# 3.1 Intro to Relational Databases

**Step 2**

* [**Download the Rockbuster “actor.csv” file**](https://images.careerfoundry.com/public/courses/data-immersion/A3/E3.1%20/actor.csv)**and open it in Excel. 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.**

By using =COUNTIF (B2:B201,"Ed") Excel was able to locate 3 counts of actors with the first name “Ed.”

* **Launch pgAdmin 4, open the Query Tool, copy-paste the following SQL statement into the Query Editor, and execute it. This statement will count all the instances of an actor with a first name “Ed” in the “actor” table. Copy the result from the Data Output window into your text document. Does your answer match the result from your earlier Excel count?**

When running this function, the result came back the same as the excel formula. 3 actors with the name “Ed” were found.

I thought the excel function was a little easier but I can see how the pgAdmin 4 tool could come in handy with large amounts of data. Excel was easier because of familiarity.

**Step 3**

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

Payment\_id, customer\_id, staff\_id, rental\_id, amount, payment\_date. Total of 10 rows.

* **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, film actor, film category, inventory, language, rental, staff, payment, film, staff.

**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?**

By clicking the schemas folder and selecting table.

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

Most films (212) 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: If they wanted to see how many films were rented last month or if they wanted to see if a certain movie was performing well or not.

OLTP: To enter new customer information or recording sales transactions.

**Step 5**

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

This invoice contains structured data. All of this information can be set up and structured in a database.

* **Organize and store the information on the invoice in a database. Step one will be to create a table in the text document you’ve started (you can insert a table if you’re using MS Word or Google Docs, for example). Make sure your table contains columns with the appropriate labels, as well as the values from the invoice in each column. You're focusing, here, on a high-level structuring of your data.**

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| **Invoice** | **First Name** | **Last Name** | **Item** | **QTY** | **Description** | **Price** | **Address** | **City** | **State** |
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