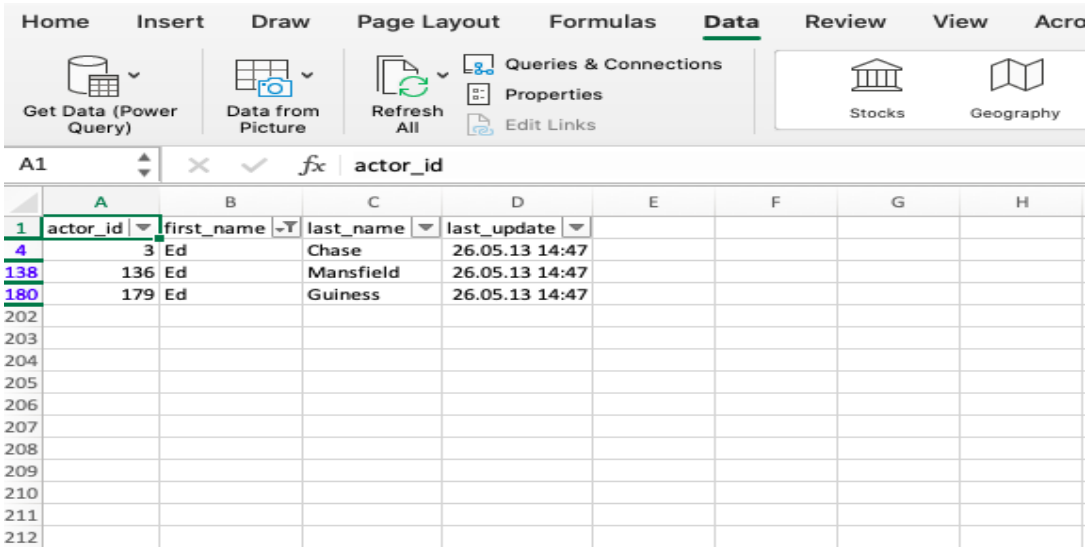
Intro to Relational Databases

Step 2

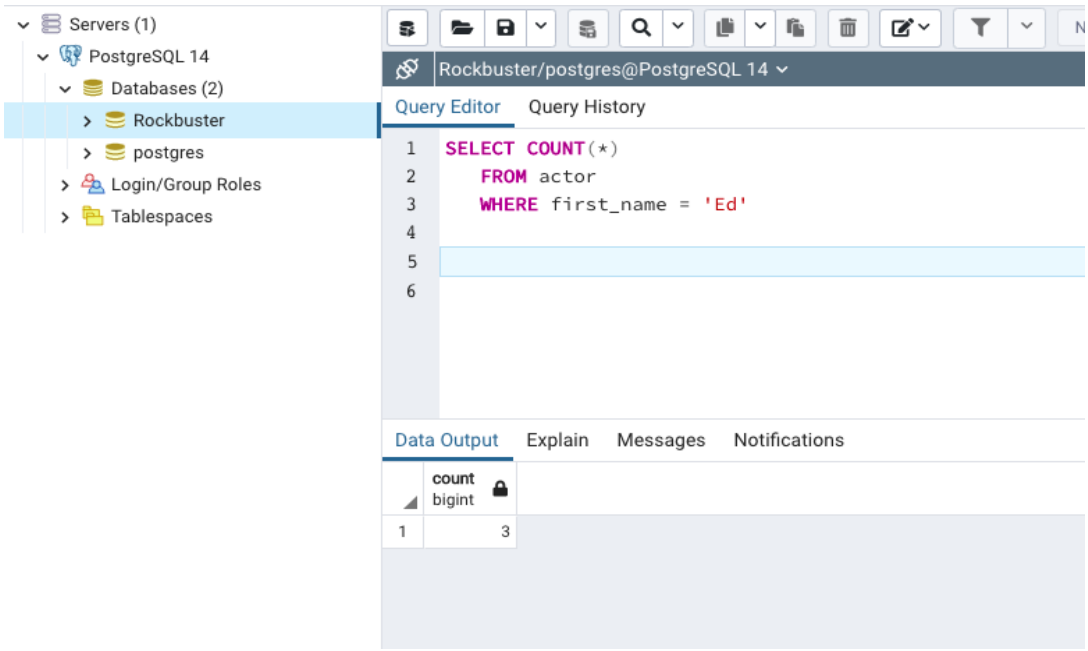
2b. Drawing on what you've learned in previous Achievements, use the appropriate functions in Excel to count all the actors whose first name is "Ed." Write down the result in a text document.

The number of actors whose first name is "Ed." is 3.



	A	B	C	D	E	F	G	H
1	actor_id	first_name	last_name	last_update				
4	3	Ed	Chase	26.05.13 14:47				
138	136	Ed	Mansfield	26.05.13 14:47				
180	179	Ed	Guiness	26.05.13 14:47				
202								
203								
204								
205								
206								
207								
208								
209								
210								
211								
212								

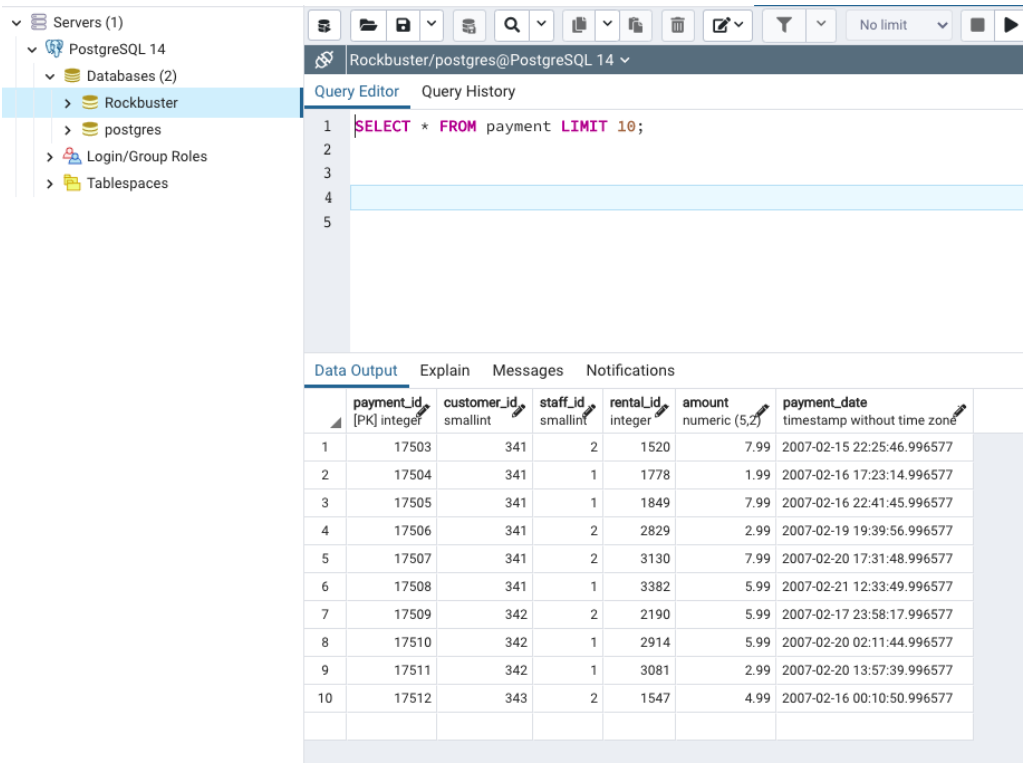
2d. Was it easier to use Excel or the SQL statement and database to count the number of "Eds"?



The output for the pgAdmin query is 3. Essential, it was easier to use SQL because after writing the query only the result was returned. Even with the data being visible, with SQL a valid result is expected.

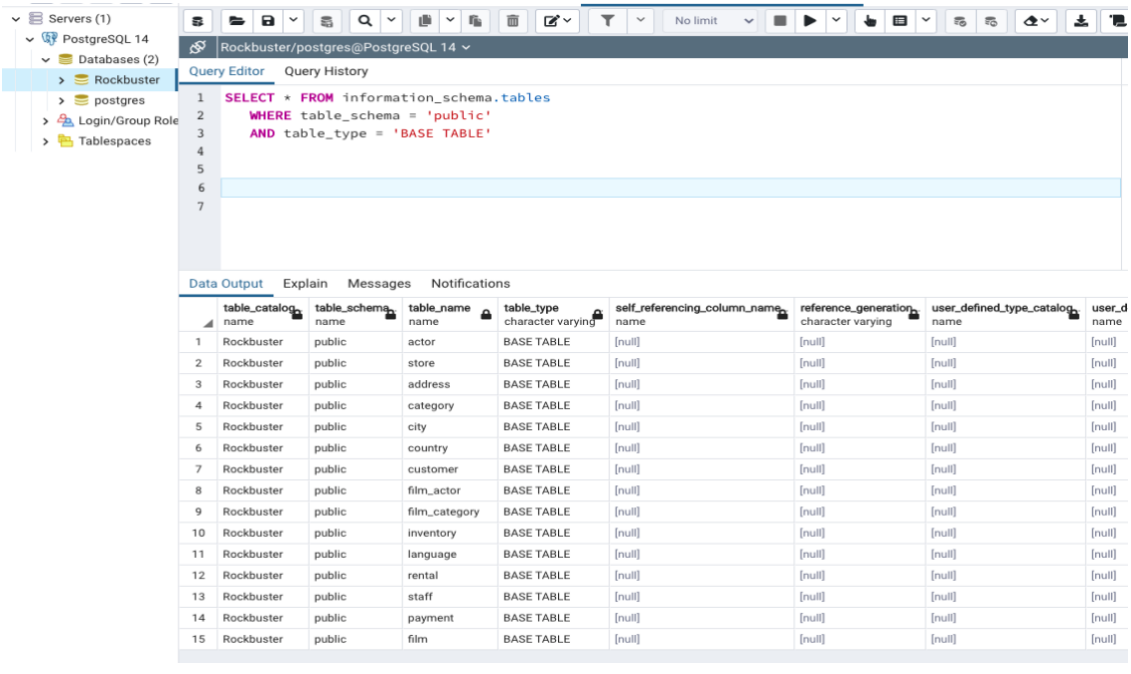
Step 3

3a. Execute the following query and list the names of the columns in the payment table.



	payment_id [PK] integer	customer_id smallint	staff_id smallint	rental_id integer	amount numeric (5,2)	payment_date timestamp without time zone
1	17503	341	2	1520	7.99	2007-02-15 22:25:46.996577
2	17504	341	1	1778	1.99	2007-02-16 17:23:14.996577
3	17505	341	1	1849	7.99	2007-02-16 22:41:45.996577
4	17506	341	2	2829	2.99	2007-02-19 19:39:56.996577
5	17507	341	2	3130	7.99	2007-02-20 17:31:48.996577
6	17508	341	1	3382	5.99	2007-02-21 12:33:49.996577
7	17509	342	2	2190	5.99	2007-02-17 23:58:17.996577
8	17510	342	1	2914	5.99	2007-02-20 02:11:44.996577
9	17511	342	1	3081	2.99	2007-02-20 13:57:39.996577
10	17512	343	2	1547	4.99	2007-02-16 00:10:50.996577

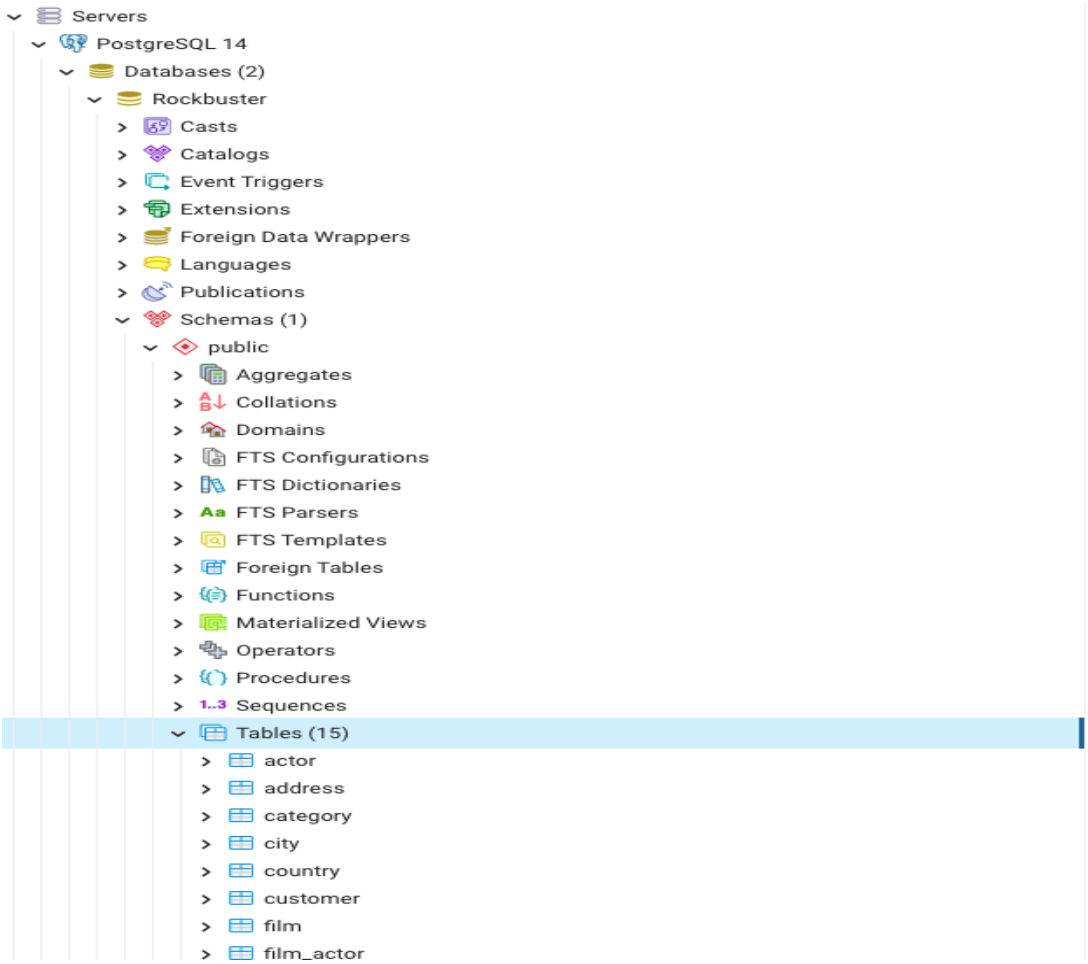
3b. Under the “table_name” column, what are the names of the tables that are available in the Rockbuster database? (List all names.)



	table_catalog name	table_schema name	table_name name	table_type character varying	self_referencing_column_name name	reference_generation character varying	user_defined_type_catalog name	user_d name
1	Rockbuster	public	actor	BASE TABLE	[null]	[null]	[null]	[null]
2	Rockbuster	public	store	BASE TABLE	[null]	[null]	[null]	[null]
3	Rockbuster	public	address	BASE TABLE	[null]	[null]	[null]	[null]
4	Rockbuster	public	category	BASE TABLE	[null]	[null]	[null]	[null]
5	Rockbuster	public	city	BASE TABLE	[null]	[null]	[null]	[null]
6	Rockbuster	public	country	BASE TABLE	[null]	[null]	[null]	[null]
7	Rockbuster	public	customer	BASE TABLE	[null]	[null]	[null]	[null]
8	Rockbuster	public	film_actor	BASE TABLE	[null]	[null]	[null]	[null]
9	Rockbuster	public	film_category	BASE TABLE	[null]	[null]	[null]	[null]
10	Rockbuster	public	inventory	BASE TABLE	[null]	[null]	[null]	[null]
11	Rockbuster	public	language	BASE TABLE	[null]	[null]	[null]	[null]
12	Rockbuster	public	rental	BASE TABLE	[null]	[null]	[null]	[null]
13	Rockbuster	public	staff	BASE TABLE	[null]	[null]	[null]	[null]
14	Rockbuster	public	payment	BASE TABLE	[null]	[null]	[null]	[null]
15	Rockbuster	public	film	BASE TABLE	[null]	[null]	[null]	[null]

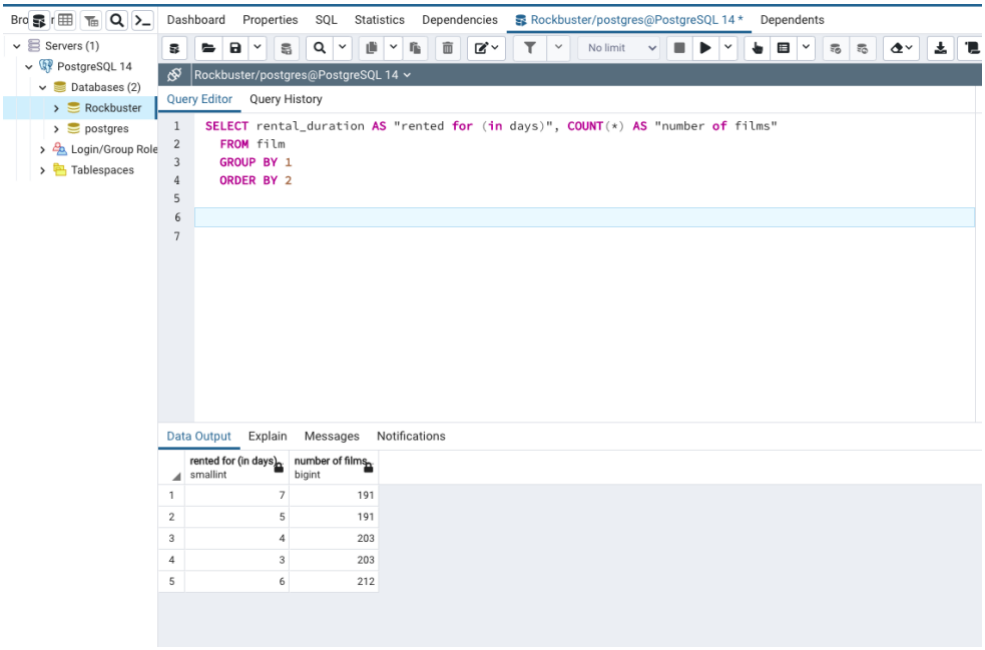
3c. Within the pgAdmin 4 console, can you think of another way to list all the table names in the database instead of the SQL statement above?

We can check it from the Rockbuster database. (Rockbuster --- Schemas --- public ---Tables)



3d. Analyze the rental duration distribution. How many days are most films rented for?

The highest number of films are rented for 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.

OLAP

- The most rented movie
- The bottom 5 countries with rental

OLTP

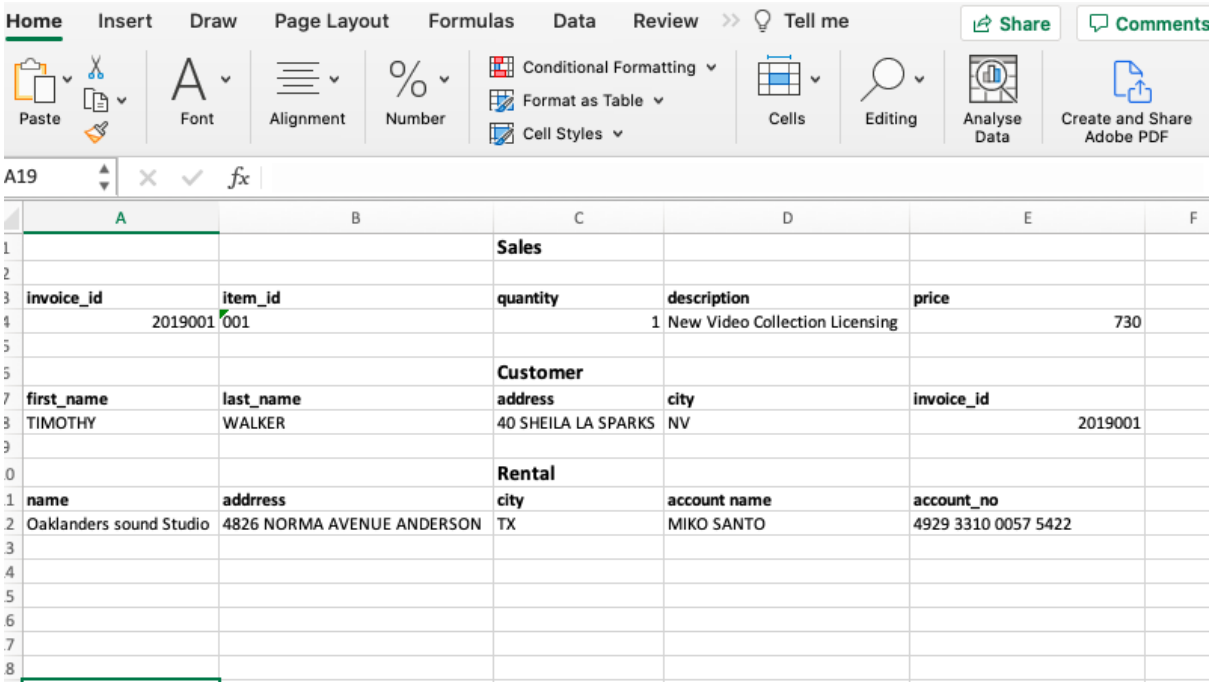
- Analysing the number of movie currently in rentage / available
- Calculating daily revenue from rentage

Step 5

5a. Does the invoice contain structured or unstructured data? Write an explanation for your answer.

The invoice contains structures data. There are information that can easily be derived from the invoice and created into table (dataset)

5b. Organize and store the information on the invoice in a database. Step one will be to create a table in the text document you've started (you can insert a table if you're using MS Word or Google Docs, for example). Make sure your table contains columns with the appropriate labels, as well as the values from the invoice in each column. You're focusing, here, on a high-level structuring of your data



	A	B	C	D	E	F
1			**Sales**			
2						
3	**invoice_id**	**item_id**	**quantity**	**description**	**price**	
4	2019001	001	1	New Video Collection Licensing	730	
5						
6			**Customer**			
7	**first_name**	**last_name**	**address**	**city**	**invoice_id**	
8	TIMOTHY	WALKER	40 SHEILA LA SPARKS	NV	2019001	
9						
10			**Rental**			
11	**name**	**addrress**	**city**	**account name**	**account_no**	
12	Oaklanders sound Studio	4826 NORMA AVENUE ANDERSON	TX	MIKO SANTO	4929 3310 0057 5422	
13						
14						
15						
16						
17						
18						