CS 166: Lab5 Assignment: Structured Query Language - SQL

October 24, 2018

The purpose of the following assignment is to practice the Structured Query Language - SQL statements. To do this assignment, you may need to read the lab notes (Lab 5). Please create a single script file (.sql), containing all your SQL queries.

Consider the following schema:

```
Suppliers ( sid NUMERIC(9,0) PRIMARY KEY,
        sname CHAR(30),
        address CHAR(40));

Parts ( pid NUMERIC(9,0) PRIMARY KEY,
        pname CHAR(40),
        color CHAR(15));

Catalog ( sid NUMERIC(9,0),
        pid NUMERIC(9,0),
        cost NUMERIC(10,2),
        PRIMARY KEY(sid,pid),
        FOREIGN KEY(sid) REFERENCES Suppliers,
        FOREIGN KEY(pid) REFERENCES Parts);
```

In order to create tables and load initial data please download the file lab5.zip from iLearn to you home directory. In your home directory unpack the .zip file:

```
unzip lab5.zip
```

Open file *startPostgreSQL.sh* and change the port number to a value in the range [1024, 32768]. Execute *source ./startPostgreSQL.sh* and make sure the server is running by typing *pg_ctl status*. If it has not started change the port to a different value and try again. Make sure to check

/tmp/$USERNAME/logfile for any error messages. Once the server is up and running execute:

```
source ./createPostgreDB.sh
cp *.txt /tmp/$USERNAME/myDB/data/
psql −h localhost −p $PORT $USERNAME_DB < chapter5.sql
```

The second command from above will copy the .txt files in lab5.zip inside the data folder of your database. These files need to exist in that location to be used by the next command that executes chapter5.sql. The .sql script will initialize the tables and insert data into them so you can run your queries on top of a toy dataset.

Create a script file with the commands in SQL to answer the following queries:

- Find the pid of parts with cost lower than 10

- Find the name of parts with cost lower than 10

- Find the address of the suppliers who supply "Fire Hydrant Cap"

- Find the name of the suppliers who supply green parts

- For each supplier, list the supplier's name along with all parts' name that it supply

Create *queries.sql* and submit the file at the end of the lab. DO NOT forget to execute *source ./stopPostgreDB.sh* to stop the server once you are done.