

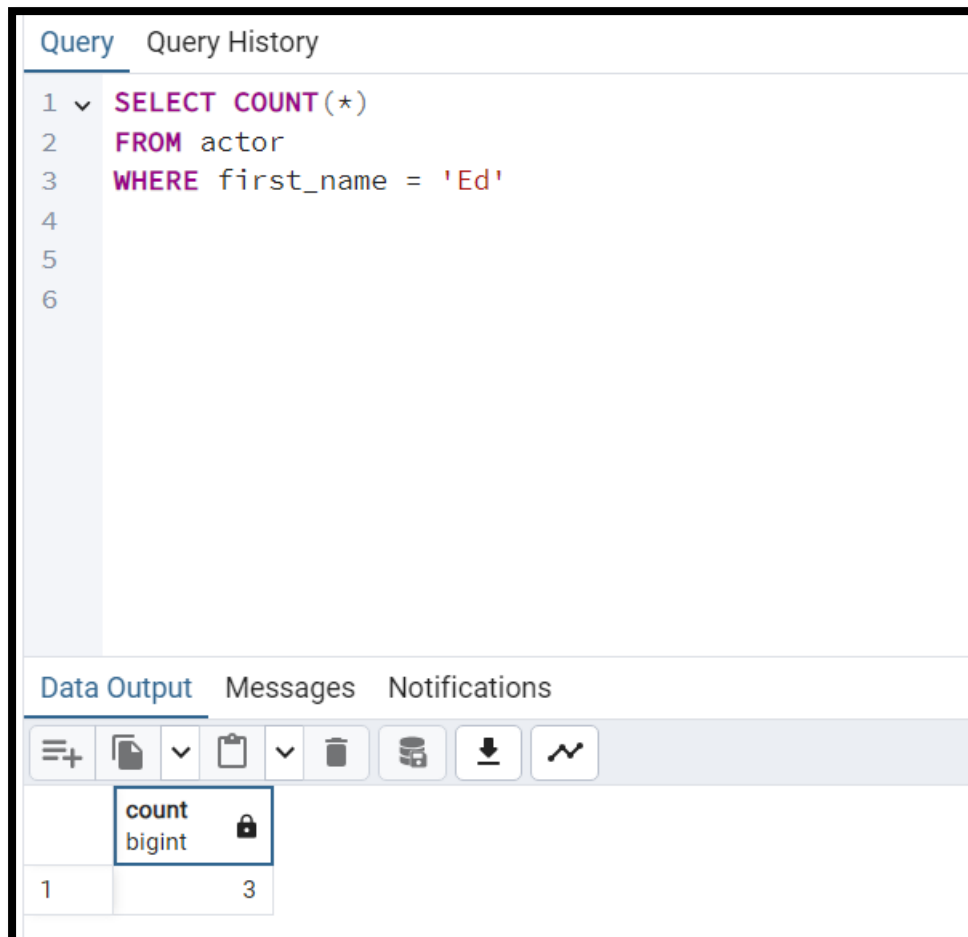
## 3.1: Intro to Relational Databases

Innocent Bayai

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### Step 2.

- a. The excel count for actors whose first name is Ed is 3 (Ed Chase, Ed Mansfield, and Ed Guinness). I filtered the actor first name column and obtained these results.
- b. By using SQL, the results are as follows:



- c. The answer matches the one from excel. Using the SQL statement is faster and easier than using excel filter option. With SQL, I don't need to interact with the data but I command through codes what I want to get and the output is availed instantly.

### Step 3.

- a. The column names are payment\_id, customer\_id, staff\_id, rental\_id, amount, and payment\_date.
- b. The tables names under the Rockbuster Database are: actor, store, address, category, city, country, customer, film actor, film category, inventory, language, rental, staff, payment, and film.
- c. Another way of getting the table names is to click Databases, click Rockbusters, go to schemas, and under public choose tables. All the 15 tables names are listed there.
- d. Most films are rented for 6 days as seen in the screen capture hereunder.

| Data Output Messages Notifications |                                  |  |                           |
|------------------------------------|----------------------------------|--|---------------------------|
|                                    | rented for (in days)<br>smallint |  | number of films<br>bigint |
| 1                                  | 7                                |  | 191                       |
| 2                                  | 5                                |  | 191                       |
| 3                                  | 4                                |  | 203                       |
| 4                                  | 3                                |  | 203                       |
| 5                                  | 6                                |  | 212                       |

#### Step 4.

OLAP can be used in the sales department for the following roles:

- Understanding the major film markets across the globe.
- The film category with the best/lowest sales.
- The cities with the highest demand.

OLTP can be used in the following cases:

- Enter client information as sales are effected.
- Record all orders, payment details and delivery details.

#### Step 5.

- The invoice contains structured data because data is organized in a specific format with clearly defined fields such as client name, contact information, item description, quantity, and price amongst other standardized data categories.

| Invoice | Film_maker              | Film_maker address              | Item | Quantity | Description                    | Price | Client_first_name | Client_surname |
|---------|-------------------------|---------------------------------|------|----------|--------------------------------|-------|-------------------|----------------|
| 2019001 | Oaklanders Sound Studio | 4826 Norma Avenue, Anderson, TX | 001  | 1        | New video collection licensing | \$730 | Timothy           | Walker         |

Continuation of rows and columns

| Client_address          | Account_Name | Account number      |
|-------------------------|--------------|---------------------|
| 40 Sheila LA Sparks, NV | Miko Santo   | 4929 3310 0057 5422 |