PART ZERO

Download and intall mySQL community edition, version 5.6.22, from

http://dev.mysql.com/downloads/mysql/

mySQL is a free download, but you'll have to create an oracle account

and answer some questions. It's a little tedious, so allow plenty of time to get it all done.

Read the install instructions carefully as well. You'll find a lot of helpful information directly on the mySQL reference manual: http://dev.mysql.com/doc/refman/5.6/en/installing.html

There's a lot of detail in that manual, so here are some key things

you'll need to do. The specific way you accomplish these tasks will

depend on your OS. I can definitely help you with anythning Mac- or

\*nix-related, but Windows questions might be best-suited for Piazza.

1. Create mysql-specific user names and groups. Always run mysql with

a username that requires a password.

2. Set your environment variables so your system recognizes mysql as

an executable. Your mySQL installation will be somewhere like

/usr/loca/mysql, and your path variable needs to be able to find

/usr/local/mysql/bin.

3. If your system doesn't provide them, make sure you have a mysql

group and a mysql user, and make sure they have rwx permissions on the

entire mysql directory.

4. Run mysql\_install\_db to set up the initial tables. If it throws any

errors, read them carefully and make sure you fix them before

continuing.

5. Kick off the mysql server, which will be need to be running before

you can actually log into it with mysql client.

PART ONE. 25 points.

This first problem just warms us up with mySQL once you have it installed. Note that I'm just asking you simple questions, and you might need to look up the exact commands to make them happen.

1. As part of your mySQL installation, you should have a database called 'test'. Switch to this database with the 'use' command. What tables does it have?

No data in the test table.

2. Now switch to the built-in 'mysql' database. What are the columns in the 'func' table? List all pertinent info. How many records exist in the table? What do you suppose this table is used to store?

Name - char(64)   
Ret -tinyint(1)  
dl- char(128)  
 type - enum('function','aggregate')

Column Name is a primary key and default values of ret and type are 0, null respectively.

No data found;

This table is used for storing function related information.

3. Create a new database called "us\_states". In this database, add a table called "states". Add 5 columns to the table: state name (a string), population (an integer), an ID field, and two more of your own choosing. Of the two your-choice fields, at least one should be an ENUM. The ID field should be a primary key that auto-increments.

Create table states(name varchar(25), population int, Id int primary key, temperature int, location ENUM(‘east’,’west’,’north’,’south’));

Using the insert command, add 10 states to your table one at a time (using real or completely made up population data).

Run queries to:

\* List all the columns in your table,

mysql> desc states;

+-------------+-------------------------------------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+-------------+-------------------------------------+------+-----+---------+----------------+

| name | varchar(40) | YES | | NULL | |

| population | int(11) | YES | | NULL | |

| id | int(11) | NO | PRI | NULL | auto\_increment |

| temperature | int(11) | YES | | NULL | |

| location | enum('west','east','north','south') | YES | | NULL | |

+-------------+-------------------------------------+------+-----+---------+----------------+

5 rows in set (0.07 sec)

\* output the states in descending order of population, and

mysql> select name from states order by name ASC;

+-------------+

| name |

+-------------+

| Alabama |

| Alaska |

| arizona |

| arkansas |

| califonia |

| colarado |

| connecticut |

| Delaware |

| Florida |

| Illinois |

| kansas |

+-------------+

11 rows in set (0.00 sec)

\* some other query of your choice that tells me something interesting about your data.

Display 5th largest populous state as per the records.

select name, population from states group by population desc limit 1 offset 4;

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| name | population |

+----------+------------+

| nebraska | 793279 |

+----------+------------+

Finding all the details whose population is greater than average population of states.

select \* from states having population > (select avg(population) from states);

+-----------+------------+----+-------------+----------+

| name | population | id | temperature | location |

+-----------+------------+----+-------------+----------+

| Alabama | 8383 | 1 | 233 | south |

| Alaska | 10000 | 2 | 40 | south |

| arizona | 9000 | 3 | 39 | south |

| califonia | 7000 | 4 | 29 | west |

| arkansas | 8700 | 8 | 38 | west |

| colarado | 8700 | 11 | 45 | north |

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Copy/paste the result of running these queries as part of your homework submission.