Prep 6 - Part 2 of 2

Database Modifications

Learn how to modify a database

So far in both our study of Relational Algebra and SQL, we have focused on making queries on a database. For this part of the prep, you will use three basic SQL commands for *modifying* a database: `INSERT`, `DELETE`, and `UPDATE`.

Your first step is to review the notes from the **SQL: Database Modifications** link on the **Lectures** page on Quercus.

Set up an empty database

Next, login to dbsrv1.cdf.toronto.edu, go into a directory of your choice, and grab the starter file for this prep, which defines the schema you are familiar with but doesn't insert any data into the tables:

```
> cp ~csc343h/summer/pub/prep/w6/world_empty.sql .
```

(Don't forget that blank and dot at the end!)

Run `psql` and import `world_empty.sql` using the `\i` command. You now have the two tables `country` and `countrylanguage`, but they each have zero rows.

Write some SQL to modify the database

Now create a new file called **prep6_queries.txt** and write commands to perform the following actions:

1. Insert three new countries on the database, each on the continent 'Pangaea':
    - Borduria, with code 'BOR' and population 1000
    - Cagliostro, with code 'CAG' and population 250
    - Qumar, with code 'MAR' and population 3380
2. Insert the following information into the database: the languages 'English', 'Italian', and 'Klingon' are spoken in Borduria, but the percentage of the population who speaks each one is not known nor is it known which one is the official language.
3. Delete from the country table every country with a population less than 300.
4. Change the continent of Borduria to 'Luna'.

Run your SQL code

Run your code using the `\i` command. Then, execute two `SELECT *` queries to display the contents of tables `country` and `countrylanguage` to check your

work.

If at any point you need to reset the data and start over, you can do that by re-importing `world_empty.sql`. The code in this file removes both of the tables and everything in them, and redefines the empty tables.

Hand in

Copy the transcript of your psql session (both the commands you typed and the output from psql) and paste it into a file called **prep6_session.txt**.

Finally, submit both `prep6_queries.txt` and `prep6_session.txt` to MarkUs under Prep6.

Recap re wrangling files

Probably the easiest way to create a text file containing a terminal session for handing in on MarkUs is this: have a window on your machine that is connected to dbsrv1 and do your psql work there. On your machine,

1. Open up your favourite text editor (it could even be an IDE like Eclipse).
2. Copy the history of your dbsrv1 and psql commands from your dbsrv1 window paste them into the text editor.
3. Save that as a file on your machine (that's where it will go when you "save", since you are running the editor on your own machine).
4. Start up a browser on your machine, log in to MarkUs, and upload the file.

Marking this part of the Prep

Since it's not handed in within PCRS, this part of your prep will be marked by TAs. So in order to earn credit, *you* must demonstrate that your code runs correctly, as specified in the instructions above.