

3.1: Intro to Relational Databases

Step 1: Done

Step 2

Compare and contrast spreadsheets and databases by following the steps below:

28	Daryl	2		
29	Debbie	1		
30	Dustin	1		
31	Ed	3		
32	Ellen	1		
33	Elvis	1		
34	Emily	1		
35	Ewan	1		

- Number of actors with the name Ed are 3.

Data output		Messages	I
	count bigint		
1		3	

- Using SQL is easier as it clearly shows the count regardless of the amount of data available however in Excel more functions would need to be executed.

Step 3

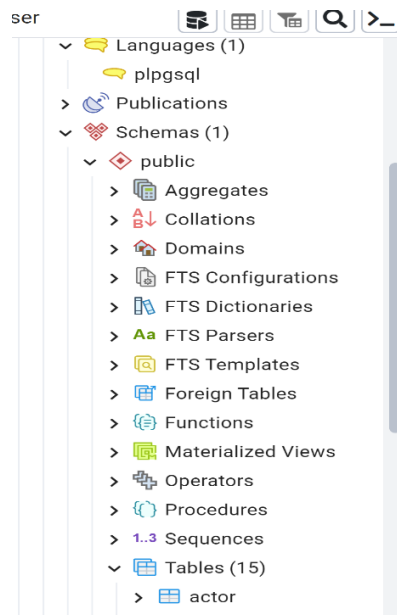
Data output		Messages		Notifications			
<div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div></div>							
	payment_id [PK] integer	customer_id 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	
Total rows: 10 of 10		Query complete 00:00:00.294				Ln 1, Col 32	

List all names under the “table_name” column,

- Payment id, customer id, staff id, rental id, amount, payment date

	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
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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

- Within the pgAdmin 4 console, another way to list all the table names in the database instead of the SQL statement is Under the Rockbuster database – Schemas – public – Tables. As shown below



- Most films are rented for 3 up to 7 days.

	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

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 sales department can use the OLAP system to analyse sales data and make sales forecasting.
- The sales department can also use the OLAP system to analyse customer information in order to come up the right promotional strategies.
- The finance department uses the OLTP system to record, update and monitor rental transactions.

Step 5

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

- The invoice contains structured data organised into different categories.

Organize and store the information on the invoice in a database.

Transaction information					
Invoice number	Item	Quantity	Description	Price	Currency
2019001	001	01	New Video Collection Licensing	730	\$

Merchant and Customer Information						
Merchant Name	Merchant Account Name	Merchant Account number	Merchant Address	Customer Name	Customer Gender	Customer Address
Oaklanders Sound Studio	Miko Santo	4929331000575420	4826 Norma Avenue, Anderson, TX	Timothy Walkers	Male	40 Sheila La, Sparks, NV