MySQL

MySQL is an open-source relational database management system which is supported by Oracle Company. It is fast, scalable, and an easy to use database management system in comparison with Microsoft SQL Server and Oracle Database.

MySQL Create Database

A database is used to store the collection of records in an organized form. It allows us to hold the data into tables, rows, columns, and indexes to find the relevant information frequently. We can access and manage the records through the database very easily.
Syntax mysql> CREATE DATABASE databasename;

MySQL Show Database

We can list all the databases available on the MySQL server host using the following command, as shown below

mysql> SHOW DATABASES;

MySQL DROP Database

We can drop an existing database in MySQL by using the DROP DATABASE statement with the below syntax:

mysql>DROP DATABASE [IF EXISTS] database_name;

MySQL CREATE TABLE

MySQL allows us to create a table into the database by using the CREATE TABLE command. Following is a generic syntax for creating a MySQL table in the database.

```
CREATE TABLE [IF NOT EXISTS] table_name(

   column_definition1,

   column_definition2,

   .....,

   table_constraints  );
```

MySQL Show Tables

We can get the number of table information of a database using the following statement:

```
mysql> SHOW TABLES;
```

MySQL Rename Table

The following are the syntax used to change the name of the table:

```
mysql> RENAME old_table TO new_table;
```

MySQL INSERT Statement

The below is generic syntax of SQL INSERT INTO command to insert a single record in MySQL table:

```
INSERT INTO table_name ( field1, field2,...fieldN ) VALUES ( value1,
value2,...valueN );
```

MySQL UPDATE Query

Following is a generic syntax of UPDATE command to modify data into the MySQL table:

```
UPDATE table_name SET column_name1 = new-value1,
column_name2=new-value2, ... [WHERE Clause] ;
```

MySQL DELETE Statement

The following are the syntax that illustrates how to use the DELETE statement:

```
DELETE FROM table_name WHERE condition
```

MySQL SELECT Statement

```
SELECT * FROM tables [WHERE conditions]  [GROUP BY fieldName(s)]
[HAVING condition]   [ORDER BY fieldName(s)]  [OFFSET M ][LIMIT N];
```

MySQL JOINS

MySQL JOINS are used with SELECT statements. It is used to retrieve data from multiple tables. It is performed whenever you need to fetch records from two or more tables.

There are three types of MySQL joins:

- MySQL INNER JOIN (or sometimes called simple join)
- MySQL LEFT OUTER JOIN (or sometimes called LEFT JOIN)
- MySQL RIGHT OUTER JOIN (or sometimes called RIGHT JOIN)

MySQL Inner Join

The MySQL Inner Join is used to return only those results from the tables that **match** the specified condition and hides other rows and columns. MySQL assumes it as a default Join, so it is optional to use the Inner Join keyword with the query.

```
SELECT columns  FROM table1 INNER JOIN table2 ON condition1
INNER JOIN table3 ON condition2...;
```

MySQL LEFT JOIN

Left Join clause returns all the rows from the left table and matched records from the right table or returns Null if no matching record is found. This Join can also be called a **Left Outer Join** clause.

```
SELECT columns FROM  table1    LEFT [OUTER] JOIN table2    ON Join_Condition;
```

MySQL RIGHT JOIN

The Right Join is used to joins two or more tables and returns all rows from the right-hand table, and only those results from the other table that fulfilled the join condition. If it finds unmatched records from the left side table, it returns Null value.

```
SELECT column_list  FROM Table1  RIGHT [OUTER] JOIN Table2  ON
join_condition;
```

MySQL CROSS JOIN

MySQL CROSS JOIN is used to combine all possibilities of the two or more tables and returns the result that contains every row from all contributing tables. The CROSS JOIN is also known as CARTESIAN JOIN, which provides the Cartesian product of all associated tables.

```
SELECT column-lists  FROM table1  CROSS JOIN table2;
```