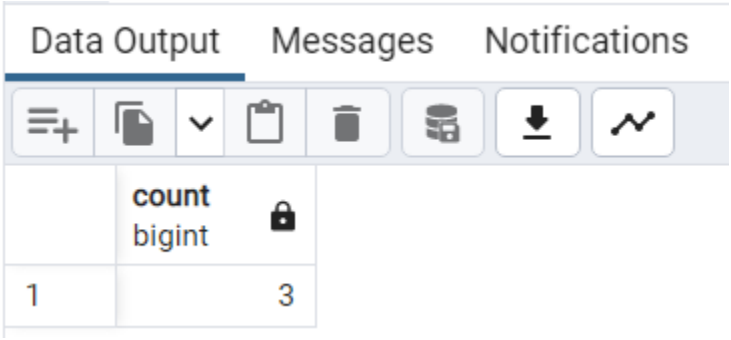
Step 2: Excel Pivot Table Result:

1	Row Labels	Count of first_name
29	**Ed**	**3**
30	Ellen	1

Executed SQL Query:



- Because the SQL statement was already written for me, I found the SQL search easier and quicker than creating a Pivot Table.

Step 3: 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)

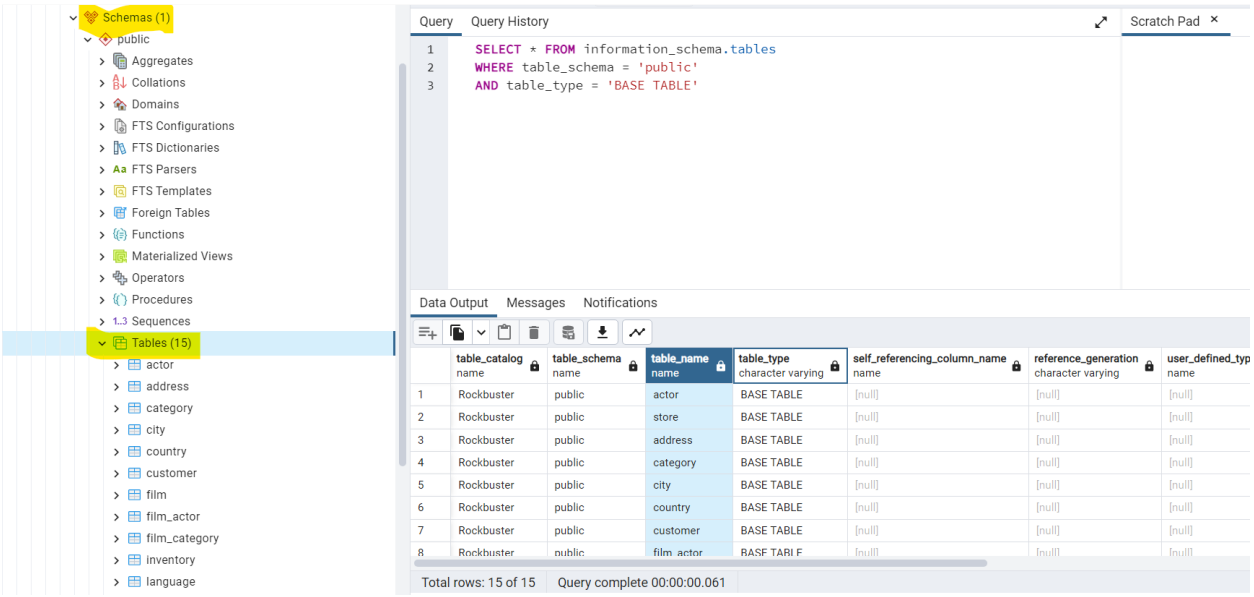
table_name

- actor
- store
- address
- category
- city
- country
- customer
- film_actor

- film_category
- inventory
- 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?

- Navigate to the panel on the left-hand side of pgAdmin 4 and navigate to Databases > Rockbuster > Schemas >Tables (15) to see the list of table names.



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

- Most films are rented for 3-4 days or 6 days.

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 Systems are suited for operations that read and analyze data rather than updating. With that in mind, the marketing and sales teams may utilize the power of an OLAP system for understanding long-term market trends. Similarly, the operations and IT departments may use such a system to study viewership trends in their efforts to optimize online operations.
- OLTP Systems are typically used to quickly insert, delta, and update vast amounts of data. This could be useful for the inventory team looking to keep track of rental orders and returns in real-time. Such systems would also be helpful for the IT team that will manage the new streaming platform, as they attempt to capture the actions of customers.

Dashboard Properties SQL Statistics Dependencies Dependents Processes Rockbuster/postgres@PostgreSQL 15*

Rockbuster/postgres@PostgreSQL 15

No limit

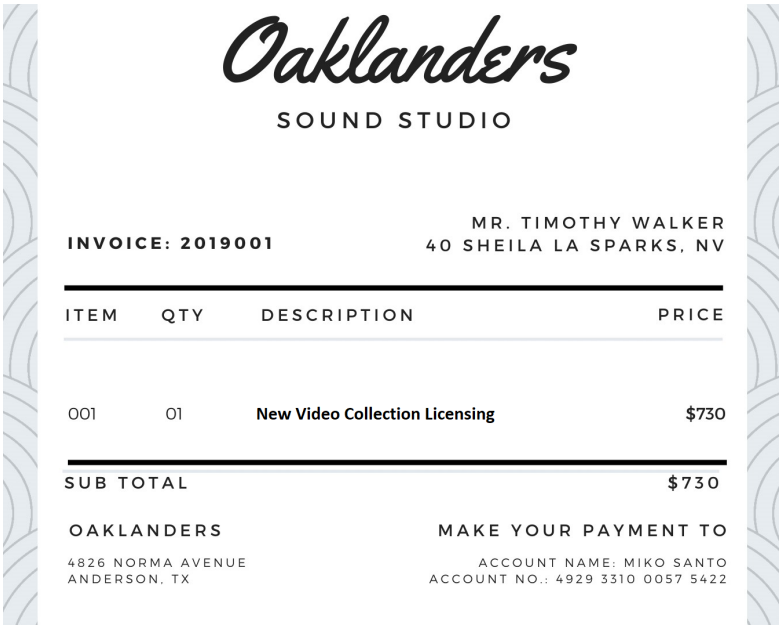
Query Query History Scratch Pad

```
1  SELECT rental_duration AS "rented for (in days)", COUNT(*) AS "number of films"
2   FROM film
3   GROUP BY 1
4   ORDER BY 2
```

Data Output Messages Notifications

	rented for (in days) smallint	number of films bigint
1	7	191
2	5	191
3	4	203
4	3	203
5	6	212

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



Oaklanders

SOUND STUDIO

INVOICE: 2019001

MR. TIMOTHY WALKER
40 SHEILA LA SPARKS, NV

ITEM	QTY	DESCRIPTION	PRICE
001	01	New Video Collection Licensing	$730

SUB TOTAL $730

OAKLANDERS
4826 NORMA AVENUE
ANDERSON, TX

MAKE YOUR PAYMENT TO
ACCOUNT NAME: MIKO SANTO
ACCOUNT NO.: 4929 3310 0057 5422

- This invoice contains semi-structured data as some data is laid out in a table of labeled columns and rows (i.e. item, quantity, and price data), although other data is less structured (i.e. the address).

Item

Invoice	Item	Quantity	Description	Subtotal	Total Price
2019001	001	01	New Video Collection Licensing	$730	$730

Customer

Customer Title	Customer Name	Customer Address	Customer City	Customer State	Store Name	Invoice
Mr.	Timothy Walker	40 Sheila LA	Sparks	NV	Oaklanders	2019001

Transaction

Account No.	Account Name	Store Name	Store Address	Store City	Store State
4929 3310 0057 5422	Miko Santo	Oaklanders	4826 Norma Avenue	Anderson	TX