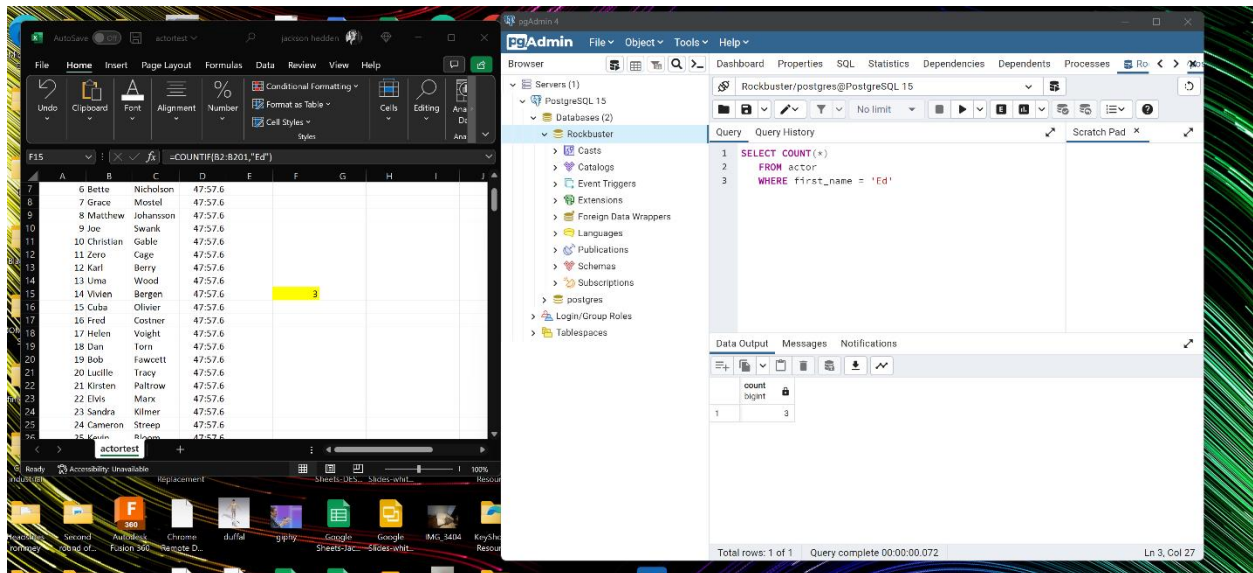# 3.1 Intro to Relational Databases

Step 2

Compare and contrast spreadsheets and databases by following the steps below

Was it easier to use Excel or the SQL statement and database to count the number of "Eds"? Provide an explanation for your answer in the same text document.

- In excel I used the function =Countif(a1,a20,"Ed") and select the column. The Query tool was faster because I only had to write a small statement and execute it it was easier because I didn't have to select cells.

Step 3

- Execute the following query and list the names of the columns in the payment table.

- Under the "table_name" column, what are the names of the tables that are available in the Rockbuster database? (List all names.)

  1. Payment_id
  2. Customer_id
  3. Staff_id
  4. Rental_id
  5. Amount
  6. Payment_date

Rockbuster/postgres@PostgreSQL 15

Query   Query History   Scratch Pad

```sql
1  SELECT * FROM information_schema.tables
2      WHERE table_schema = 'public'
3      AND table_type = 'BASE TABLE'
```
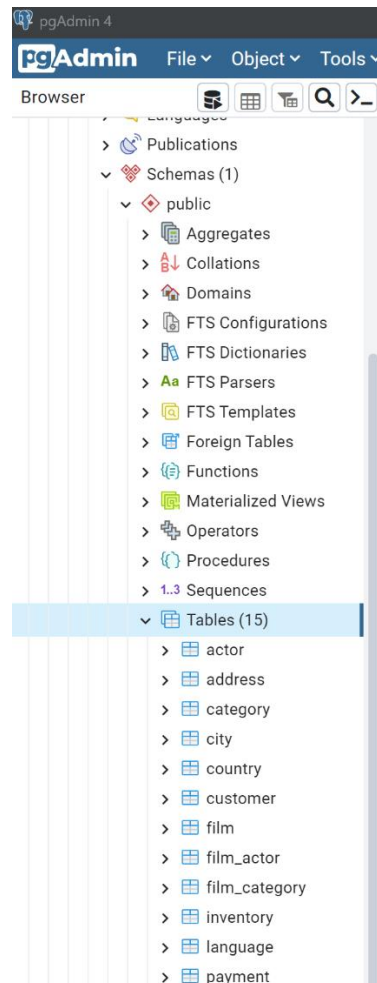
Data Output   Messages   Notifications

table_catalog name	table_schema name	table_name name	table_type character varying	self_referencing_column_name name	referenc charact
1	Rockbuster	public	actor	BASE TABLE	[null]	[null]
2	Rockbuster	public	store	BASE TABLE	[null]	[null]
3	Rockbuster	public	address	BASE TABLE	[null]	[null]
4	Rockbuster	public	category	BASE TABLE	[null]	[null]
5	Rockbuster	public	city	BASE TABLE	[null]	[null]
6	Rockbuster	public	country	BASE TABLE	[null]	[null]
7	Rockbuster	public	customer	BASE TABLE	[null]	[null]

Total rows: 15 of 15   Query complete 00:00:00.123   Ln 3, Col 33

1. Payment
2. Film
3. Actor
4. Address
5. Category
6. City
7. Country
8. Customer
9. Film_actor
10. Film_category
11. Inventory
12. Language
13. Rental
14. Staff
15. Store

- Within the pgAdmin 4 console, can you think of another way to list all the table names in the database instead of the SQL statement above?

- Analyze the rental duration distribution. How many days are most films rented for?

  As we can see Most films are rented between 4-6 days.

Step 4

Think about who in Rockbuster Stealth might want to use an OLAP or OLTP system for their data needs; for example, the sales department, which is interested in sales trends, would likely use an OLAP system. Describe at least 2 situations for each type of system.

The marketing team could OLAP system for analysis of marketing lead generation trends and time by time look at financial performance.

The sales team could use the OLTP system to help them with order entry, and movie rentals.

Step 5

• Does the invoice contain structured or unstructured data?

The invoice contains unstructured data. As we can see the data is stored in its raw format, as opposed to being in an organized form, such as tabular form.

Invoice ID	Name	Address	Company	Item	Qty	Description	Price	Acc Name	Acc No.
2019001	Timothy	4826 Norma Ave Anderson TX	Oaklanders Sound Studio	001	01	New video collection licensing	730	Miko Santo	4929 3310 0057 5422