LIBRARY DATABASE

NANDO DYAS ARYA - KAMPUS MERDEKA 1 - ANGGA

SEPT 05

CONTENT

Define Use Case

Define the story of the library database with some case.

Create ER Diagram

Minimum 3 Entities with 3 Attributes for each Entities.

Create Syntax Table

Constraint (Primary Key, Not Null, References) .

Create Syntax Insert Data

Each table at least 3 data

Co reate scenarianalysis

At least 2 table

DEFINE

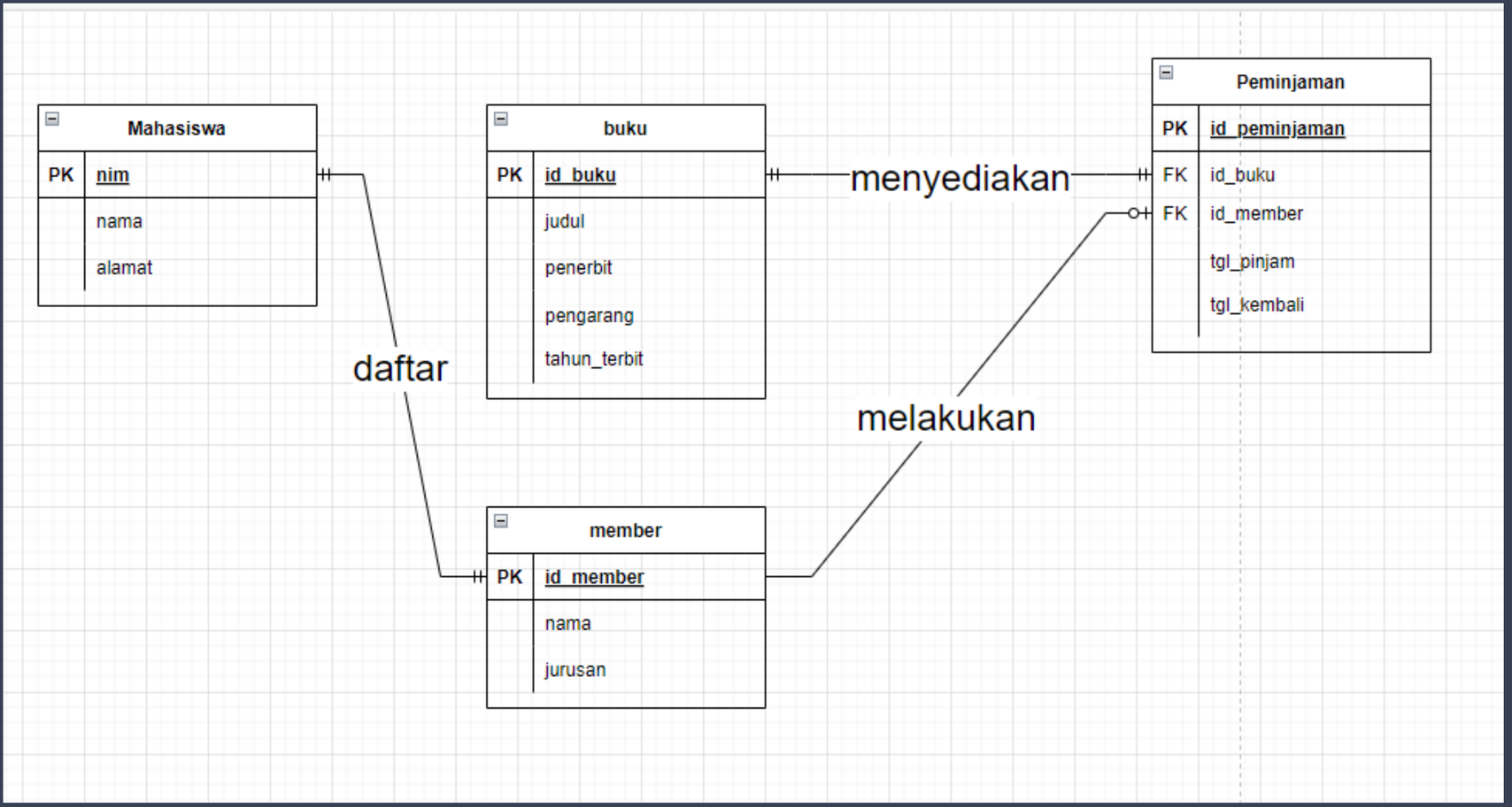
When registering to become a member of the MIPA Faculty library, the names, student numbers and addresses of students are recorded. After that, they will get a membership card consisting of ID, name and major, and they can borrow books from the library. Each book has data on book number, title, author, publisher, year of publication. One author can write several books.

A member may borrow several books. Each borrower will note the date of borrowing, date of return, loan id, book id and member id. Libraries apply a rule that borrowed books must be returned exactly one week after borrowing.

However, students are sometimes late in returning books, so they get punishment. The amount of the punishment is IDR 500,- per day of delay. Students are considered late if they return books later than 1 week. The punishment will be established by the student as of the 3rd of the month.

At the beginning of March 2020 the head of the library wants to check the punishment that must be pay by each student in February 2020.

ER DIAGRAM



3 Entities with
3 Attributes for each Entities.

CREATE TABLE

Table Mahasiswa & Buku

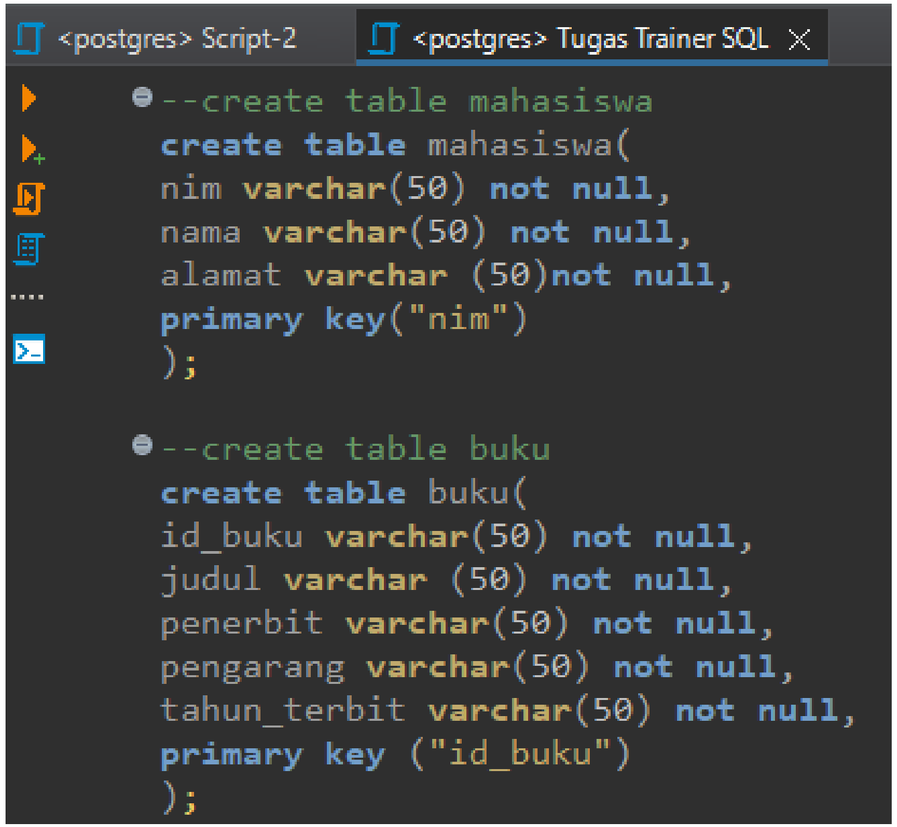
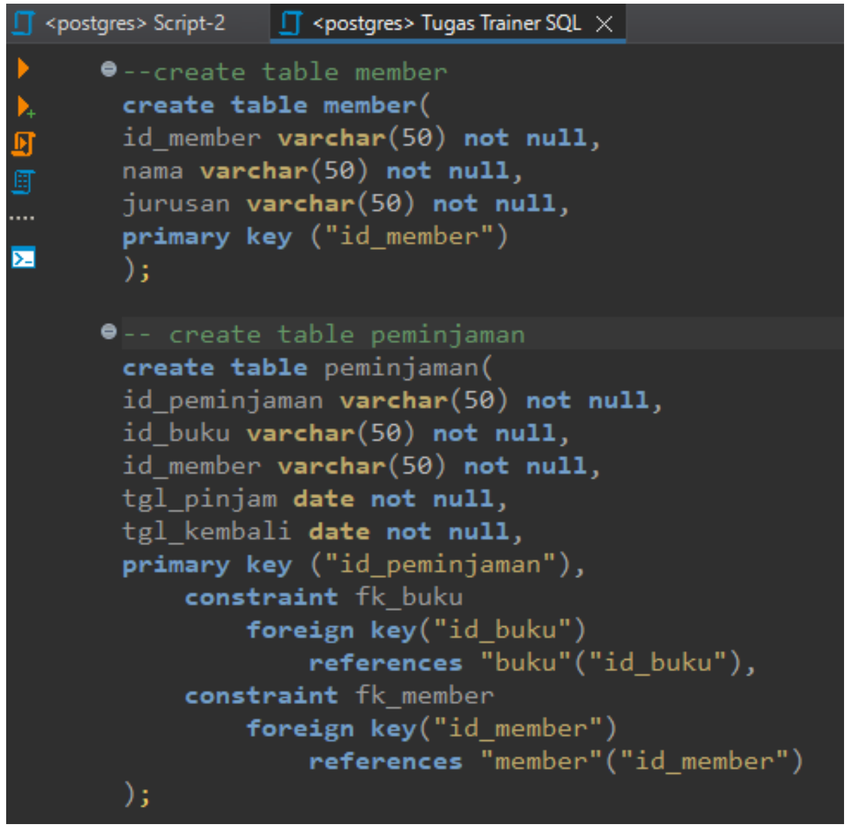


Table Member & Peminjaman



INSERT DATA

Data Mahasiswa

<postgres> Script-2 | <postgres> Tugas Trainer SQL

```
--insert data table mahasiswa
insert into mahasiswa
values
('1901','Ann','Batu'),
('1902','Widya','Malang'),
('1903','Tanta','Batu'),
('1904','Romi', 'Probolinggo'),
('1905','Alfian','Lamongan'),
('1906','Faris','Blitar'),
('1907','Naufal','Bojonegoro'),
('1908','Ihsan','Riau'),
('1909','Nijar','Blitar'),
('1910','Aisyah','Malang');
```

Table & Data Mahasiswa

<postgres> Script-2 | <postgres> Tugas Trainer SQL

Properties | Data | ER Diagram

mahasiswa | Enter a SQL expression to filter results (use Ctrl-

Grid | Text

	nim	nama	alamat
1	1901	Ann	Batu
2	1902	Widya	Malang
3	1903	Tanta	Batu
4	1904	Romi	Probolinggo
5	1905	Alfian	Lamongan
6	1906	Faris	Blitar
7	1907	Naufal	Bojonegoro
8	1908	Ihsan	Riau
9	1909	Nijar	Blitar
10	1910	Aisyah	Malang

INSERT DATA

Data Buku

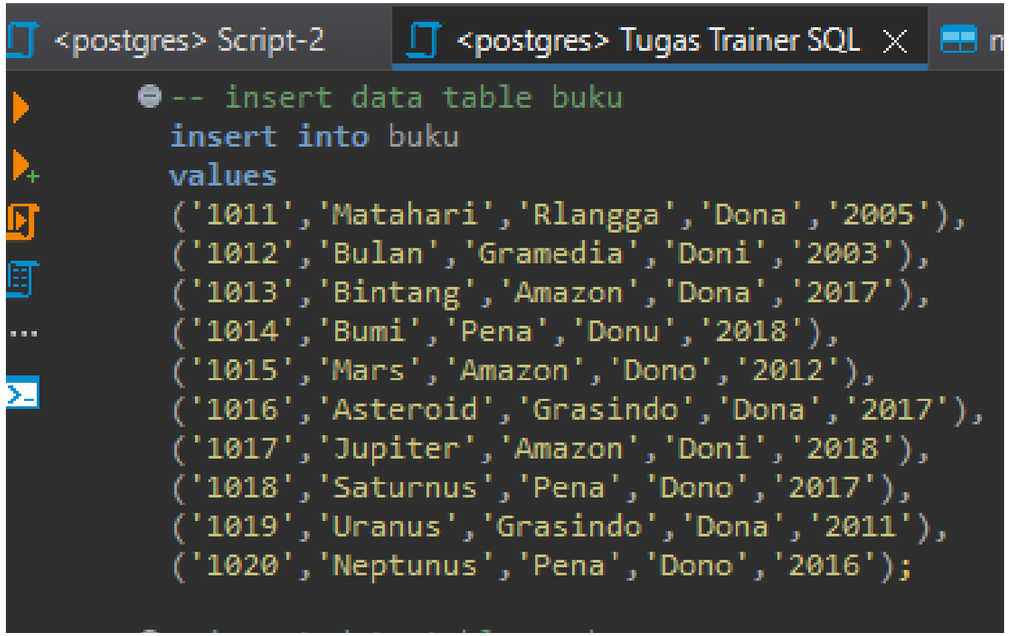
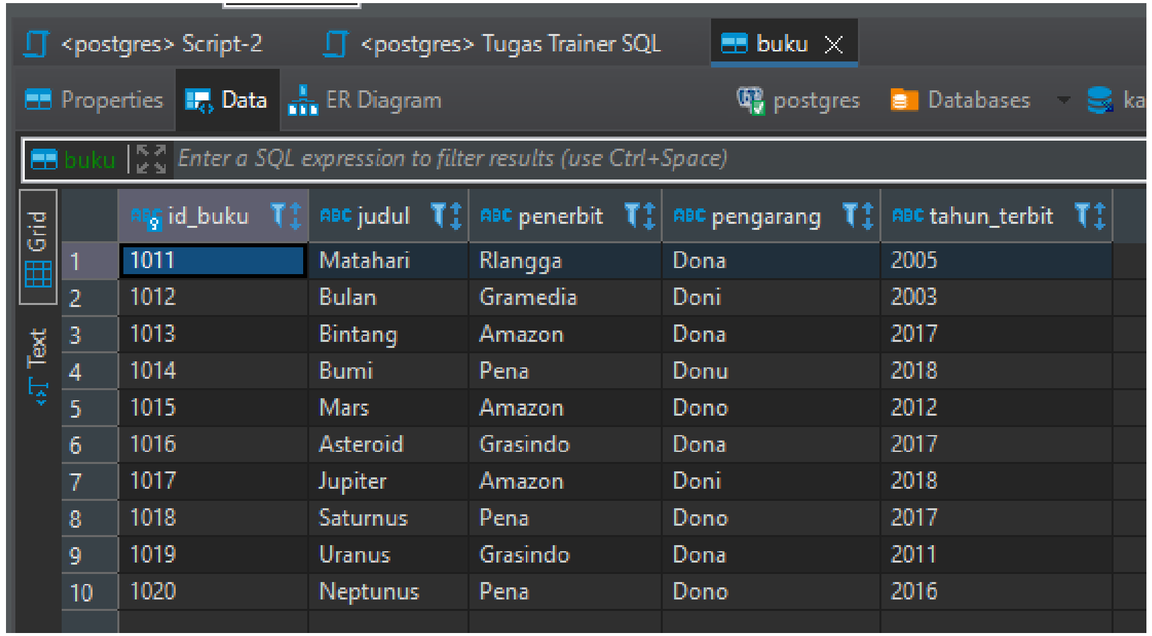


Table & Data Buku



	id_buku	judul	penerbit	pengarang	tahun_terbit
1	1011	Matahari	Rlangga	Dona	2005
2	1012	Bulan	Gramedia	Doni	2003
3	1013	Bintang	Amazon	Dona	2017
4	1014	Bumi	Pena	Donu	2018
5	1015	Mars	Amazon	Dono	2012
6	1016	Asteroid	Grasindo	Dona	2017
7	1017	Jupiter	Amazon	Doni	2018
8	1018	Saturnus	Pena	Dono	2017
9	1019	Uranus	Grasindo	Dona	2011
10	1020	Neptunus	Pena	Dono	2016

INSERT DATA

Data Member

<postgres> Script-2 | <postgres> Tugas Trainer SQL

```
--insert data table member
insert into "member"
values
('3001','Ann','Fisika'),
('3002','Alfian','Kimia'),
('3003','Tanta','Biologi'),
('3004','Romi','Fisika'),
('3005','Widya','Matematika'),
('3006','Faris','Biologi'),
('3007','Naufal','Matematika'),
('3008','Ihsan','Matematika'),
('3009','Nijar','Matematika'),
('3010','Aisyah','Fisika');
```

Table & Data Member

<postgres> Script-2 | <postgres> Tugas Trainer SQL

Properties | Data | ER Diagram

member | Enter a SQL expression to filter results (use Ctrl+Space

Grid | Text

	id_member	nama	jurusan
1	3001	Ann	Fisika
2	3002	Alfian	Kimia
3	3003	Tanta	Biologi
4	3004	Romi	Fisika
5	3005	Widya	Matematika
6	3006	Faris	Biologi
7	3007	Naufal	Matematika
8	3008	Ihsan	Matematika
9	3009	Nijar	Matematika
10	3010	Aisyah	Fisika

INSERT DATA

Data Peminjaman

<postgres> Script-2 | <postgres> Tugas Trainer SQL

```
--insert data table peminjaman
insert into peminjaman
values
('1','1011','3001','02/02/2020','09/02/2020'),
('2','1012','3002','03/02/2020','19/02/2020'),
('3','1013','3003','04/02/2020','11/02/2020'),
('4','1014','3004','05/02/2020','12/02/2020'),
('5','1015','3005','06/02/2020','17/02/2020'),
('6','1016','3006','07/02/2020','17/02/2020'),
('7','1017','3007','08/02/2020','15/02/2020'),
('8','1018','3008','09/02/2020','23/02/2020'),
('9','1019','3009','10/02/2020','24/02/2020'),
('10','1020','3010','11/02/2020','20/02/2020');
```

Table & Data Peminjaman

<postgres> Script-2 | <postgres> Tugas Trainer SQL | peminjaman

Properties | Data | ER Diagram | postgres | Databases | kampus_merdeka

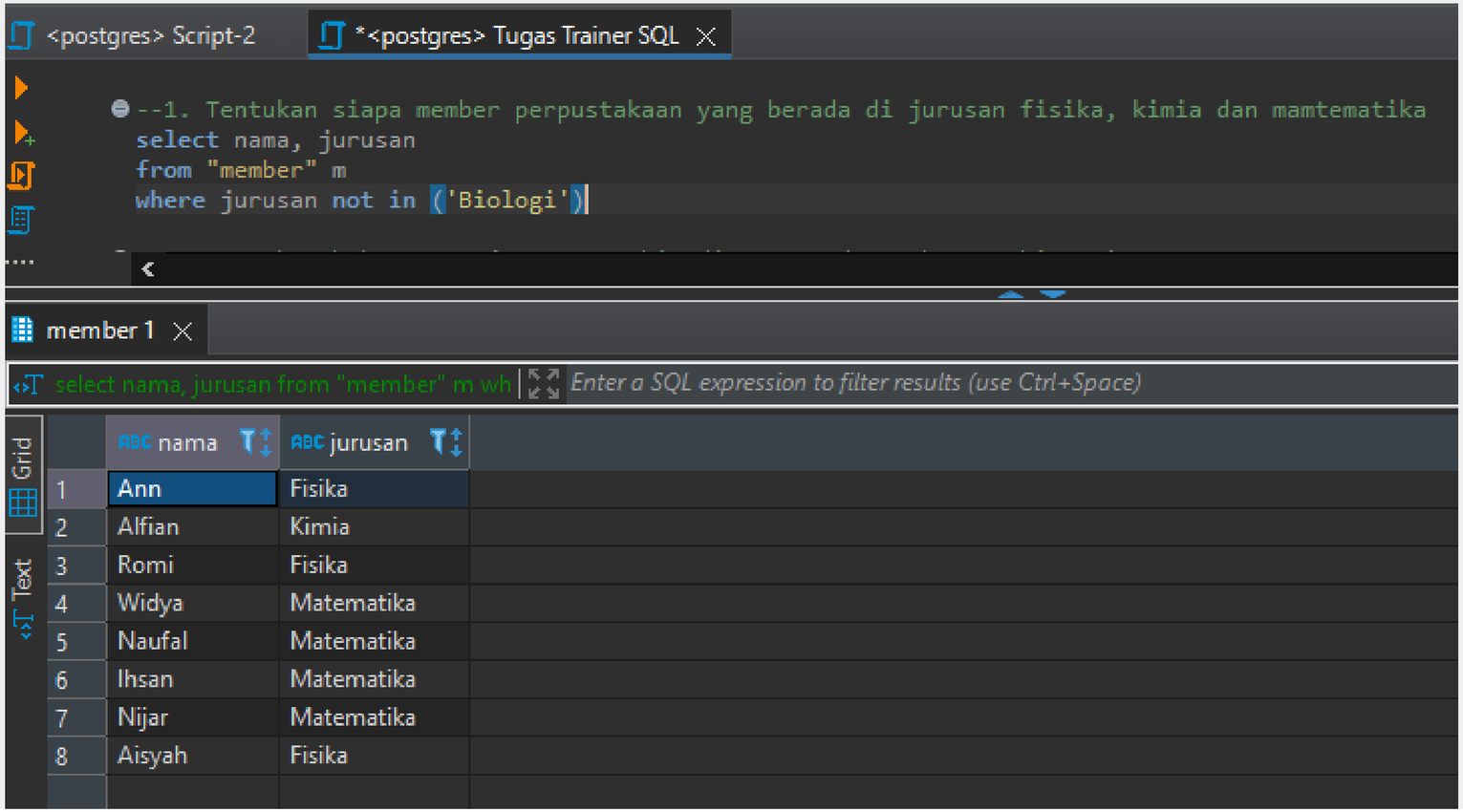
peminjaman | Enter a SQL expression to filter results (use Ctrl+Space)

Grid | Text

	id_peminjaman	id_buku	id_member	tgl_pinjam	tgl_kembali
1	1	1011	3001	2020-02-02	2020-02-09
2	2	1012	3002	2020-02-03	2020-02-19
3	3	1013	3003	2020-02-04	2020-02-11
4	4	1014	3004	2020-02-05	2020-02-12
5	5	1015	3005	2020-02-06	2020-02-17
6	6	1016	3006	2020-02-07	2020-02-17
7	7	1017	3007	2020-02-08	2020-02-15
8	8	1018	3008	2020-02-09	2020-02-23
9	9	1019	3009	2020-02-10	2020-02-24
10	10	1020	3010	2020-02-11	2020-02-20

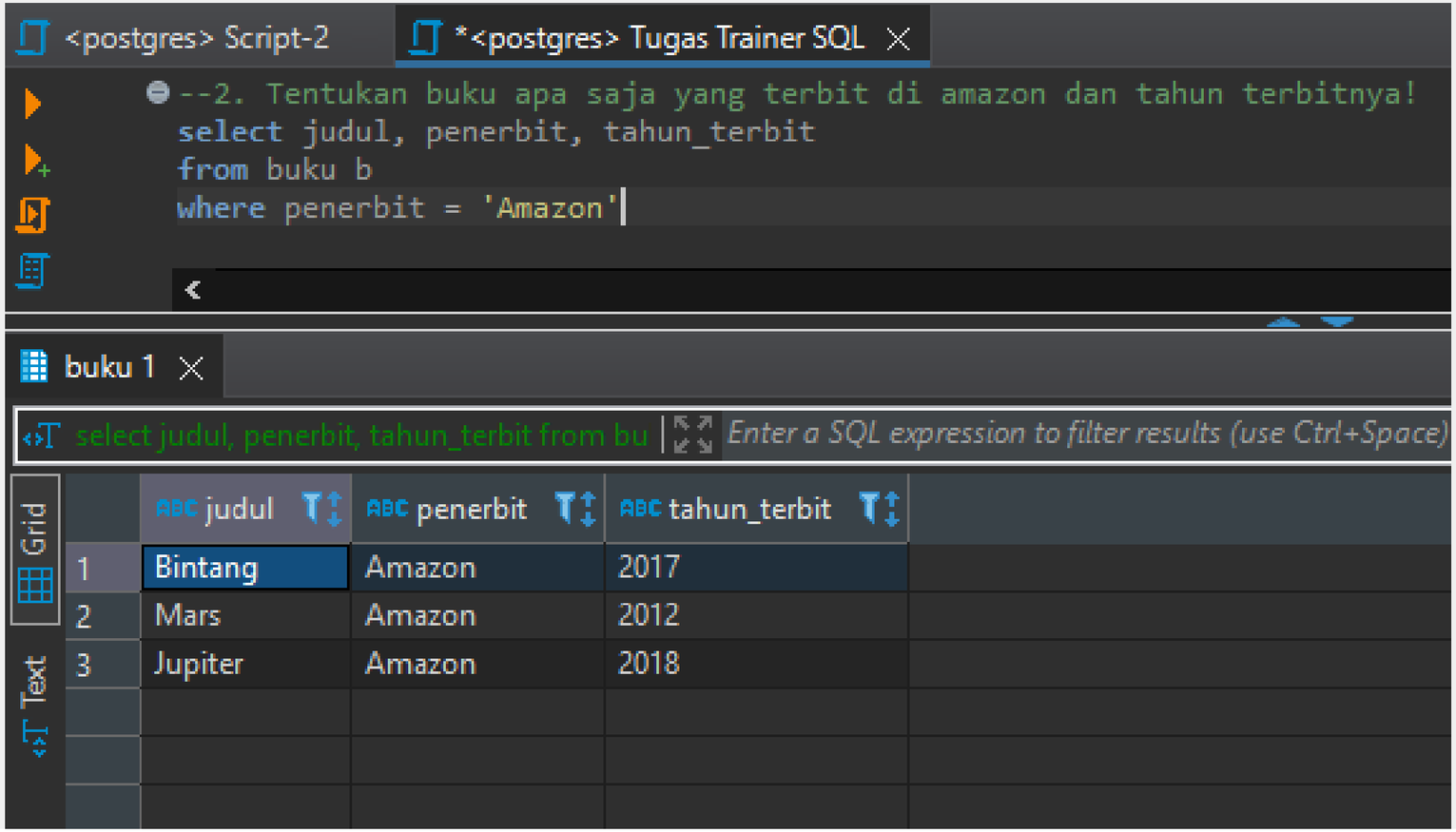
SCENARIANALYSIS

- Determine who is a member of the library who is in the department of physics, chemistry and mathematics



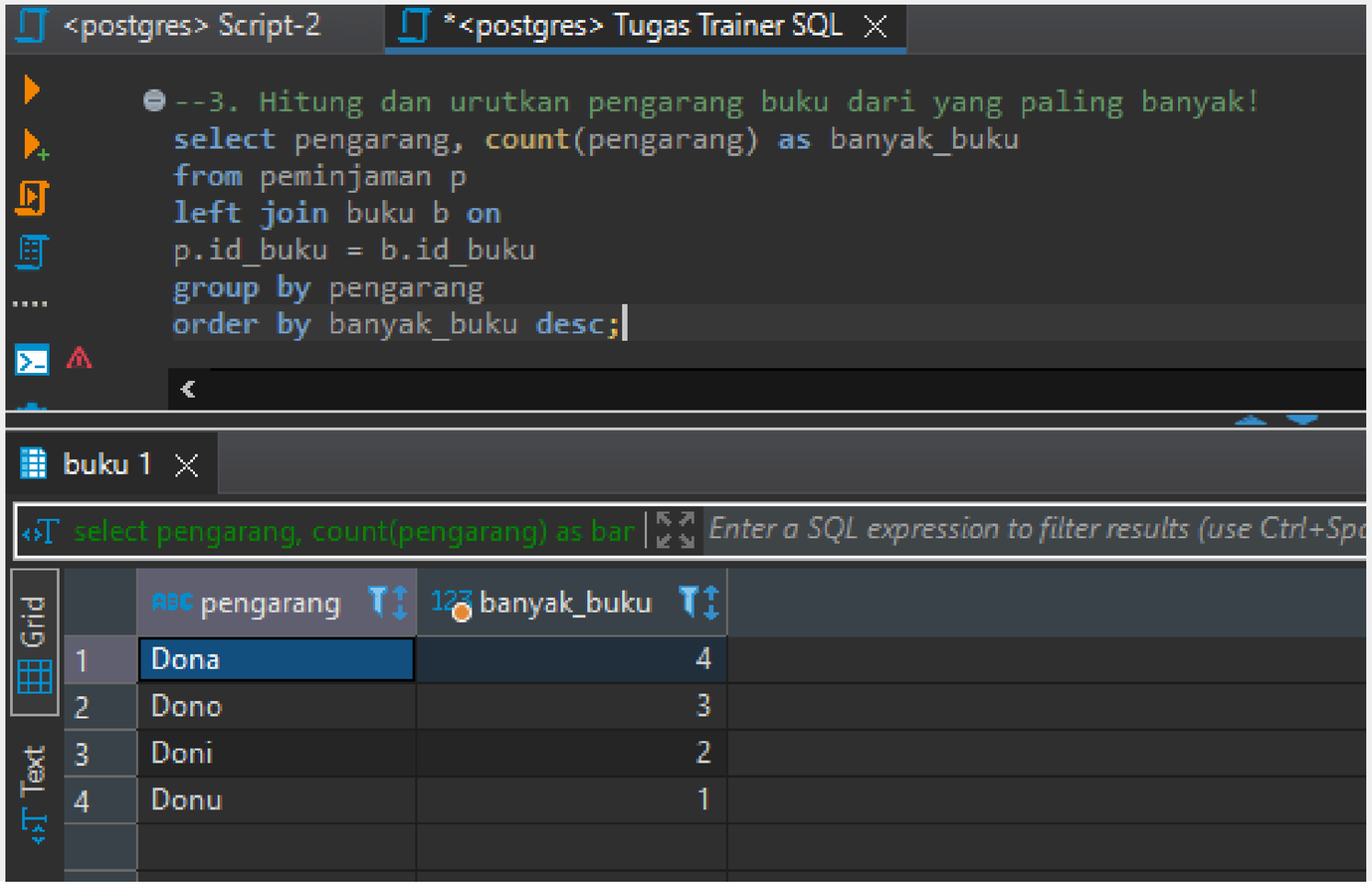
SCENARIANALYSIS

- Determine what books are published on amazon and the year they were published



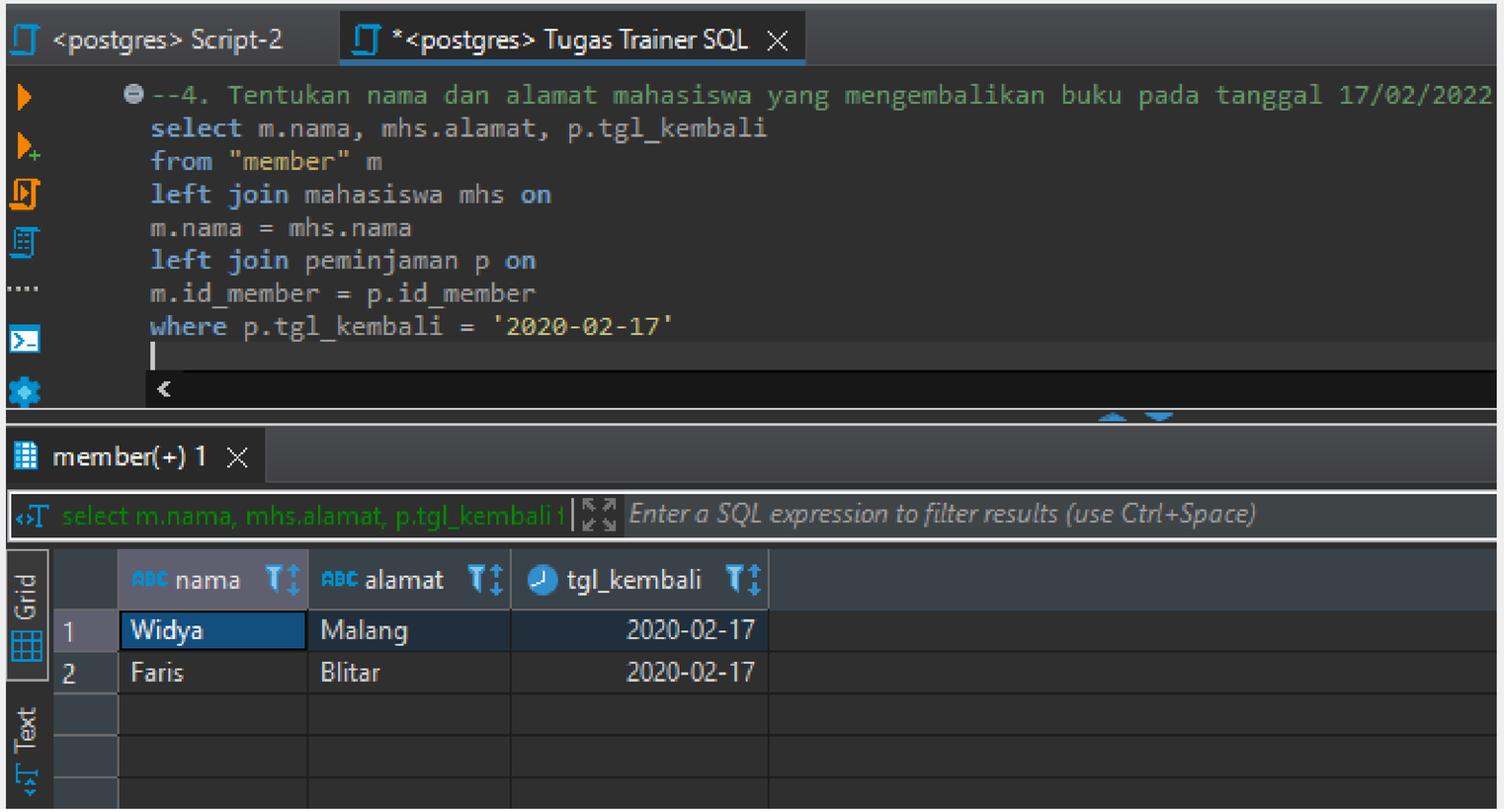
SCENARIANALYSIS

- Count and order the authors of the books from the most!



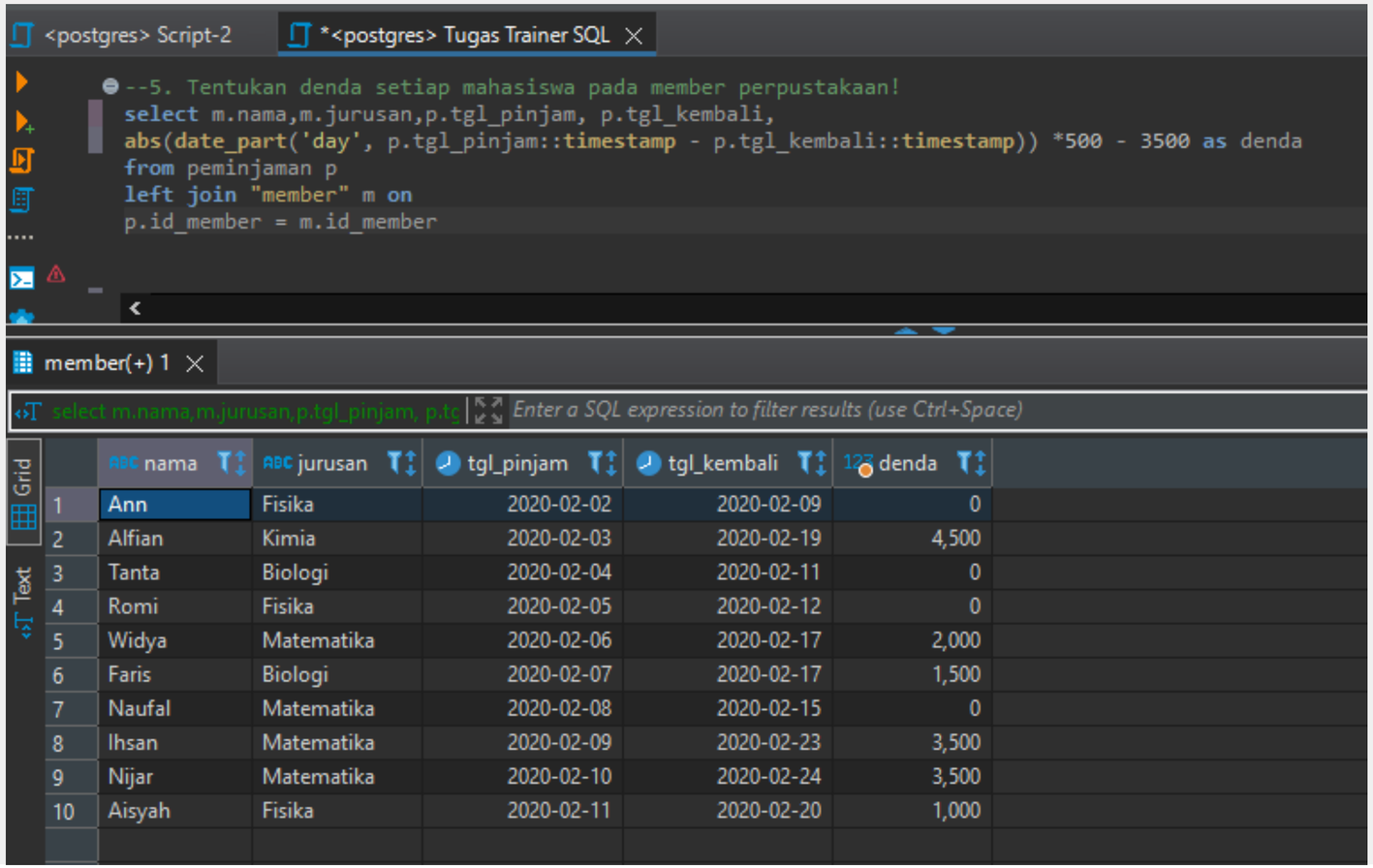
SCENARIANALYSIS

- Determine the name and address of the student who returns the book on 17/02/2022!



MAIN SCENARIANALYSIS

- Determine the punishment for each student on the library members!



	nama	jurusan	tgl_pinjam	tgl_kembali	denda
1	Ann	Fisika	2020-02-02	2020-02-09	0
2	Alfian	Kimia	2020-02-03	2020-02-19	4,500
3	Tanta	Biologi	2020-02-04	2020-02-11	0
4	Romi	Fisika	2020-02-05	2020-02-12	0
5	Widya	Matematika	2020-02-06	2020-02-17	2,000
6	Faris	Biologi	2020-02-07	2020-02-17	1,500
7	Naufal	Matematika	2020-02-08	2020-02-15	0
8	Ihsan	Matematika	2020-02-09	2020-02-23	3,500
9	Nijar	Matematika	2020-02-10	2020-02-24	3,500
10	Aisyah	Fisika	2020-02-11	2020-02-20	1,000

THANKYOU