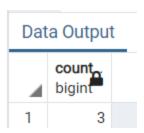
3.1 Introduction to Relational Databases

≡ Time	2
≡ Due	@April 1, 2022
Status	In progress

- 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.
 - 0 3
- 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.



• They were both equally easy, as I used =COUNTIF(B:B, "Ed") in Excel, which works exactly the same as the query in SQL.

Step 3

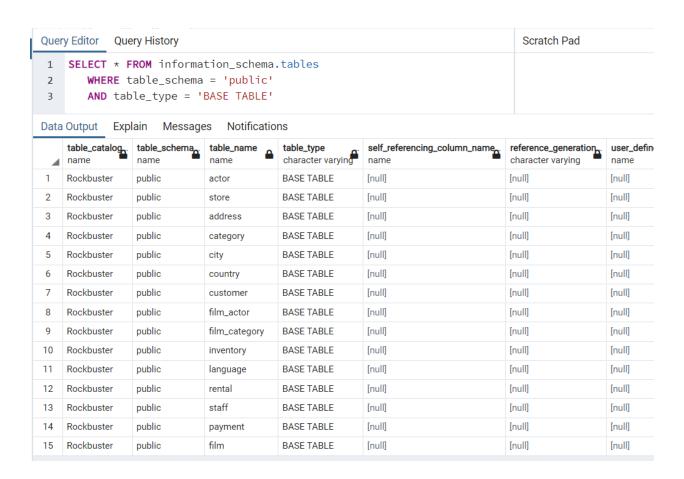
To answer the next set of questions, you'll be pasting the queries provided into the Query Editor in pgAdmin 4. Note down your answers in your running text document.

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

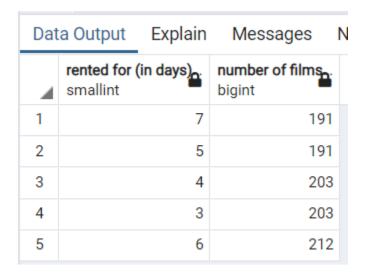
```
SELECT * FROM payment LIMIT 10;
```

Data Output Explain Messages Notifications						
4	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

- Under the "table_name" column, what are the names of the tables that are available in the Rockbuster database? (List all names.)
 - actor, store, address, category, city, country, customer, film_actor, film_category, iventory, language, rental, staff, payment, film



- 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?
 - Database > Rockbuster > Schemas > Tables
- Analyze the rental duration distribution. How many days are most films rented for?
 - Most 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 - 1 a data analyst determining the most profitable licenses, 2 or what days of the week are the most popular for rentals

OLTP - 1 a store cashier processes a transaction (renting a film), 2 or queries the rental status of films

Step 5

Rockbuster Stealth has received an invoice for the licenses for its new video collection.

Take a moment to familiarize yourself with data in the invoice, then note down the answers to the questions below.

- Does the invoice contain structured or unstructured data? Write an explanation for your answer.
 - Structured data as it can be arranged in a table.
- Organize and store the information on the invoice in a database.

Transaction database



<u>Aa</u> Invoice number	# Item	# Quantity	■ Description	# Price
<u>2019001</u>	1	1	New Video Collection Licensing	\$730.00

Supplier_database

<u>Aa</u> Supplier name	■ Address	≡ City	≡ State	Account name	# Account number
<u>Oaklanders</u>	4826 Norma Avenue	Anderson	TX	Miko Santo	4929331000575422

Customer_database

<u>Aa</u> First name	■ Last name	■ Address	≡ City	≡ State
<u>Timothy</u>	Walker	40 Sheila La	Sparks	NV