Lab

Chapter 11 – Data Analytics (OLAP)

Practice Data Load

- Download files from blackboard
  - dvdrental.tar
  - remove_lastupdate.sql

- Create a new database 'CREATE DATABASE dvdrental;'

Practice Data Load

- cd C:\Program Files\PostgreSQL\15\bin
  - If it does not work, check your installation path of postgresql or version

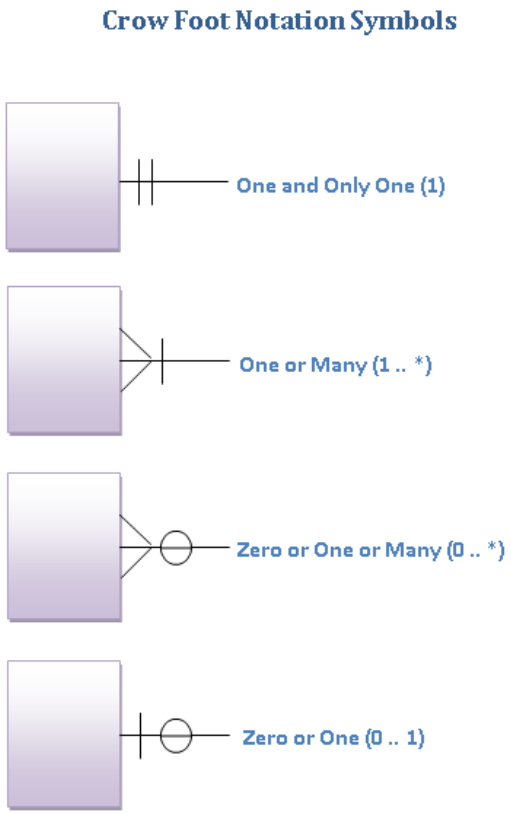
- pg_restore -U postgres -d dvdrental "dvdrental.tar file path"
  - If whitespace is included in the path, use double quotation(")

Practice Data Load

- Connect dvdrental database
  - \c dvdrental
- Execute remove_lastupdate.sql script file
  - \i 'remove_lastupdate.sql file path'
  - If whitespace or Korean is included in the path, use single quotation(')
  - Be sure that file separator is double-backslash(\\) or slash(/)

```
postgres=# ₩c dvdrental
접속정보: 데이터베이스="dvdrental", 사용자="postgres".
dvdrental=# ₩i 'C:/Users/hjlee/Downloads/remove_lastupdate.sql'
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
dvdrental=#
```

Table Description



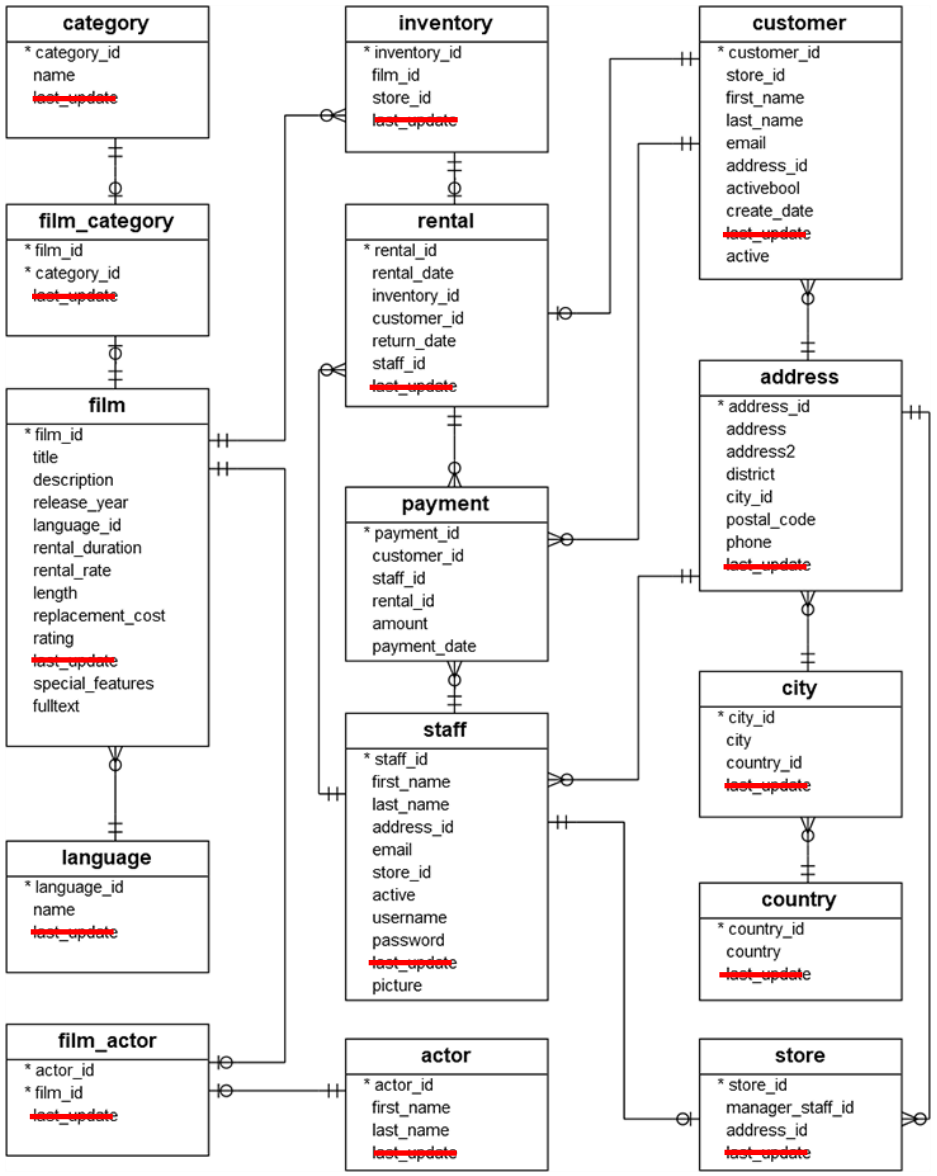


Table Description

- actor — contains actors data including first name and last name.
- film — contains films data such as title, release year, length, rating, etc.
- film_actor — contains the relationships between films and actors.
- category — contains film's categories data.
- film_category — containing the relationships between films and categories.
- store — contains the store data including manager staff and address.
- inventory — stores inventory data.
- rental — stores rental data.
- payment — stores customer's payments.
- staff — stores staff data.
- customer — stores customer's data.
- address — stores address data for staff and customers
- city — stores the city names.
- country — stores the country names.

Exercise

Answer the following questions in SQL

1. Use GROUPING SETS to count the number of films for each *rental_rate* and *rating*, respectively
2. For all combinations of *actor_id* and *category name*, print the information on the number of films in which the actors of *actor_id 1* or *2* play (Note: It doesn't mean that two actors star at the same time).
3. Use ROLLUP to show total amount on *rental_date* by year, month, and day (Note: Use *extract* function).
4. For each film *category*, find customer_id's who is TOP-2 in order of the number of DVDs rented (if there are many ties, more than 2 customers can be printed)
5. For each customer, print her/his total amount, the total amount for her/his country, and dense ranking by the country's total amount

(Hint: First calculate the customer's total amount using the with clause, and then apply a window query;
a customer belongs to only one country. The number of result records is equal to the number of customers.)

Homework

- Complete today's practice exercise
- Write your queries and take screenshots of execution results
- Submit your report on blackboard
  - 10:29:59, 2024/06/18
  - **Only PDF file** is accepted
  - **No late submission**

End of Lab