## Requirements:

**Source**: Sakila databases on:

* ~~SQL Server~~
* MySQL
* ~~PostgreSQL~~
* ~~Oracle~~

<https://dev.mysql.com/doc/sakila/en/sakila-structure-tables.html>

## The Sakila Database ERD

## Deliverables:

**BI**: Create data visualizations with:

* Power BI with Oracle

1. Create BI visualizations
2. Create & run SQL queries
3. Upload spreadsheet or csv file with SQL query results
4. After completing visualizations then upload BI application file

Measures:

* RentalQuantity = number of times a film has been rented
* RentalAmount = Payment amount in $

## Questions: answer questions with sql queries & then do visualizations

1. Rentals by Customer Geography
   1. Contribution of Countries & Cities (in hierarchy) by rental amount - Treemap (or Heatmap) & sql query
   2. Rental amounts by countries for PG & PG-13 rated films - bar chart & sql query
   3. Top 20 cities by number of customers who rented - bar chart & sql query
   4. Top 20 cities by number of films rented - bar chart & sql query
   5. Rank cities by average rental cost - bar chart & sql query
2. Rentals by Film Category
   1. Film categories by rental amount (ranked) & rental quantity – tabular & sql query
   2. Film categories by rental amount (ranked) – bar chart & sql query
   3. Film categories by average rental amount (ranked) & – tabular & sql query
   4. Contribution of Film Categories by number of customers - Treemap (or Heatmap) & sql query
   5. Contribution of Film Categories by rental amount - Treemap (or Heatmap) & sql query
3. Rentals by Film
   1. List Films with rental amount, rental quantity, rating, rental rate, replacement cost and category name – tabular & sql query
   2. List top 10 Films by rental amount (ranked) – bar chart & sql query
   3. List top 20 Films by number of customers (ranked) – bar chart & sql query
   4. List Films with the word “punk” in title with rental amount and number of customers – tabular & sql query
   5. Contribution by rental amount for films with a documentary category - Treemap (or Heatmap) & sql query
4. Rentals by Customer (Last name, First Name)
   1. List Customers (Last name, First Name) with rental amount, rental quantity, active status, country and city – tabular & sql query
   2. List top 10 Customers (Last name, First Name) by rental amount (ranked) for PG & PG-13 rated films – bar chart & sql query
   3. Contribution by rental amount for customers from France, Italy or Germany - Treemap (or Heatmap) & sql query
   4. List top 20 Customers (Last name, First Name) by rental amount (ranked) for comedy films – bar chart & sql query
   5. List top 10 Customers (Last name, First Name) from China by rental amount (ranked) for films that have replacement costs greater than $24 – bar chart & sql query