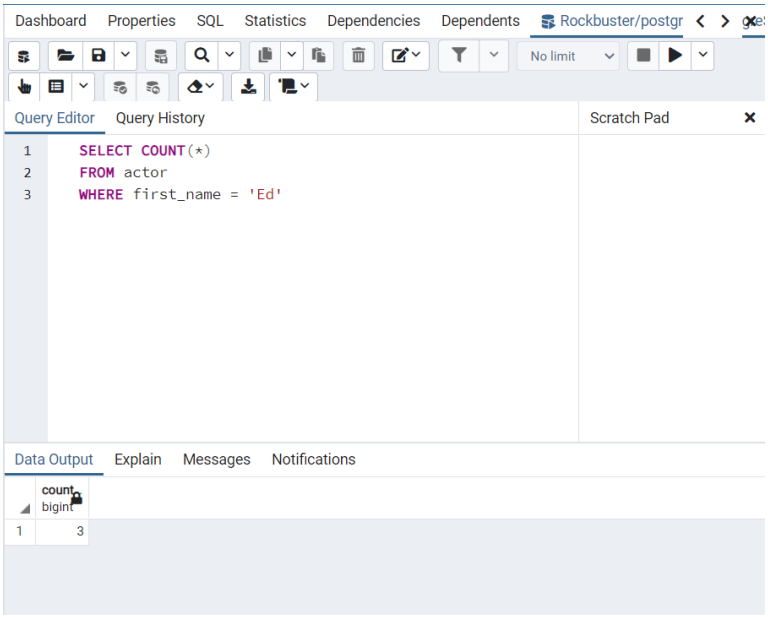
3.1: Intro to Relational Databases
Prepared by: Rob Rowland

Step 2:

Excel Result: 3, using =COUNTIF(B:B,"Ed")

PostgreSQL Result:



For this instance, pulling the number in Excel was easier since the formula was quick and not complex. Granted, I'm already familiar with Excel and was able to execute it more quickly, however, for a calculation this simple, PostgreSQL seems unnecessary compared to Excel.

Step 3:

payment_id	customer_id	staff_id	rental_id	amount	payment_date
[PK] integer	smallint	smallint	integer	numeric (5,2)	timestamp without time zone

Names of Tables: category, payment, language, film, country, inventory, film_category, city, staff, rental, store, actor, film_actor, customer, address

Rental Duration Distribution:

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

Step 4:

OLAP System:

- Buyers/Procurement would use an OLAP to view which movies are rented the most and plan inventory accordingly
- Marketing would use an OLAP to view historical sales to prioritize future budgets

OLTP System:

- Marketing would use an OLTP to store and manage customer demographics
- Shipping/Procurement would use an OLTP to store and manage vendor accounts

Step 5:

This is structured data because all of it can be sorted into columns, tables, and rows.

Customer First Name	Customer Last Name	Customer Address: Street	Customer Address: City	Customer Address: State	Account Number
Timothy	Walker	40 Sheila Lane	Sparks	NV	4929331000575420
Item Number	**Quanity**	**Description**	**Price per Unit**	**Invoice Number**	
001	1	New Video Collection Licensing	$730.00	2019001	
Vendor	**Vendor Address: Street**	**Vendor Address: City**	**Vendor Address: State**		
Oaklanders Sound Studio	4826 Norma Avenue	Anderson	TX		