
2										
3	**Average of 2nd month BMI**	**Start of the diet**								
4		**⊞2020**	**⊞2021**	**⊟2022**					**2022 Total**	**Grand Total**
5	**diet effectiveness**			*March*	*May*	*July*	*October*	*December*		
6	high	26,56								26,56
7	normal		24,77	*30,36*		*24,96*			27,66	26,70
8	little			*26,75*	*25,76*		*30,97*		27,83	27,83
9	negligible							*20,04*	20,04	20,04
10	**Grand Total**	**26,56**	**24,77**	***28,56***	***25,76***	***24,96***	***30,97***	***20,04***	**26,48**	**26,27**

Total (max pts) =	12

Варіант 9.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5

city	Warsaw			
Average of income	Column Labels			
Row Labels	James, John	Nickson, Neigel	Smith, Samuel	Grand Total
Consultation	€ 555,80	€ 1 202,95	€ 248,81	€ 640,84
Diagnostics	€ 814,83	-€ 146,47	€ 1 108,80	€ 740,15
Instrumental diagnostics	€ 341,02		€ 729,11	€ 599,75
Medication prescription	€ 660,62	€ 1 398,49		€ 1 029,56
Physical examination	€ 718,54			€ 718,54
Physiotherapy	€ 386,63		€ 245,24	€ 315,94
Surgery	€ 507,17	€ 355,38		€ 431,28
Grand Total	€ 603,99	€ 702,59	€ 703,51	€ 651,61



		2+2
Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	

Gender	F								
Count of Patient	doctors								
effectiveness	Allheal Jeremy	Astroff Simon	Cuddy Liza	Curewizard Peter	House George	Nopain James	Richards Phillip	Treatman Sarah	Grand Total
very good	5	1	3	4	1	1	1	2	18
satisfactory	2	3		4	3	1	2	2	17
low			2			1		1	4
no effectiveness	1	1			2		1	1	6
Grand Total	8	5	5	8	6	3	4	6	45

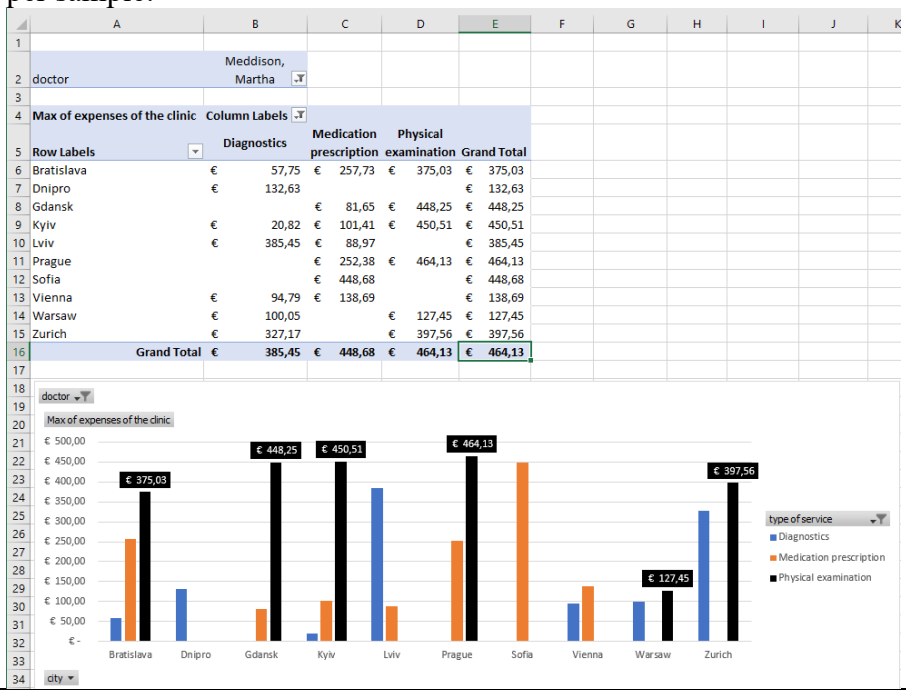
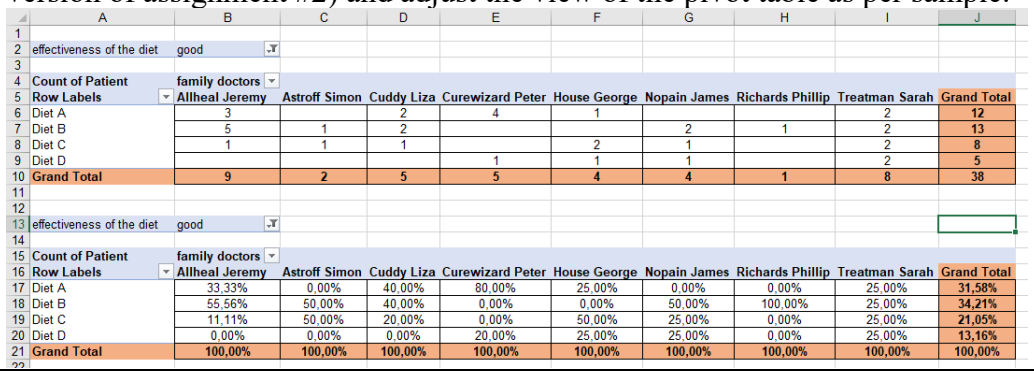
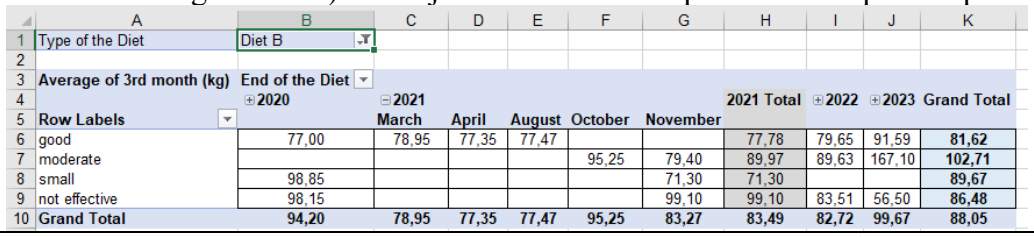
Gender	F								
Count of Patient	doctors								
effectiveness	Allheal Jeremy	Astroff Simon	Cuddy Liza	Curewizard Peter	House George	Nopain James	Richards Phillip	Treatman Sarah	Grand Total
very good	62,5%	20,0%	60,0%	50,0%	16,7%	33,3%	25,0%	33,3%	40,00%
satisfactory	25,0%	60,0%	0,0%	50,0%	50,0%	33,3%	50,0%	33,3%	37,78%
low	0,0%	0,0%	40,0%	0,0%	0,0%	33,3%	0,0%	16,7%	8,89%
no effectiveness	12,5%	20,0%	0,0%	0,0%	33,3%	0,0%	25,0%	16,7%	13,33%
Grand Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

		3
Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	

Type of the Diet	Diet C				
Max of 1st month (kg)	diet effectiveness				
Row Labels	no effectiveness	low	satisfactory	very good	Grand Total
⊞2020			101,44		101,44
⊟2021			104,86	90,91	104,86
January			100,5	90,91	100,5
May			98,58		98,58
June			104,86		104,86
July			100,75		100,75
August			95,19		95,19
⊞2022	66	72,16	122,02	99,53	122,02
⊞2023	70		103,04	100,31	103,04
Grand Total	70	72,16	122,02	100,31	122,02

	Total (max pts) =	12

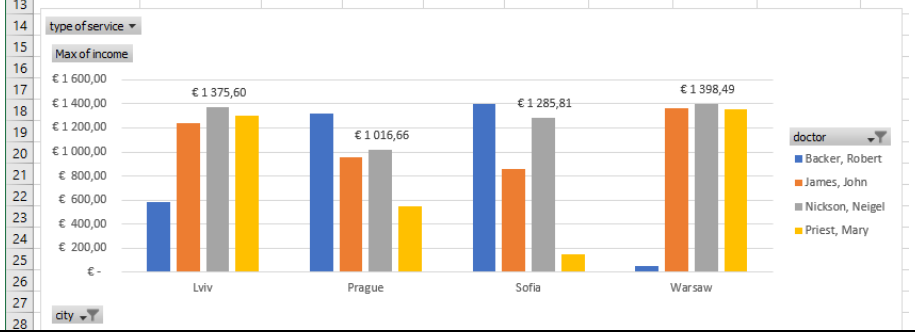
Варіант 10.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample: 	5
Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample: 	2+2
Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample: 	3
	Total (max pts) =	12

Варіант 11.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5

type of service	(All)				
Max of income	Column Labels				
Row Labels	Backer, Robert	James, John	Nickson, Neigel	Priest, Mary	Grand Total
Lviv	€ 585,05	€ 1 239,91	€ 1 375,60	€ 1 297,86	€ 1 375,60
Prague	€ 1 316,46	€ 959,68	€ 1 016,66	€ 550,73	€ 1 316,46
Sofia	€ 1 402,40	€ 856,20	€ 1 285,81	€ 149,50	€ 1 402,40
Warsaw	€ 50,86	€ 1 362,81	€ 1 398,49	€ 1 357,50	€ 1 398,49
Grand Total	**€ 1 402,40**	**€ 1 362,81**	**€ 1 398,49**	**€ 1 357,50**	**€ 1 402,40**



Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:							2+2

effectiveness of the diet	not effective							
Count of Patient	family doctors							
Row Labels	Allheal Jeremy	Astroff Simon	Cuddy Liza	House George	Nopain James	Richards Phillip	Treatman Sarah	Grand Total
Diet A	1	4	1	1	1	1	2	11
Diet B	2	1		2		1		6
Diet C		1	1					2
Diet D							1	1
Grand Total	**3**	**6**	**2**	**3**	**1**	**2**	**3**	**20**

effectiveness of the diet	not effective							
Count of Patient	family doctors							
Row Labels	Allheal Jeremy	Astroff Simon	Cuddy Liza	House George	Nopain James	Richards Phillip	Treatman Sarah	Grand Total
Diet A	5,00%	20,00%	5,00%	5,00%	5,00%	5,00%	10,00%	55,00%
Diet B	10,00%	5,00%	0,00%	10,00%	0,00%	5,00%	0,00%	30,00%
Diet C	0,00%	5,00%	5,00%	0,00%	0,00%	0,00%	0,00%	10,00%
Diet D	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	5,00%	5,00%
Grand Total	**15,00%**	**30,00%**	**10,00%**	**15,00%**	**5,00%**	**10,00%**	**15,00%**	**100,00%**

Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:				3

Type of the Diet	Diet A				
Max of 3rd month (kg)	Effectiveness of the Diet				
End of the Diet	good	moderate	small	not effective	Grand Total
2020	**80,75**			**100,77**	**100,77**
2021	**81,19**			**99,61**	**99,61**
2022	**97,60**	**76,20**	**70,00**	**98,89**	**98,89**
January				*98,89*	98,89
April				*97,60*	97,6
May				*98,15*	98,15
June	*97,60*			*98,82*	98,82
July	*90,00*			*84,90*	90
August		*76,20*	*70,00*		76,2
September				*92,90*	92,9
October	*77,11*				77,11
2023	**78,09**				**78,09**
Grand Total	**97,60**	**76,20**	**70,00**	**100,77**	**100,77**

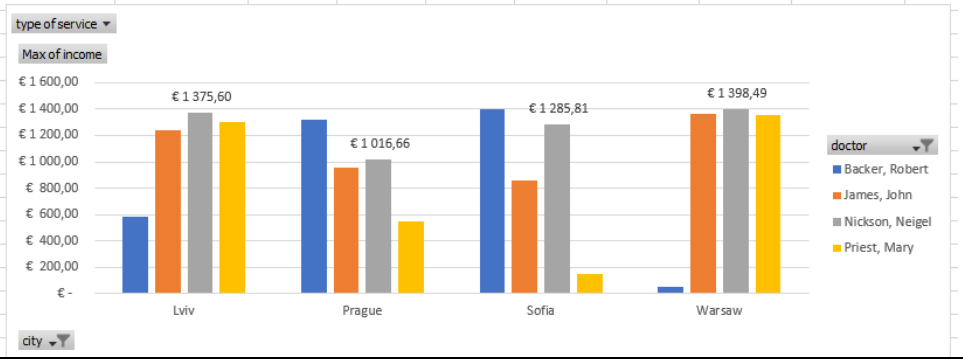
Total (max pts) =	12

Варіант 12.

		max pts
Task 1.	Create the pivot table with the pivot chart based on the data from '*med-network-report-example.xlsx*' and adjust the view of the pivot table and the pivot chart as per sample:	5
Task 2.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	2+2
Task 3.	Create the pivot table based on the data from '*diets.xlsx*' (use datatable from your version of assignment #2) and adjust the view of the pivot table as per sample:	3
	Total (max pts) =	12

type of service (All)

Max of income	Column Labels				
Row Labels	Backer, Robert	James, John	Nickson, Neigel	Priest, Mary	Grand Total
Lviv	€ 585,05	€ 1 239,91	€ 1 375,60	€ 1 297,86	€ 1 375,60
Prague	€ 1 316,46	€ 959,68	€ 1 016,66	€ 550,73	€ 1 316,46
Sofia	€ 1 402,40	€ 856,20	€ 1 285,81	€ 149,50	€ 1 402,40
Warsaw	€ 50,86	€ 1 362,81	€ 1 398,49	€ 1 357,50	€ 1 398,49
Grand Total	**€ 1 402,40**	**€ 1 362,81**	**€ 1 398,49**	**€ 1 357,50**	**€ 1 402,40**



family doctor Cuddy Liza

Count of Patient	Effectiveness of the diet				
Sex	negligible	little	normal	high	Grand Total
F		2		3	5
M	1		1	2	4
Grand Total	**1**	**2**	**1**	**5**	**9**

family doctor Cuddy Liza

Count of Patient	Effectiveness of the diet				
Sex	negligible	little	normal	high	Grand Total
F	0,00%	100,00%	0,00%	60,00%	56%
M	100,00%	0,00%	100,00%	40,00%	44%
Grand Total	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100%**

effectiveness of the diet normal

Average of 1st month (kg)	doctors								
Start of the diet	Allheal Jeremy	Astroff Simon	Cuddy Liza	Curewizard Peter	House George	Nopain James	Richards Phillip	Treatman Sarah	Grand Total
⊞2020		95,70			90,90			84,47	91,53
⊟2021	97,35	104,86		95,19	92,75	106,67	77,00	102,35	97,72
⊞Qtr1					100,50				100,50
⊟Qtr2	95,65	104,86				100,69			99,21
April						100,69			100,69
May	98,58								98,58
June	92,71	104,86							98,79
⊞Qtr3	100,75			95,19				110,00	101,98
⊞Qtr4					85,00	112,65	77,00	94,70	92,34
⊞2022	101,58	96,60	94,35	90,87	102,01	103,47	96,22		97,38
⊞2023	86,54				99,36			188,90	124,93
Grand Total	**96,03**	**98,22**	**94,35**	**91,95**	**95,81**	**105,07**	**89,81**	**119,52**	**99,18**

Форми контролю самостійної роботи:

Контроль правильності виконання практичних завдань з теми.

Вид навчальних занять, під час яких проводиться контроль самостійної роботи:

Самостійна робота виконується студентами і перевіряється викладачем у позааудиторний час. У разі виникнення суперечливих питань щодо виконання завдань або оцінювання самостійної роботи, ці питання вирішуються під час консультацій.

Критерії оцінювання самостійної роботи:

Максимальний бал за кожне завдання самостійної роботи наведено поруч із кожним завданням. Бал, необхідний для зарахування практичного завдання самостійної роботи, повинен становити не менше, ніж 60% від максимально можливої оцінки.

МЕТОДИЧНА КАРТКА ОРГАНІЗАЦІЇ САМОСТІЙНОЇ РОБОТИ

Тема: Freeware tools to create dashboards. Using dashboards to analyze processes in healthcare and medicine

Ключові терміни та поняття теми: dashboard, interactive visualization, visual, types of visuals: clustered chart, stacked chart, waterfall chart, map, card, multi-row card, tree map, decomposition tree, funnel chart, scatter, slicer, gauge, table, matrix.

Методичні рекомендації до виконання самостійної роботи:

Самостійна робота з даної теми передбачає виконання студентами практичних завдань за темою.

Рекомендовано користуватися конспектом, зробленим під час розв'язку типових завдань з теми на практичних заняттях, конспектом і слайдами лекції з поточної теми, власними файлами з виконаними завданнями на аудиторному практичному занятті.

Інші джерела, рекомендовані для використання під час самостійної роботи з теми:

1. Hoyt R.E. Health informatics: practical guide / Robert E. Hoyt, William R. Hersh. – 7th ed. – [S. l.] : Lulu.com, Informatics Education, 2018. – 475 p.
2. Essentials of Clinical Informatics / ed. by M.E. Frisse, K.E. Misulis. – [S. l.] : Oxford University Press, 2019. – 366 p.
3. Medical informatics: textbook for students of higher medical education establishments / I. Ye. Bulakh [et al.]. – 4th ed., rev.– Kyiv : Medicine, 2018. – 368 p.
4. Medical Informatics / S.J Singer [et al.]. – New York : Springer Science + Business Media, 2001. – 780 p.
5. Musen M.A. Handbook of Medical Informatics / ed. by M.A. Musen, J. van Bemmel. – [S. l.] : Springer, 2002. – 628 p.

Самостійна робота передбачає вдосконалення практичних навичок з теми та набуття професійних компетентностей:

A. на репродуктивному і продуктивному рівні: використання інтерактивних панелей для аналітики даних у завданнях управління охороною здоров'я і аналізу клінічних даних пацієнтів (набір завдань виконується на модельних базах даних з файлів '*med-network-report-example.xlsx*' і '*diets.xlsx*');

B. на творчому рівні: використання інтерактивних панелей для аналітики даних проведеного власного опитування (завдання виконується на базі даних отриманій в результаті опитування респондентів за власним опитувальником).

Практичні завдання рівня А виконуються студентами за варіантами, для оцінювання кожним студентом надається власний варіант завдання.

Нижче наведено перелік варіантів завдань для самостійної роботи з теми.

Завдання для самостійної (домашньої) роботи:

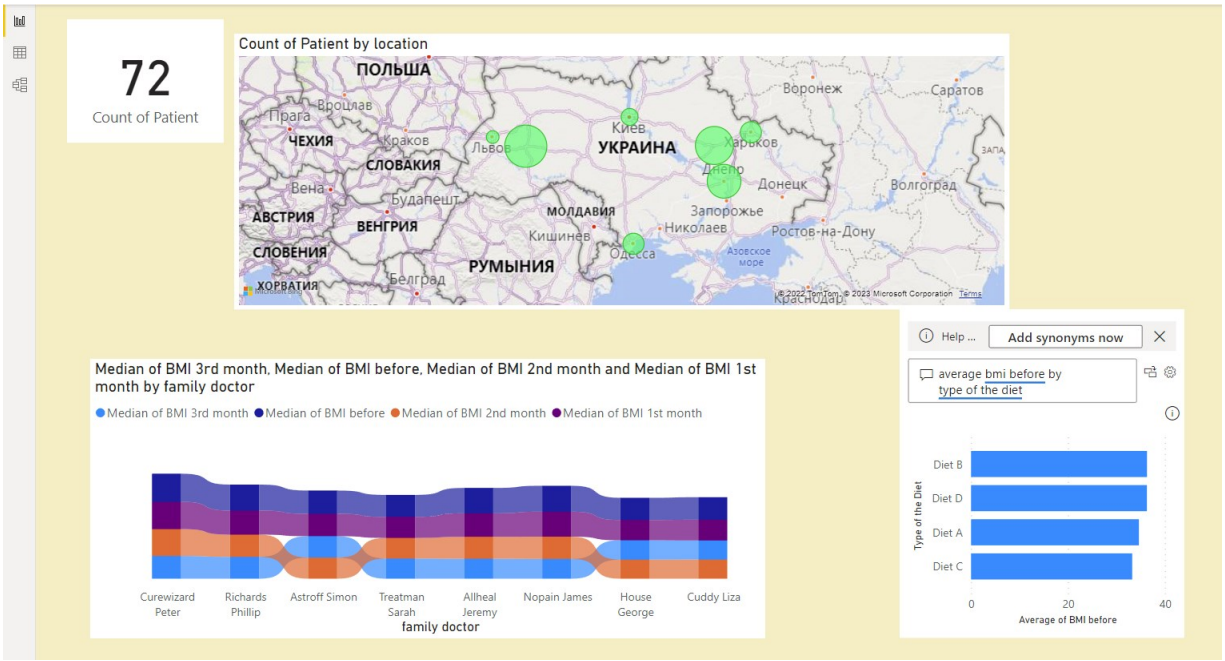
Рівень А

Варіант 1.

- Import data table from '*med-network-report-example.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:

Варіант 2.

- Import data table from '*diets.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:

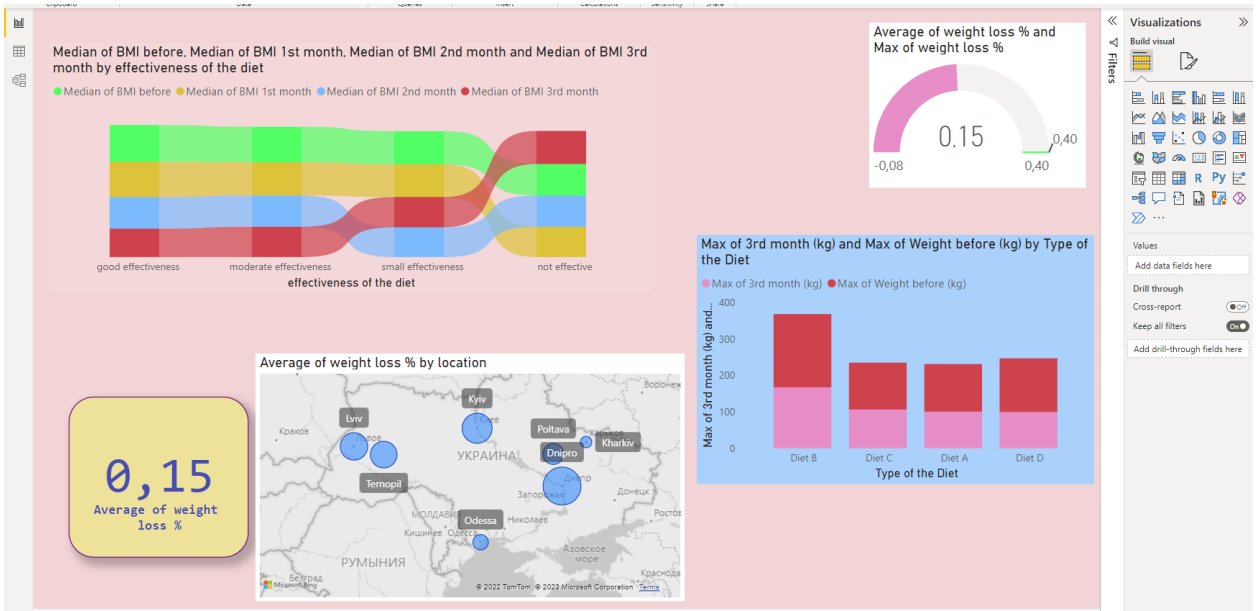


Варіант 3.

- Import data table from '*med-network-report-example.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:

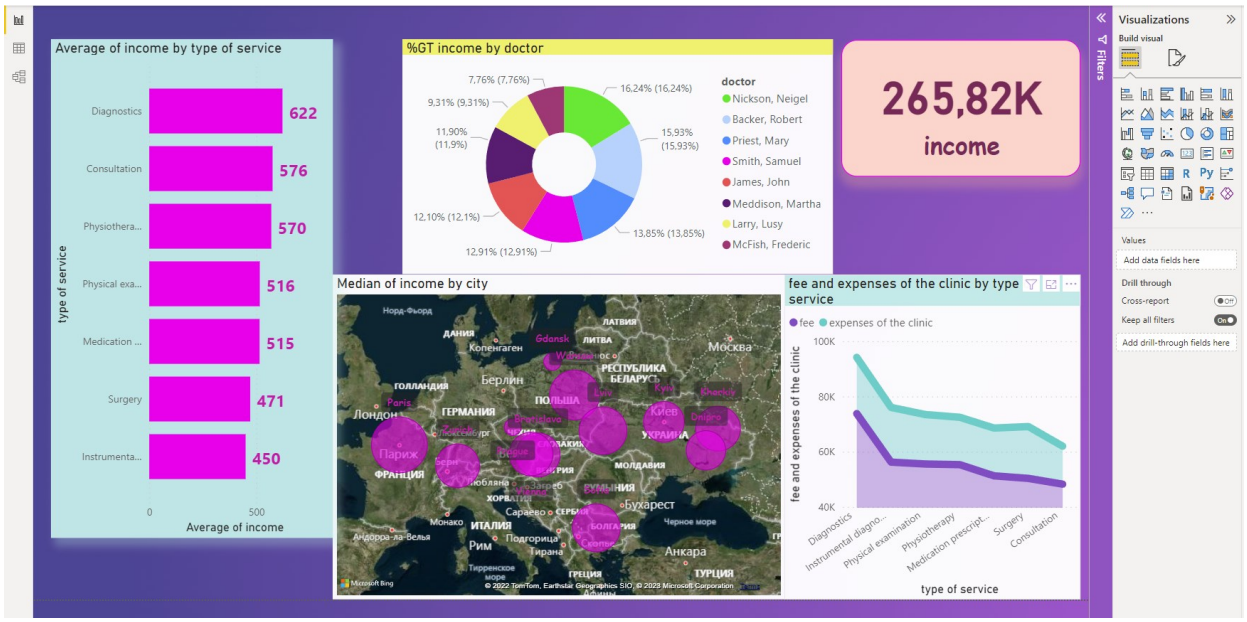
Варіант 4.

- Import data table from '*diets.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:



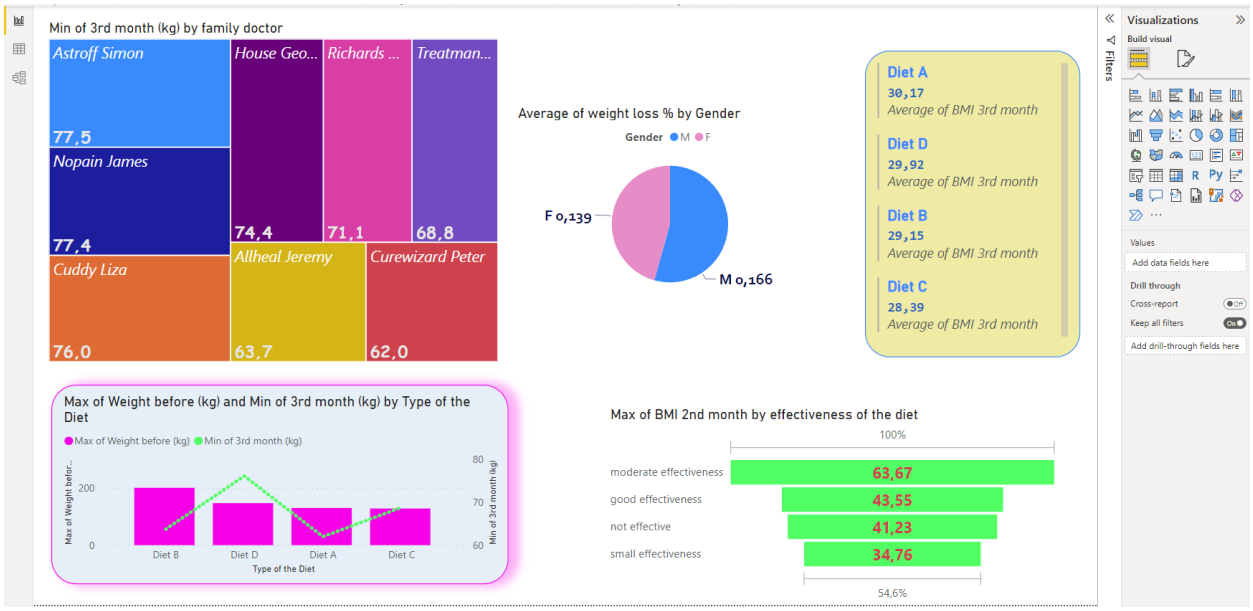
Варіант 5.

- Import data table from '*med-network-report-example.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:



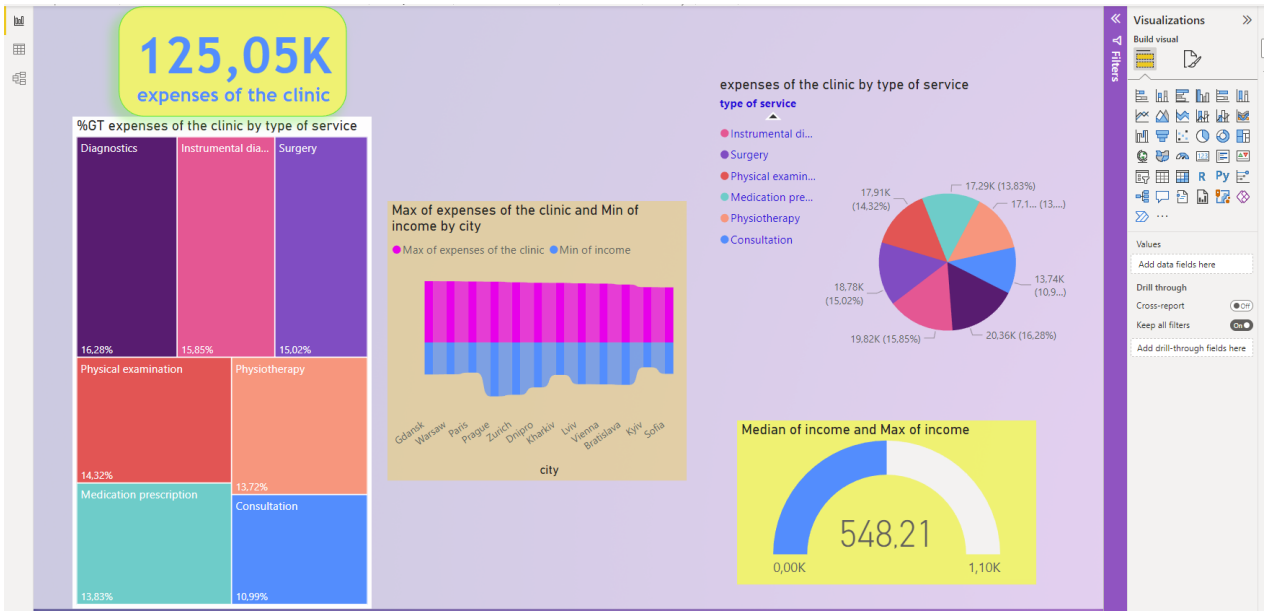
Варіант 6.

- Import data table from '*diets.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:



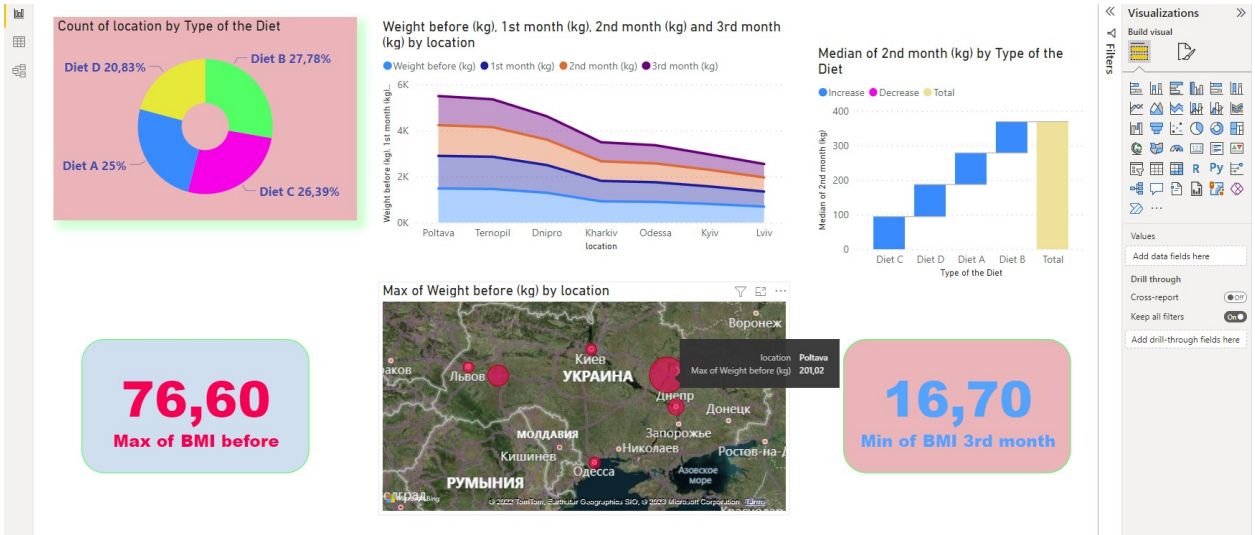
Варіант 7.

- Import data table from '*med-network-report-example.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:



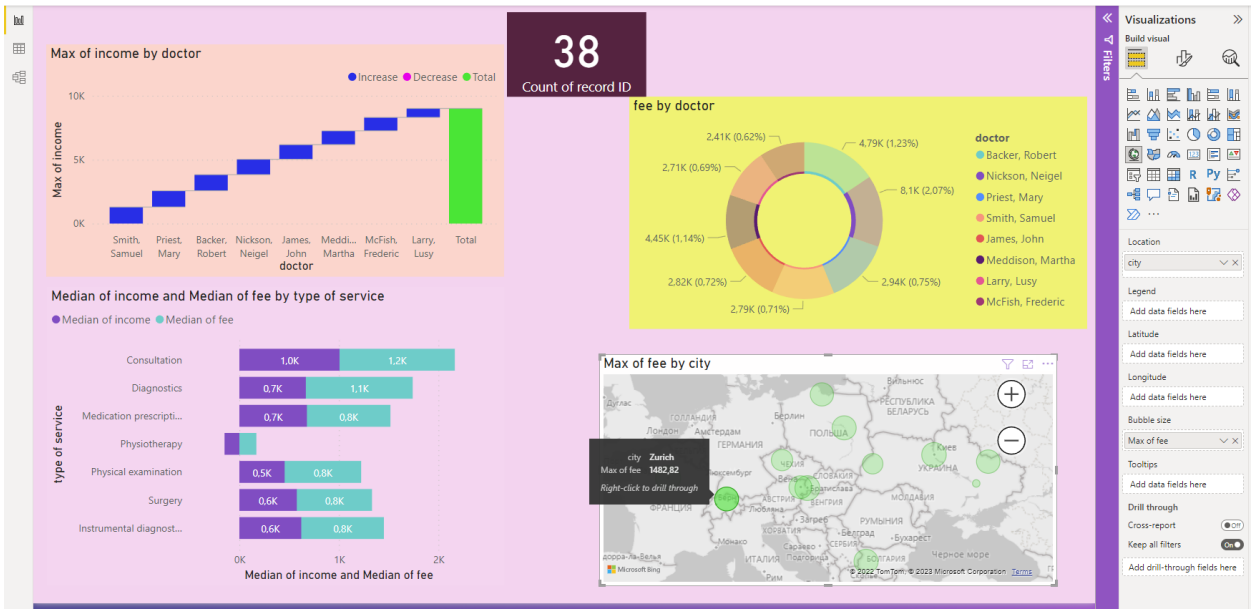
Варіант 8.

- Import data table from '*diets.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:



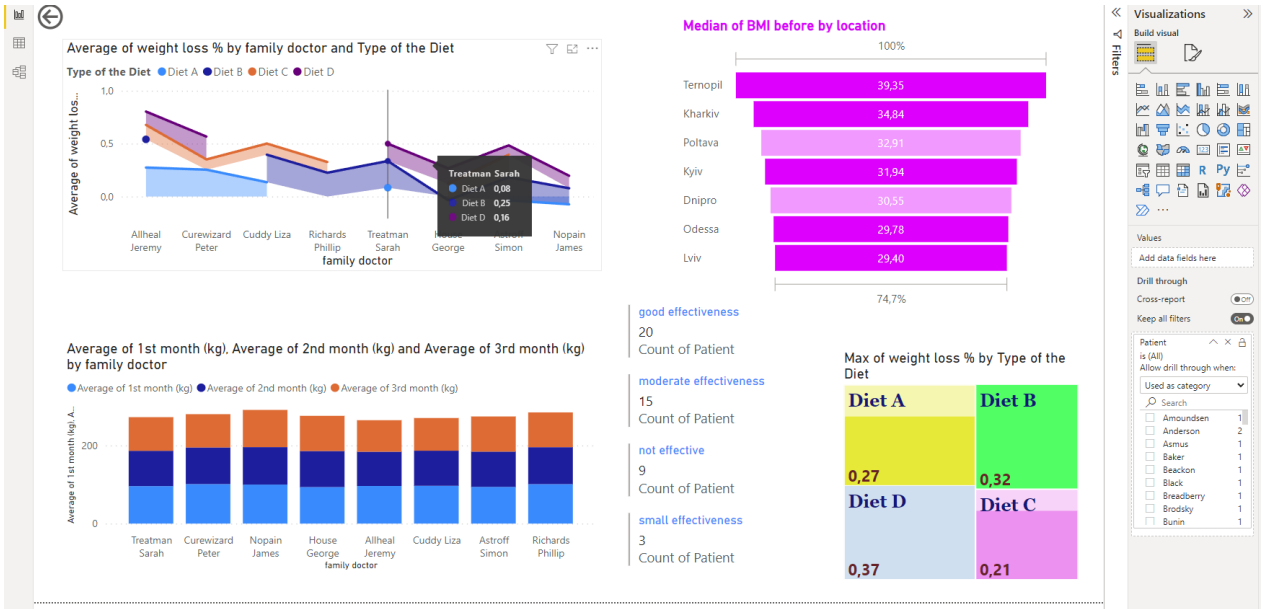
Варіант 9.

- Import data table from '*med-network-report-example.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:



Варіант 10.

- Import data table from '*diets.xlsx*' spreadsheet to the MS Power BI.
- Create the dashboard and format it as per sample:



Рівень B

- Import spreadsheet with responses to your google form to the MS Power BI.
- Create some visuals in MS Power BI (**at least 4 visuals of different types**) that show your data summary.
- Arrange your visuals in the dashboard so that they represent your findings in the best way.

Форми контролю самостійної роботи:

Контроль правильності виконання практичних завдань з теми.

Вид навчальних занять, під час яких проводиться контроль самостійної роботи:

Самостійна робота виконується студентами і перевіряється викладачем у позааудиторний час. У разі виникнення суперечливих питань щодо виконання завдань або оцінювання самостійної роботи, ці питання вирішуються під час консультацій.

Критерії оцінювання самостійної роботи:

Самостійна робота з теми за рівнем А оцінюється виходячи з максимальної оцінки 3 бали; за рівнем В – 5 балів. Бал, необхідний для зарахування практичного завдання самостійної роботи, повинен становити не менше, ніж 60% від максимально можливої оцінки.

МЕТОДИЧНА КАРТКА ОРГАНІЗАЦІЇ САМОСТІЙНОЇ РОБОТИ

Тема: Using freeware tools to conduct surveys in healthcare management and patients' records analysis

Ключові терміни та поняття теми: surveys in healthcare, medical questionnaires, forms, online questionnaires, form controls, multiply choice questions, check box, radio button, grid, scale.

Методичні рекомендації до виконання самостійної роботи:

Самостійна робота з даної теми передбачає виконання студентами практичних завдань за темою.

Рекомендовано користуватися конспектом, зробленим під час розв'язку типових завдань з теми на практичних заняттях, конспектом і слайдами лекції з поточної теми, власними файлами з виконаними завданнями на аудиторному практичному занятті.

Інші джерела, рекомендовані для використання під час самостійної роботи з теми:

1. Bennet A.E. Questionnaires in medicine: a guide to their design and use / A.E. Bennet, K. Ritchie. – London : Published for the Nuffield Provincial Hospital Trust by the Oxford University Press, 1975. – 116 p.
2. Hoyt R.E. Health informatics: practical guide / Robert E. Hoyt, William R. Hersh. – 7th ed. – [S. l.] : Lulu.com, Informatics Education, 2018. – 475 p.
3. Essentials of Clinical Informatics / ed. by M.E. Frisse, K.E. Misulis. – [S. l.] : Oxford University Press, 2019. – 366 p.
4. Medical informatics: textbook for students of higher medical education establishments / I. Ye. Bulakh [et al.]. – 4th ed., rev.– Kyiv : Medicine, 2018. – 368 p.
5. Medical Informatics / S.J Singer [et al.]. – New York : Springer Science + Business Media, 2001. – 780 p.
6. Musen M.A. Handbook of Medical Informatics / ed. by M.A. Musen, J. van Bemmel. – [S. l.] : Springer, 2002. – 628 p.

Самостійна робота передбачає вдосконалення практичних навичок з теми та набуття професійних компетентностей шляхом виконання опитування за власною (обраною студентом) тематикою, аналізу і презентації його результатів.

Завдання для самостійної (домашньої) роботи:

In this topic assignments you are to do your own survey, process the answers, and present your results. This should be done in several steps:

Step 1: Think of the topic of your own survey, what it will be about, what will be the purpose of your survey.

Think of the questions you ask the respondents to achieve the goal of the survey. Come up with a set of questions (not more than 10 questions).

Step 2: Make the questionary for your survey using google forms.

Requirements for the google form:

- Use different types of questions (i.e. multiple choice questions, dropdowns, check boxes, scale(s), date/time, short text).
- Use images for some questions and answers.
- Customize your form (add header image, change theme colors, change default fonts for questions, header and text).
- In the header specify the purpose of your survey shortly.
- · **Important**!!! Create a spreadsheet to collect responses to your google form.

Step 3: Share the link to your form with me (your teacher in this course), your groupmates, and other people. Collect the responses (not less than 50 records).

Step 4: Process the results of your survey. Draw the conclusions.

Requirements for the results processing:

- Use database spreadsheet functions and conditional subtotals functions for calculations while summarizing the data.
- Use pivot tables (pivot charts) for data summary.
- Use subtotals for data summary.
- Create some visuals in MS Power BI (at least 4 visuals of different types) that show your data summary.

Step 5: Present your findings, explain what you have found out in your survey.

Форми контролю самостійної роботи:

Контроль правильності виконання проєкту з організації та проведення опитування і аналізу його результатів.

Вид навчальних занять, під час яких проводиться контроль самостійної роботи:

Перші чотири кроки завдання самостійної роботи виконуються студентами і перевіряється викладачем у позааудиторний час. У разі виникнення суперечливих питань щодо виконання завдань або оцінювання самостійної роботи, ці питання вирішуються під час консультацій. Останній крок (презентація отриманих результатів) відбувається на останньому практичному занятті після чого студент отримує загальну оцінку за самостійну роботу з даної теми.

Критерії оцінювання самостійної роботи:

Максимальний бал за самостійну роботу в цій темі складає 20 балів. Бал, необхідний для зарахування практичного завдання самостійної роботи, повинен становити не менше, ніж 60% від максимально можливої оцінки.