MySQL

It is a Relational Datatabase managaement System.

My stands for the founder Michael Widenu's daughter name and SQL is the abbreviation for Structured Query Language.

Data is of two types:

1) Structured Data → MySQL, OracleDB, MSServer, etc
2) Unstructured Data → mongoDB, NoSQL, etc

----

1) To display the list of Databases:
   Show databases;

2) To create the DB:
   Create database <db_name>;

3) To select the DB:
   Use <db_name>;

4) To display the list of Tables:
   Show tables;

5) To create the table:
   Create table <tbl_name>
   (
          Col1 datatype,
          Col2 datatype,
          Col3 datatype,
          …….
   );

6) To display the Structure:
   Desc <tbl_name>;

7) To Insert Data:
   Insert into <tbl_name> values
   (valu1, calue2, value3, …..);

8) To Retrive the Data:
   Select * from <tbl_name>;

   Select col1, col2 from <tbl_name>;

9) UPDATE Statement:
   Update <tbl_name>
   Set col = value
   Where condition;

WHERE Clause:

It is used to filter the records.

Operators in WHERE Clause:

=	EQUALS TO
>	GREATER THAN
<	LESS THAN
>=	GREATER THAN EQULAS TO
<=	LESS THAN EQUALS TO
!= or <>	NOT EQUALS TO
Between	It is used to Specify range.
IN	It is used to specify multiple values.
LIKE	It is used to identify patterns.

Two WildCard Operators with LIKE:

1) _(underscore): One Character mandatory.
2) %(Percent Sign): Zero or More Characters.

DELETE STATEMENT:

Delete from <tbl_name> where condition;

To drop the table:

Drop table <tbl_name>;

Name startswith 'A' -→   'A%'

A   AA   AAA   ABA   BAA

Name Endswith 'A' → '%A'

Second Character should be 'A' →

Enter password: ****

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 101

Server version: 8.0.26 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input
statement.

mysql> show databases;

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

```
| Database          |
+-------------------+
| b31cls            |
| b31dconn          |
| b31pdbc           |
| crt               |
| demo              |
| information_schema |
| mysql             |
| newdb             |
| newdb2            |
| performance_schema |
| sakila            |
| sys               |
| tp                |
| world             |
+-------------------+
14 rows in set (0.03 sec)

mysql> create database b1
    -> ;
Query OK, 1 row affected (0.05 sec)

mysql> show databases;
```

```
+-------------------+
| Database          |
+-------------------+
| b1                |
| b31cls            |
| b31dconn          |
| b31pdbc           |
| crt               |
| demo              |
| information_schema |
| mysql             |
| newdb             |
| newdb2            |
| performance_schema |
| sakila            |
| sys               |
| tp                |
| world             |
+-------------------+
15 rows in set (0.00 sec)

mysql> use b1;
Database changed
mysql>
```

```
mysql> show tables;
Empty set (0.02 sec)

mysql> create table student
    -> (
    -> roll int,
    -> name varchar(50),
    -> marks float
    -> );
Query OK, 0 rows affected (0.06 sec)

mysql> desc student;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| roll  | int         | YES  |     | NULL    |       |
| name  | varchar(50) | YES  |     | NULL    |       |
| marks | float       | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
3 rows in set (0.02 sec)

mysql> insert into student values
    -> (1, 'Harshal', 88.12);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from student;

+------+---------+-------+
| roll | name    | marks |
+------+---------+-------+
|    1 | Harshal | 88.12 |
+------+---------+-------+
1 row in set (0.00 sec)

mysql> insert into student values
    -> (2, 'Megha', 77.09),
    -> (3, 'Ashish', 67.89),
    -> (4, 'Arnav', 67.436),
    -> (5, 'Neha', 88.456);
Query OK, 4 rows affected (0.02 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> select * from student;

+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    2 | Megha   |  77.09 |
|    3 | Ashish  |  67.89 |
```

```
|   4 | Arnav   | 67.436 |
|   5 | Neha    | 88.456 |
+------+---------+--------+
5 rows in set (0.00 sec)
```

mysql> select roll, name from student;

```
+------+---------+
| roll | name    |
+------+---------+
|    1 | Harshal |
|    2 | Megha   |
|    3 | Ashish  |
|    4 | Arnav   |
|    5 | Neha    |
+------+---------+
5 rows in set (0.00 sec)
```

mysql> select * from student;

```
+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    2 | Megha   |  77.09 |
|    3 | Ashish  |  67.89 |
```

```
|    4 | Arnav  | 67.436 |

|    5 | Neha   | 88.456 |

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

5 rows in set (0.00 sec)


mysql> update student

    -> set roll = 1djfyugihjl

    -> ;

ERROR 1054 (42S22): Unknown column '1djfyugihjl' in 'field list'

mysql> update student

    -> set roll = 100

    -> where name = 'Ashish';

Query OK, 1 row affected (0.04 sec)

Rows matched: 1  Changed: 1  Warnings: 0


mysql> select * from student;

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

| roll | name    | marks  |

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

|    1 | Harshal |  88.12 |

|    2 | Megha   |  77.09 |

|  100 | Ashish  |  67.89 |

|    4 | Arnav   | 67.436 |

|    5 | Neha    | 88.456 |
```

```
+------+---------+--------+
```

5 rows in set (0.01 sec)

mysql> select * from student where marks > 80;

```
+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    5 | Neha    | 88.456 |
+------+---------+--------+
```

2 rows in set (0.01 sec)

mysql> select * from student where roll < 4;

```
+------+---------+-------+
| roll | name    | marks |
+------+---------+-------+
|    1 | Harshal | 88.12 |
|    2 | Megha   | 77.09 |
+------+---------+-------+
```

2 rows in set (0.00 sec)

mysql> select * from student where roll <> 100;

```
+------+---------+--------+
| roll | name    | marks  |
```

```
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    2 | Megha   |  77.09 |
|    4 | Arnav   | 67.436 |
|    5 | Neha    | 88.456 |
+------+---------+--------+
4 rows in set (0.00 sec)
```

mysql> select * from student;

```
+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    2 | Megha   |  77.09 |
|  100 | Ashish  |  67.89 |
|    4 | Arnav   | 67.436 |
|    5 | Neha    | 88.456 |
+------+---------+--------+
5 rows in set (0.00 sec)
```

mysql> select * from student where marks between 60 and 80;

```
+------+--------+--------+
| roll | name   | marks  |
+------+--------+--------+
```

```
|   2 | Megha  |  77.09 |
| 100 | Ashish |  67.89 |
|   4 | Arnav  | 67.436 |
+------+--------+--------+
3 rows in set (0.00 sec)


mysql> select * from student;
+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|   1 | Harshal |  88.12 |
|   2 | Megha   |  77.09 |
| 100 | Ashish  |  67.89 |
|   4 | Arnav   | 67.436 |
|   5 | Neha    | 88.456 |
+------+---------+--------+
5 rows in set (0.00 sec)


mysql> select * from student where marks in(67.89, 88.12);
Empty set (0.00 sec)


mysql> select * from student where marks in(67, 88);
Empty set (0.00 sec)
```

```
mysql> select * from student where roll in(1, 100, 5);

+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|  100 | Ashish  |  67.89 |
|    5 | Neha    | 88.456 |
+------+---------+--------+
3 rows in set (0.00 sec)


mysql> select * from student;

+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    2 | Megha   |  77.09 |
|  100 | Ashish  |  67.89 |
|    4 | Arnav   | 67.436 |
|    5 | Neha    | 88.456 |
+------+---------+--------+
5 rows in set (0.00 sec)


mysql> select * from student where name like 'A%';

+------+--------+--------+
```

```
| roll | name   | marks  |
+------+--------+--------+
|  100 | Ashish |  67.89 |
|    4 | Arnav  | 67.436 |
+------+--------+--------+
2 rows in set (0.00 sec)
```

mysql> select * from student where name like '%A';

```
+------+-------+--------+
| roll | name  | marks  |
+------+-------+--------+
|    2 | Megha |  77.09 |
|    5 | Neha  | 88.456 |
+------+-------+--------+
2 rows in set (0.00 sec)
```

mysql> select * from student where name like '_A%';

```
+------+---------+-------+
| roll | name    | marks |
+------+---------+-------+
|    1 | Harshal | 88.12 |
+------+---------+-------+
1 row in set (0.00 sec)
```

```
mysql> select * from student where name like '___s%';

+------+---------+-------+
| roll | name    | marks |
+------+---------+-------+
|    1 | Harshal | 88.12 |
+------+---------+-------+
1 row in set (0.00 sec)


mysql> select * from student where name like 'M%A';

+------+-------+-------+
| roll | name  | marks |
+------+-------+-------+
|    2 | Megha | 77.09 |
+------+-------+-------+
1 row in set (0.00 sec)


mysql> select * from student where name like '____';

+------+------+--------+
| roll | name | marks  |
+------+------+--------+
|    5 | Neha | 88.456 |
+------+------+--------+
1 row in set (0.00 sec)
```

```
mysql> select * from student where name like '%E%';

+------+-------+--------+
| roll | name  | marks  |
+------+-------+--------+
|    2 | Megha |  77.09 |
|    5 | Neha  | 88.456 |
+------+-------+--------+
2 rows in set (0.00 sec)


mysql> select * from student;

+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    2 | Megha   |  77.09 |
|  100 | Ashish  |  67.89 |
|    4 | Arnav   | 67.436 |
|    5 | Neha    | 88.456 |
+------+---------+--------+
5 rows in set (0.00 sec)


mysql> delete from student where roll = 100;
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from student;

+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    2 | Megha   |  77.09 |
|    4 | Arnav   | 67.436 |
|    5 | Neha    | 88.456 |
+------+---------+--------+
4 rows in set (0.01 sec)


mysql> delete from student where name like '%a';
Query OK, 2 rows affected (0.01 sec)


mysql> select * from student;

+------+---------+--------+
| roll | name    | marks  |
+------+---------+--------+
|    1 | Harshal |  88.12 |
|    4 | Arnav   | 67.436 |
+------+---------+--------+
2 rows in set (0.00 sec)


mysql> delete from student;
```

Query OK, 2 rows affected (0.03 sec)

mysql> select * from student;

Empty set (0.00 sec)

mysql> show tables;

```
+--------------+
| Tables_in_b1 |
+--------------+
| student      |
+--------------+
```

1 row in set (0.01 sec)

mysql> desc student;

```
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| roll  | int         | YES  |     | NULL    |       |
| name  | varchar(50) | YES  |     | NULL    |       |
| marks | float       | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
```

3 rows in set (0.01 sec)

mysql> drop table student;

Query OK, 0 rows affected (0.07 sec)

mysql> show tables;

Empty set (0.01 sec)

mysql> drop database b1;

Query OK, 0 rows affected (0.05 sec)

mysql> show databases;

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

| Database |

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

| b31cls |

| b31dconn |

| b31pdbc |

| crt |

| demo |

| information_schema |

| mysql |

| newdb |

| newdb2 |

| performance_schema |

| sakila |

| sys |

```
| tp           |
| world        |
+--------------------+
```

14 rows in set (0.00 sec)

mysql>