SUBMITTED BY:
Grace Skelley on 10.27.2022

DIRECTIONS:

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
```

- *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.*

Query Editor | Query History

```
1  SELECT *
2  FROM category
```

Data Output | Explain | Messages | Notifications

	category_id [PK] integer	name character varying (25)	last_update timestamp without time zone
1	1	Action	2006-02-15 09:46:27
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

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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.*

```
INSERT INTO category(name)
VALUES('Thriller'), ('Crime'), ('Mystery'), ('Romance'), ('War')
```

Data Output | Explain | Messages | Notifications

	category_id [PK] integer	name character varying (25)	last_update timestamp without time zone
1	1	Action	2006-02-15 09:46:27
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	2022-10-27 15:51:36.359744
18	18	Crime	2022-10-27 15:51:36.359744
19	19	Mystery	2022-10-27 15:51:36.359744
20	20	Romance	2022-10-27 15:51:36.359744
21	21	War	2022-10-27 15:51:36.359744

- *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)
);
```

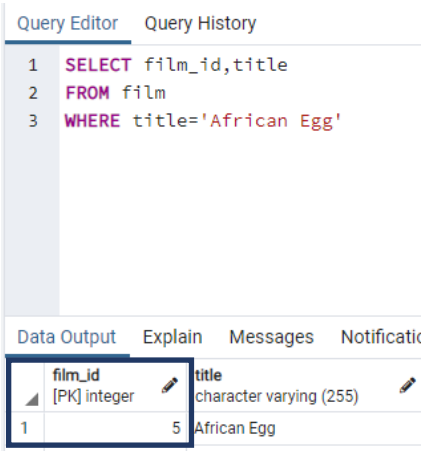
NOT NULL CONSTRAINTS – This restriction prevents the value to be blank/empty.
PRIMARY KEY CONSTRAINTS - This prevents the value from being reproduced and duplicated. This is a unique identifier and each table must have one.

- The `category_id` is an integer data type and the value can neither be null nor blank. This serves as a primary key for the category table.
- The `name` is a text data type that requires neither null nor blank value.
- The `last_update` is a `TIMESTAMP(6) WITH TIME ZONE` data type that cannot be left null or empty in value.

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 film_id,title
FROM film
WHERE title='African Egg'
```



- *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.*

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

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

Query Editor | Query History

```
1  SELECT category_id
2  FROM film_category
3  WHERE film_id=5
```

Data Output | Explain | Message

	category_id smallint
1	8

Data Output | Explain | Messages | Notifications

	film_id [PK] smallint	category_id [PK] smallint	last_update timestamp without time zone
981	982	1	2006-02-15 10:07:09
982	983	12	2006-02-15 10:07:09
983	984	9	2006-02-15 10:07:09
984	985	14	2006-02-15 10:07:09
985	986	2	2006-02-15 10:07:09
986	987	12	2006-02-15 10:07:09
987	988	16	2006-02-15 10:07:09
988	989	16	2006-02-15 10:07:09
989	990	11	2006-02-15 10:07:09
990	991	1	2006-02-15 10:07:09
991	992	6	2006-02-15 10:07:09
992	993	3	2006-02-15 10:07:09
993	994	13	2006-02-15 10:07:09
994	995	11	2006-02-15 10:07:09
995	996	6	2006-02-15 10:07:09
996	997	12	2006-02-15 10:07:09
997	998	11	2006-02-15 10:07:09
998	999	3	2006-02-15 10:07:09
999	1000	5	2006-02-15 10:07:09
1000	5	17	2022-10-27 16:59:47.388349

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'
```

Data Output | Explain | Messages | Notifications

	category_id [PK] integer	name character varying (25)	last_update timestamp without time zone
1	1	Action	2006-02-15 09:46:27
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	2022-10-27 15:51:36.359744
18	18	Crime	2022-10-27 15:51:36.359744
19	20	Romance	2022-10-27 15:51:36.359744
20	21	War	2022-10-27 15:51:36.359744

***Mystery** = removed from the list*

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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.

DATA TOOLS	PROS	CONS
SQL	- Easy database management (CRUD) for large-scale datasets - Data Output can be generated in seconds - Records of queries can be tracked through "Query History" - Has high storage capacity for data updates, etc. - Performs relational database management	- Must be familiar with SQL commands - System errors can occur and are hard to resolve at times
EXCEL	- User-friendly and doesn't require coding - Search and data updates are easy to execute through the "Find and Replace" tabs - File can be too large to maintain updates	- Database size is limited - Requires multiple steps to achieve the desired outcome (filtering, updates, etc.) - Susceptible to human error - Has visualization capabilities

Bonus Task

The SQL query below contains some typos. See if you can fix it based on what you've learned so far about SQL and data types; then try running it in pgAdmin 4. If the query works, copy it into your Answers 3.3 document.

If you get this you're a SQL champ!

```
CREATE TBL 3EMPLOYEES
 {
employee_id VARINT(30) NOT EMPTY
name VARCHAR(50),
contact_number VARCHAR(30) ,
designation_id INT,
last_update TIMESTAMP NOT NULL DEF now()
CONSTRAIN employee_pkey PRIMARY KEY (employee_id)
}
```

CORRECT CODE

```
CREATE TABLE employees
(
employee_id VARCHAR(30) NOT NULL,
name VARCHAR(50),
contact_number VARCHAR(30),
designation_id INT,
last_update TIMESTAMP NOT NULL DEFAULT now(),
CONSTRAINT employee_pkey PRIMARY KEY (employee_id)
)
```