Homework Assignment #1
Database Systems course (2011-2012 A)

Objectives

To understand and be able to manipulate SQL queries.

Data

We'll use the **Sakila** schema, which can be found on TAU's server or the following link (if you want to install it at home).

http://dev.mysql.com/doc/index-other.html ("sakila database")

http://dev.mysql.com/doc/sakila/en/sakila.html (for full documentation)

Requirements

For each question, you are required to provide the following:

- The SQL query you used
- The answers
- Any assumptions you made

Please note that your query must return the answer of the question exactly; if the answer asks for a count of something, return that count, etc. Unless it's specifically asked, we do NOT want duplicates in the answers. If you know what views are, then keep it to yourself (i.e. don't use views). The questions are (roughly) in order from least to most difficult.

IMPORTANT NOTE: you may NOT use the "LIMIT" keyword of MySQL in your queries.

Submission

Your solution should be assigned hardcopy (that is, print it..) to Rubi's mailbox (371 on Schreiber's second floor)

For each question, your solution should include:

- The query (shift "SQL keywords" as much as possible for easy understanding)
- The results. You must make sure that table is aligned
- Any assumption you made

Tip for handling the results: if you are using Word, you can export the results from MySQL Workbench (to HTML) and then copy-paste it from your browser.

Q1

// any assumptions you made regarding q1 should be written here..

SELECT   *

FROM   category

category_id	name	last_update
1	Action	2006-02-15 04:46:27
2	Animation	2006-02-15 04:46:27
3	Children	2006-02-15 04:46:27
4	Classics	2006-02-15 04:46:27
5	Comedy	2006-02-15 04:46:27
6	Documentary	2006-02-15 04:46:27
7	Drama	2006-02-15 04:46:27
8	Family	2006-02-15 04:46:27
9	Foreign	2006-02-15 04:46:27
10	Games	2006-02-15 04:46:27
11	Horror	2006-02-15 04:46:27
12	Music	2006-02-15 04:46:27
13	New	2006-02-15 04:46:27
14	Sci-Fi	2006-02-15 04:46:27
15	Sports	2006-02-15 04:46:27
16	Travel	2006-02-15 04:46:27

Q2

SELECT   country

FROM   country

WHERE   lower(country) LIKE '%in'

ORDER BY   country

country
Bahrain
Liechtenstein
Spain

Questions

1. What are the names of all the countries in the databases which start with the letter "B" (sorted by their names)?

2. Return the first names (sorted) of all the actors with the last name "berry".

3. Find all the films whose length is more than 184 (inclusive). Order the results by the length (and for films with the same length order them by their name). Return their title and the length.

4. Return the first name, last name and city of all customers who live in Canada. Order the results first by the last then by the first name.

5. How many customers are from Brazil??

6. Return the "popular countries"? (that is, the ones with more than 20 customer). For each such country, return its name and its correspond number of customers. Order the result by the number of customers (descending).

7. Return the categories (names) of the longest film. NOTE that there may be several "longest" films (i.e. with the same length), so you might need to return more than one category.. Return the duration as well.

8. Find the movies whose total number of actors is above the average. Return the movie names and its number of actors ordered by the title.
   IMPORTANT NOTE: this query should return many movies. Please write in your submission only the first TOP-10 results..

9. Who is the customer who spent the most on rental movies? Return his/her customer id, first name and the amount spent.

10. Give an interesting query of your own that is not already in the assignment. The query should involve at least two joins, HAVING clause and aggregation operation. Give the English explanation and the answer.