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Tutorial 1: Introduction to MySQL

Database System **CSC3170**

Goals: Learn how to install MySQL and build your first MySQL program.

1. Installation of MySQL.

(1) Please link to the following website and follow the instructions step by step to install MySQL on your computer:
https://www.a2hosting.com › developer-corner › mysql › managing-mysql-databases-and-users-from-the-command-line

(2) To create **MySQL** database and users, follow these steps:

a. At the command line, log in to **MySQL** as the root user:
mysql *-u root -p*

b. Type the **MySQL** root password, and then press Enter.

c. Type **\q** to exit the **mysql** program.

d. To log in to **MySQL** as the user you just created, type the following command:
mysql -u username -p

e. Type the user's password, and then press Enter.

f. To create a database, type the following command. Replace *dbname* with the name of the database that you want to create:
CREATE DATABASE dbname

g. To work with the new database, type the following command. Replace *dbname* with the name of the database you created in step f:
USE dbname

h. You can now work with the database with the functions such as creating a basic table and inserting some data in the table, etc.
Please follow the instructions and examples provided on the specified website as follows:

https://www.a2hosting.com › developer-corner › mysql › managing-mysql-databases-and-users-from-the-command-line

(3) Using SQL script files

2. Basic Operations with MySQL

Please visit the following website to get a quick start with MySQL:
https://dev.mysql.com › doc › mysql-getting-started

The following lists some basic operations with the MySQL server. Please follow the description to practice the use of the proper SQL statements. SQL Statement Syntax explains in detail the rich syntax and functionality of the SQL statements that are illustrated below.

1) Showing existing databases. Use a SHOW DATABASES statement:

```
mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
4 rows in set (0.00 sec)
```

2) Creating a new database. Use a CREATE DATABASE statement:

```
mysql> CREATE DATABASE pets;
Query OK, 1 row affected (0.01 sec)
```

3) Creating a table inside a database. First, pick the database in which you want to create the table with a USE statement:

```
mysql> USE pets
Database changed
```

More functions are provided on the above website as listed below. Please follow the instructions to practise and gain your first hand experience with MySQL.

- DESCRIBE shows information on all columns of a table
- **Adding records into a table.** Use, for example, an INSERT...VALUES statement;
- **Retrieving records from a table.** Use a SELECT statement, and "*" to match all columns;
- **Deleting a record from a table.** Use a DELETE statement to delete a record from a table, specifying the criterion for deletion with the WHERE clause;
- **Adding or deleting a column from a table.** Use an ALTER TABLE...ADD statement to add a column. You can use, for example, an AFTER clause to specify the location of the new column;
- SHOW CREATE TABLE shows a CREATE TABLE statement, which provides even more details on the table.
- How to download MySQL for Windows and MAC:https://www.softwaretestinghelp.com/how-to-download-mysql/

- Download MySQL --free the latest version:https://mysql-com.en.softonic.com/download
- MySQL examples: https://www.w3schools.com/mysql/mysql_examples.asp