

CS105.3 - Database Management Systems

Lab Sheet 9

This lab guide is designed to provide examples and exercises in the fundamentals of SQL within the MySQL environment.

The objective is not to develop full blown applications but to illustrate the concepts of SQL using simple examples ☺

Note: Laboratory machines are already have the MySQL but you need to install MySQL in your own machine. Please make sure you're getting the latest but stable version.

We use XAMPP to run MySQL.

1. Run XAMPP and familiarize with the options available.
2. Open up the MySQL console. (it looks like CMD) → so you can see `mysql>`

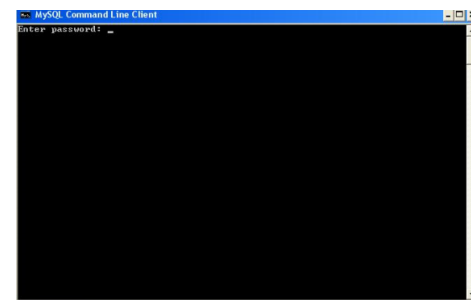


Figure 1: MySQL command line client window

3. Familiarize with following. Ask instructors to explain the following command. Identify each part of the command.

```
mysql > -h hostname -u username -p [password]
```

4. Once you have successfully logged on you will see the opening screen as shown in Figure.

To work in MySQL requires you to type in commands. For example typing in the following will mysql> `\h` will show you the help section.

5. For example to display information about how to create a database you would type:
`mysql> help create database.`

6. Find out what is the command that we need to type to quit/exit the MySQL console.

7. Before creating any tables, MySQL requires you to create a database by executing the CREATE DATABASE command. To create a database called MYDB you would type the following: (you can give a name to your DB).

```
mysql> CREATE DATABASE MYDB;
```

8. To check to see if your database has been created you need to use the SHOW DATABASES command which lists the databases on the MySQL server host. You will only be able to see those databases for which you have some kind of privilege.

Use SHOW DATABASES command and verify your DB is there.

9. To work with any specific database you first have to select it. When you first login to MySQL, the default database is always selected, so you need to execute the USE command followed by the name of the database that you want to use.

```
mysql> USE MYDB;
```

10. You can use SHOW TABLES command to show the tables within your database.

Type and see the output.

11. Now you will learn how to create a small database called SALES from a script file (test.sql)

First, download the .sql file from the LMS and use below command to run the script.

```
mysql> SOURCE C:\MYSQL\SALES.sql
```

Note that in order for this command to work correctly you should have copied the script files into the directory C:\MYSQL\. If your files are located in a different directory then change the path accordingly. (May be you stored on Desktop)

The command SOURCE will load and execute the script to create the SALES database. Notice that prompts will indicate that tables are being created and data added.

12. Now, if you run **SHOW DATABASES** what is the output? Can you see the SALES database?

13. Now, if you run **SHOW TABLES** what is the output?

14. Now, type **DESCRIBE CUSTOMER**. What is the output?

Let's create a table in a new database.

1. Create the following database in MySQL.

Database: CompanyDB

2. USE **CompanyDB** and create the following tables.

Create the following **Employees** table with suitable data types and field sizes.
Primary key is **IdNum**.

Employees Table

IdNum	LName	FName	JobCode	Salary	Phone
1876	CHIN	JACK	TA1	42400	212/588-5634
1114	GREENWALD	JANICE	ME3	38000	212/588-1092
1556	PENNINGTON	MICHAEL	ME1	29860	718/383-5681
1354	PARKER	MARY	FA3	65800	914/455-2337
1130	WOOD	DEBORAH	PT2	36514	212/587-0013