3.1 Intro to Relational Databases

* 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.
* Launch pgAdmin 4, open the Query Tool, copy-paste the SQL statement below into the Query Editor, and execute it.

SELECT COUNT(\*)

FROM actor

WHERE first\_name = 'Ed'

* Copy the result that tells you the number of times the first name “Ed” appears in the “actor” table from the **Data Output** window into your text document from step 2b. Check that your answer matches your answer from step 2a. 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.

Excel= 3

PostgreSQL= 3

PostgreSQL was easier to use than excel and required less steps.

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

SELECT \* FROM payment LIMIT 10;

Table

Description automatically generated

* Under the “table\_name” column, what are the names of the tables that are available in the Rockbuster database? (List all names.)

SELECT \* FROM information\_schema.tables

WHERE table\_schema = 'public'

AND table\_type = 'BASE TABLE'

Graphical user interface, text, application

Description automatically generated

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

SELECT rental\_duration AS "rented for (in days)",

COUNT(\*) AS "number of films"

FROM film

GROUP BY 1

ORDER BY 2

Graphical user interface

Description automatically generated with medium confidence

* Most films are rented for 6 days.

1. 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.

OALP:

The marketing department could use this information to determine the impact of marketing campaigns.

It could also be used to guide business decisions that are data driven for business intelligence.

OLTP:

Customer service - To maintain customer details

Financial department - To maintain current budget and expense records.

1. Does the invoice contain structured or unstructured data?

-The following invoice contains structured data.

Text

Description automatically generated with low confidence