3.3: SQL for Data Analysts

Answers 3.3.

Step 1:

Your first task is to find out what film genres already exist in the category table:

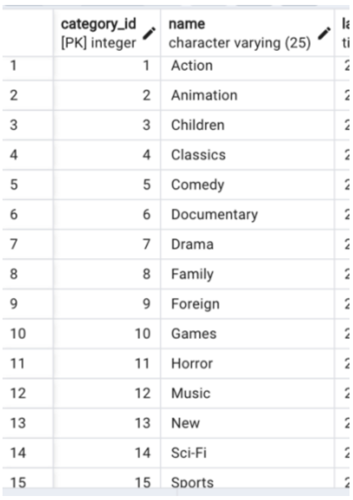
- **Open pgAdmin 4, click the Rockbuster database, and open the Query Tool.**

- **Write a SELECT command to find out what film genres exist in the category table.**

  SELECT *

  FROM category name

- **Copy-paste the output into your answers document or write the answers out—it's up to you. Make sure to include the category ID for each genre.**

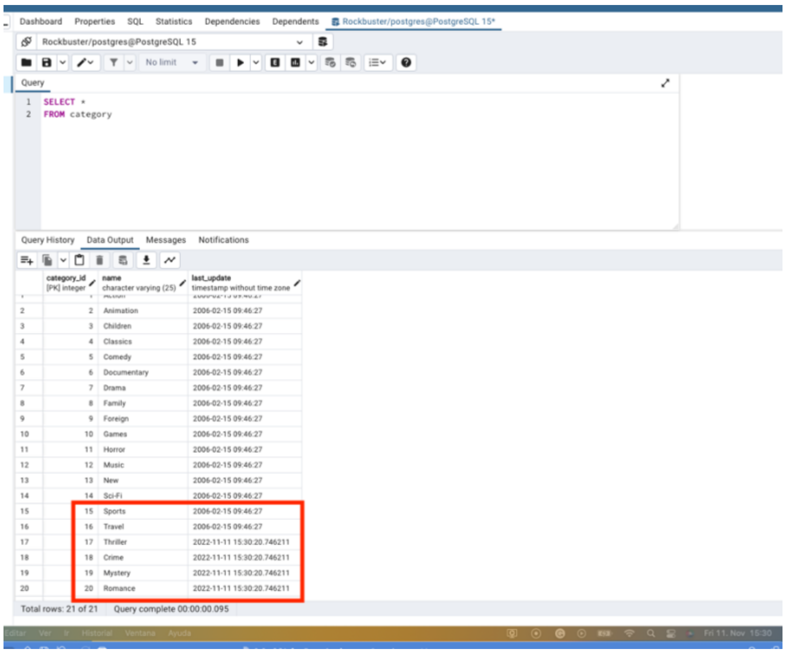


	category_id [PK] integer	name character varying (25)	la ti
1	1	Action	2
2	2	Animation	2
3	3	Children	2
4	4	Classics	2
5	5	Comedy	2
6	6	Documentary	2
7	7	Drama	2
8	8	Family	2
9	9	Foreign	2
10	10	Games	2
11	11	Horror	2
12	12	Music	2
13	13	New	2
14	14	Sci-Fi	2
15	15	Sports	2

Step 2:

You're ready to add some new genres! Write an INSERT statement to add the following genres to the category table: Thriller, Crime, Mystery, Romance, and War:

Copy-paste your **INSERT** commands into your answers document.



```
SELECT *
FROM category
```

	category_id [PK] integer	name character varying (25)	last_update timestamp without time zone
2	2	Animation	2006-02-15 09:46:27
3	3	Children	2006-02-15 09:46:27
4	4	Classics	2006-02-15 09:46:27
5	5	Comedy	2006-02-15 09:46:27
6	6	Documentary	2006-02-15 09:46:27
7	7	Drama	2006-02-15 09:46:27
8	8	Family	2006-02-15 09:46:27
9	9	Foreign	2006-02-15 09:46:27
10	10	Games	2006-02-15 09:46:27
11	11	Horror	2006-02-15 09:46:27
12	12	Music	2006-02-15 09:46:27
13	13	New	2006-02-15 09:46:27
14	14	Sci-Fi	2006-02-15 09:46:27
15	15	Sports	2006-02-15 09:46:27
16	16	Travel	2006-02-15 09:46:27
17	17	Thriller	2022-11-11 15:30:20.746211
18	18	Crime	2022-11-11 15:30:20.746211
19	19	Mystery	2022-11-11 15:30:20.746211
20	20	Romance	2022-11-11 15:30:20.746211

Total rows: 21 of 21   Query complete 00:00:00.095

INSERT INTO category (name)

VALUES ('Thriller'), ('Crime'), ('Mystery'), ('Romance'), ('War');

- The **CREATE** statement below shows the constraints on the category table. Write a short paragraph explaining the various constraints that have been applied to the columns. What do these constraints do exactly? Why are they important?

```
  CREATE TABLE category
(
  category_id integer NOT NULL DEFAULT nextval('category_category_id_seq'::regclass),
  name text COLLATE pg_catalog."default" NOT NULL,
  last_update timestamp with time zone NOT NULL DEFAULT now(),
  CONSTRAINT category_pkey PRIMARY KEY (category_id)
);
```

Constraints are crucial in keeping the data organized and ensuring that the values in each column are consistently formatted. They can also help to ensure that values in a column are unique, not null, or even check that the values meet certain conditions.

This constraint contains 'NOT NULL DEFAULT' and ensures that a column can't have any empty or missing.

2. Category_id - The data type should be an integer, and it cannot be null

3. Name - The data type should be in text, and it cannot be null

4. Last_update - The data type should be the timestamp with time zone and cannot be null, and finally, 5. Primary key: The primary key gives each record in a table a unique ID.

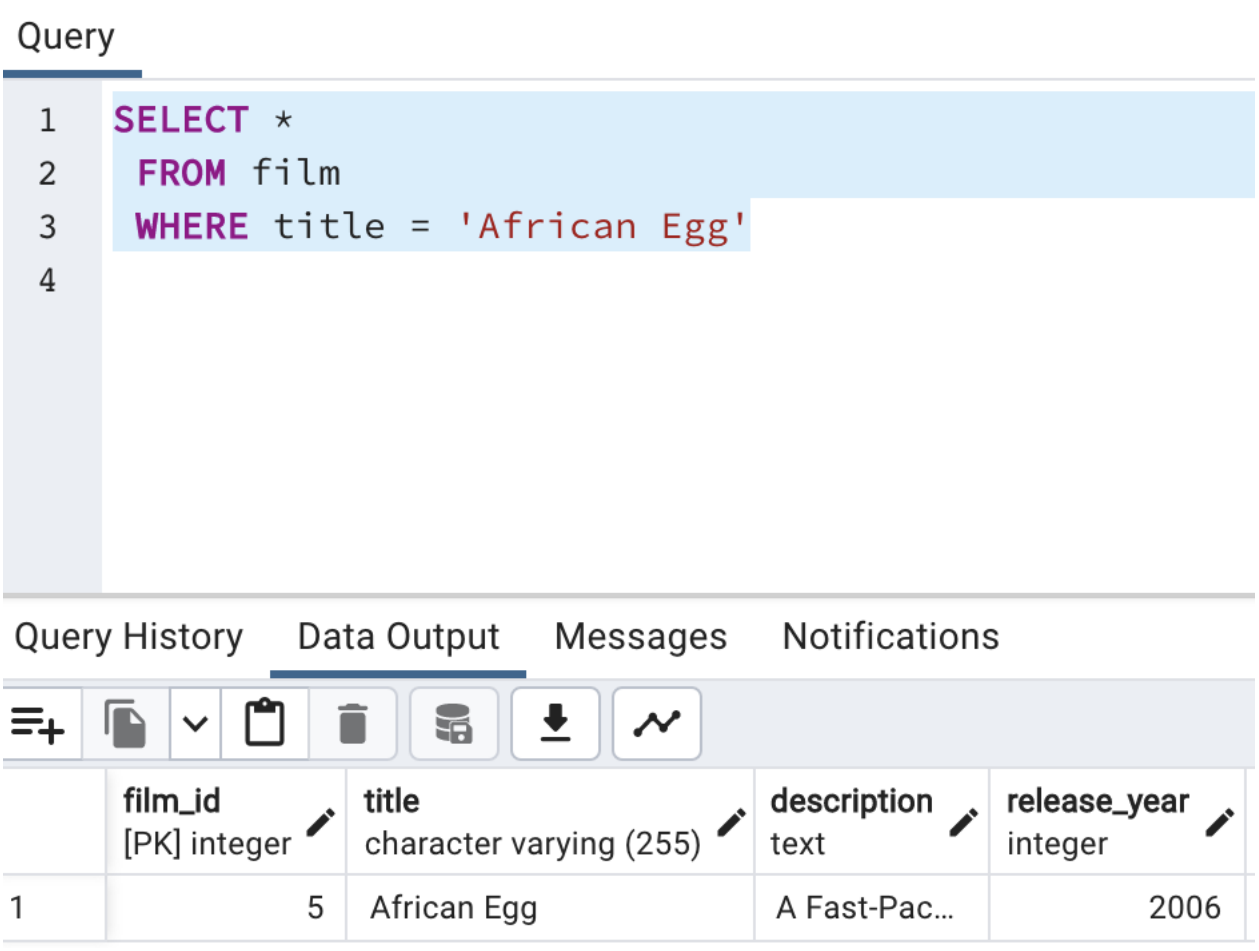
Step 3:

The genre for the movie *African Egg* needs to be updated to thriller. Work through the steps below to make this change:

- **Write the SELECT statement to find the film_id for the movie *African Egg*.**
- **SELECT ***

  FROM film

  WHERE title = 'African Egg'



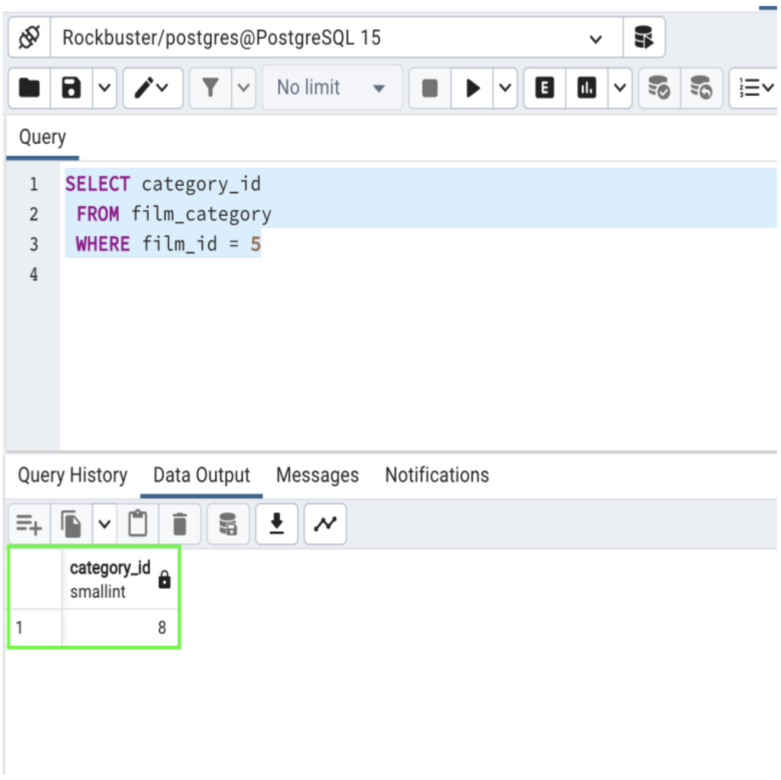
```
SELECT *
 FROM film
 WHERE title = 'African Egg'
```

	film_id [PK] integer	title character varying (255)	description text	release_year integer
1	5	African Egg	A Fast-Pac...	2006

-
- Query:
- SELECT category_id

  FROM film_category

  WHERE film_id = 5


Rockbuster/postgres@PostgreSQL 15

No limit

Query

```
SELECT category_id
 FROM film_category
 WHERE film_id = 5
```

Query History Data Output Messages Notifications

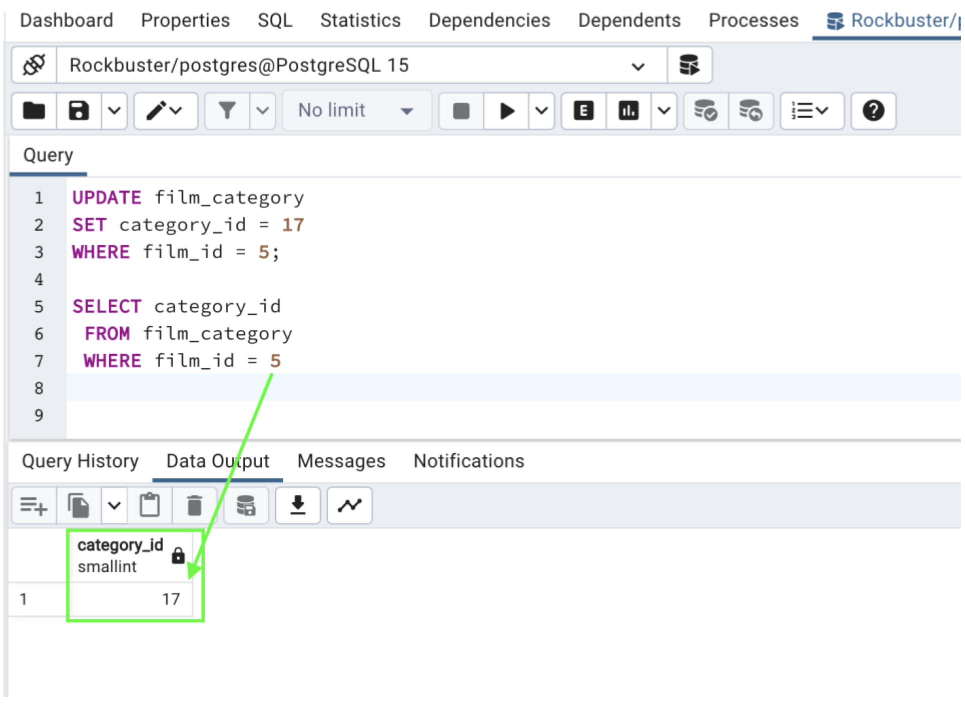
```
   category_id
   smallint
1            8
```

Once you have the film_ID and category_ID, write an UPDATE command to change the category in the film_category table (not the category table). Copy-paste this command into your answers document.

Film_id= 5

Category_id= 8

Thriller ID= 17



```
UPDATE film_category
SET category_id = 17
WHERE film_id = 5;

SELECT category_id
 FROM film_category
 WHERE film_id = 5
```

```
  category_id
  smallint
1          17
```

Step 4:

Since there aren’t many movies in the mystery category, you and your manager decide to remove it from the category table. Write a DELETE command to do so and copy-paste it into your answers document.

DELETE

FROM category

WHERE name = 'Mystery';

Step 5:

Based on what you’ve learned so far, think about what it would be like to complete steps 1 to 4 with Excel instead of SQL. Are there any pros and cons to using SQL? Write a paragraph explaining your answer.

I can see the advantage of using SQL to query data. This can be achieved faster, mainly if I use many tables simultaneously. The disadvantages are that you must learn all the queries and know the structure of the database to complete the task faster than Excel. In Excel, these types of tasks (searching IDs, Changing Ids, Adding values, etc.) can also be done quickly by using filters and advance search/ replace.