

MYSQL

It is a relational database management system.

My → stands for the founder's name Michael Widenu's daughter

SQL → abbreviation for Structured Query Language

Data is of two types:

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

- 1) Show databases;
It displays the list of all the databases present in the system.

- 2) To create a database:
Create database <db_name>;

- 3) To create table:
Create table <tbl_name>
(col1 datatype,
Col2 datatype,
.....);

- 4) To select the database:
Use <db_name>;

- 5) To see the structure the table:
Desc <tbl_name>;

INSERT STATEMENT:

To insert data into the table the insert statement is used.

Insert into <tbl_name>(col1, col2, col3) values(value1, value2, value3);

UPDATE STATEMENT:

It is used to update the data in the table.

Update <tbl_name>

Set col_name = value

Where condition;

DELETE STATEMENT:

It is used to delete the data in the table.

Delete from <tbl_name> where condition;

SELECT STATEMENT:

It is used to retrieve the records from the table.

Select * from <tbl_name>;

Select col1,col2 from tbl_name;

WHERE CLAUSE:

It is used to filter the records.

Operators in where clause:

>

<

>=

<=

=

!= or (<>)

IN → It allows us to specify multiple values.

AND

OR

LIKE → It is used to identify the patterns

There are two wildcard operators in LIKE:

1) _(underscore) → One character mandatory.

2) %(percent) → zero or more characters.

BETWEEN → It allows us to specify the range.

A AA BAA ABA A%

Name ends with 'j'

J	JJ	AJJJ	AJA	%J
---	----	------	-----	----

Name starts with 'S' and ends with 'h'

S sh ssh Saurabh s%h

Name should present 'i'

I	ii	ashish avinash	Ishan sakshi	%I%
---	----	----------------	--------------	-----

NAME SHOULD contain second character 'i'

Vicky viraj 'i%'

Name should contain last second character 'i'

'%l_ '

Name consist of 5 characters

' '

Enter password: ****

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

Your MySQL connection id is 123

Server version: 8.0.26 MySQL Community Server - GPL

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

```
mysql> show databases;
```

```
+-----+
| Database      |
+-----+
| akshay        |
| b23           |
| b24           |
| b25           |
| b25conn       |
| b25m2m        |
| b25one2many   |
| b26           |
| b26classform  |
| b26conn       |
| b26sql        |
| b3            |
| connb24       |
| connb25       |
| db            |
```

db1	
db3	
demo1	
information_schema	
m2m	
mysql	
mysqlb26	
new	
new1	
new100	
new12345	
new1b23	
new200	
new26	
new700	
newb23	
newb234	
newdb	
o1	
o2	
o3	
p_9	
pdbc1	
performance_schema	
place_track	
raw1	

```
| realtionshipsb26 |
```

```
| s1 |
```

```
| s2 |
```

```
| s3 |
```

```
| s4 |
```

```
| s5 |
```

```
| sakila |
```

```
| sample123 |
```

```
| sys |
```

```
| tp |
```

```
| world |
```

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

52 rows in set (0.06 sec)

```
mysql> create database b27;
```

Query OK, 1 row affected (0.02 sec)

```
mysql> create table student
```

```
-> (
```

```
-> rn int,
```

```
-> name varchar(40),
```

```
-> marks float
```

```
-> );
```

ERROR 1046 (3D000): No database selected

```
mysql> use b27;
```

Database changed

```
mysql> create table student
```

```
-> (
```

```
-> rn int,
```

```
-> name varchar(40),
```

```
-> marks float
```

```
-> );
```

```
Query OK, 0 rows affected (0.07 sec)
```

```
mysql> desc student;
```

Field	Type	Null	Key	Default	Extra
rn	int	YES		NULL	
name	varchar(40)	YES		NULL	
marks	float	YES		NULL	

```
3 rows in set (0.03 sec)
```

```
mysql> select * from student;
```

```
Empty set (0.01 sec)
```

```
mysql> insert into student values
```

```
-> (1, 'Akshay', 80.923);
```

```
Query OK, 1 row affected (0.02 sec)
```

```
mysql> select * from student;
```

```

+-----+-----+-----+
| rn  | name  | marks |
+-----+-----+-----+
|  1  | Akshay | 80.923 |
+-----+-----+-----+
1 row in set (0.01 sec)

```

```

mysql> insert into student(rn, name) values
-> (2, 'Saurabh');
Query OK, 1 row affected (0.02 sec)

```

```

mysql> select * from student;
+-----+-----+-----+
| rn  | name  | marks |
+-----+-----+-----+
|  1  | Akshay | 80.923 |
|  2  | Saurabh | NULL  |
+-----+-----+-----+
2 rows in set (0.00 sec)

```

```

mysql> insert into student values
-> (3, 'Suraj', 90),
-> (4, 'Abhishek', 70),
-> (5, 'Rohit', 67);
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

```



```
mysql> select * from student;
```

```
+-----+-----+-----+
| rn  | name  | marks |
+-----+-----+-----+
|  1  | Akshay | 80.923 |
|  2  | Saurabh | NULL |
|  3  | Suraj  | 90 |
|  4  | Abhishek | 70 |
|  5  | Rohit  | 67 |
+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> update student
```

```
-> set name = 'Viraj'
```

```
-> where rn = 1;
```

Query OK, 1 row affected (0.02 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from student;
```

```
+-----+-----+-----+
| rn  | name  | marks |
+-----+-----+-----+
|  1  | Viraj  | 80.923 |
|  2  | Saurabh | NULL |
|  3  | Suraj  | 90 |
+-----+-----+-----+
```

```
| 4 | Abhishek | 70 |
```

```
| 5 | Rohit | 67 |
```

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

5 rows in set (0.00 sec)

```
mysql> delete from student where name = 'Rohit';
```

Query OK, 1 row affected (0.02 sec)

```
mysql> select * from student;
```

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

```
| rn | name | marks |
```

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

```
| 1 | Viraj | 80.923 |
```

```
| 2 | Saurabh | NULL |
```

```
| 3 | Suraj | 90 |
```

```
| 4 | Abhishek | 70 |
```

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

4 rows in set (0.01 sec)

```
mysql> select * from student;
```

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

```
| rn | name | marks |
```

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

```
| 1 | Viraj | 80.923 |
```

```
| 2 | Saurabh | NULL |
```

```
| 3 | Suraj | 90 |
```

```
| 4 | Abhishek | 70 |
```

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

4 rows in set (0.00 sec)

```
mysql> select rn,name from student;
```

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

```
| rn | name |
```

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

```
| 1 | Viraj |
```

```
| 2 | Saurabh |
```

```
| 3 | Suraj |
```

```
| 4 | Abhishek |
```

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

4 rows in set (0.00 sec)

```
mysql> select * from student;
```

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

```
| rn | name | marks |
```

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

```
| 1 | Viraj | 80.923 |
```

```
| 2 | Saurabh | NULL |
```

```
| 3 | Suraj | 90 |
```

```
| 4 | Abhishek | 70 |
```

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

4 rows in set (0.00 sec)

```
mysql> insert into student values
```

```
-> (5, 'Rohit', 45),;
```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 2

```
mysql> insert into student values
```

```
-> (5, 'Rohit', 45),
```

```
-> (6, 'Vicky', 64),
```

```
-> (7, 'Mehul', 73),
```

```
-> (8, 'Hardik', 35),
```

```
-> (9, 'Abhimanyu', 50),
```

```
-> (10, 'Asish', 48);
```

Query OK, 6 rows affected (0.04 sec)

Records: 6 Duplicates: 0 Warnings: 0

```
mysql> select * from student;
```

rn	name	marks
1	Viraj	80.923
2	Saurabh	NULL
3	Suraj	90
4	Abhishek	70
5	Rohit	45
6	Vicky	64
7	Mehul	73
8	Hardik	35

	9		Abhimanyu		50	
--	---	--	-----------	--	----	--

	10		Asish		48	
--	----	--	-------	--	----	--

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

10 rows in set (0.01 sec)

mysql> create table stud_bkp as select * from student;

Query OK, 10 rows affected (0.05 sec)

Records: 10 Duplicates: 0 Warnings: 0

mysql> select * from student;

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

	rn		name		marks	
--	----	--	------	--	-------	--

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

	1		Viraj		80.923	
--	---	--	-------	--	--------	--

	2		Saurabh		NULL	
--	---	--	---------	--	------	--

	3		Suraj		90	
--	---	--	-------	--	----	--

	4		Abhishek		70	
--	---	--	----------	--	----	--

	5		Rohit		45	
--	---	--	-------	--	----	--

	6		Vicky		64	
--	---	--	-------	--	----	--

	7		Mehul		73	
--	---	--	-------	--	----	--

	8		Hardik		35	
--	---	--	--------	--	----	--

	9		Abhimanyu		50	
--	---	--	-----------	--	----	--

	10		Asish		48	
--	----	--	-------	--	----	--

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

10 rows in set (0.00 sec)

```
mysql> select * from student where rn > 5;
```

```
+-----+-----+-----+
| rn  | name   | marks |
+-----+-----+-----+
|  6  | Vicky  |   64  |
|  7  | Mehul  |   73  |
|  8  | Hardik |   35  |
|  9  | Abhimanyu | 50  |
| 10  | Asish  |   48  |
+-----+-----+-----+
```

```
5 rows in set (0.00 sec)
```

```
mysql> select * from student where marks < 50;
```

```
+-----+-----+-----+
| rn  | name   | marks |
+-----+-----+-----+
|  5  | Rohit  |   45  |
|  8  | Hardik |   35  |
| 10  | Asish  |   48  |
+-----+-----+-----+
```

```
3 rows in set (0.01 sec)
```

```
mysql> select * from student;
```

```
+-----+-----+-----+
| rn  | name   | marks |
+-----+-----+-----+
```

	1	Viraj	80.923	
	2	Saurabh	NULL	
	3	Suraj	90	
	4	Abhishek	70	
	5	Rohit	45	
	6	Vicky	64	
	7	Mehul	73	
	8	Hardik	35	
	9	Abhimanyu	50	
	10	Asish	48	

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

10 rows in set (0.00 sec)

mysql> select * from student where rn in(2,5,9);

	rn	name	marks	
	2	Saurabh	NULL	
	5	Rohit	45	
	9	Abhimanyu	50	

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

3 rows in set (0.00 sec)

mysql> insert into student values

-> (11, 'Rohit', 100);

Query OK, 1 row affected (0.03 sec)

```
mysql> select * from student;
```

rn	name	marks
1	Viraj	80.923
2	Saurabh	NULL
3	Suraj	90
4	Abhishek	70
5	Rohit	45
6	Vicky	64
7	Mehul	73
8	Hardik	35
9	Abhimanyu	50
10	Asish	48
11	Rohit	100

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

```
11 rows in set (0.01 sec)
```

```
mysql> select * from student where name = 'Rohit' and marks = 100;
```

rn	name	marks
11	Rohit	100

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

```
1 row in set (0.00 sec)
```



```
mysql> select * from student where name = 'Rohit' or marks = 100;
```

```
+-----+-----+-----+
| rn  | name  | marks |
+-----+-----+-----+
|  5 | Rohit |   45 |
| 11 | Rohit |  100 |
+-----+-----+-----+

2 rows in set (0.01 sec)
```

```
mysql> select * from student;
```

```
+-----+-----+-----+
| rn  | name   | marks |
+-----+-----+-----+
|  1 | Viraj  | 80.923 |
|  2 | Saurabh | NULL |
|  3 | Suraj  |   90 |
|  4 | Abhishek |   70 |
|  5 | Rohit  |   45 |
|  6 | Vicky  |   64 |
|  7 | Mehul  |   73 |
|  8 | Hardik |   35 |
|  9 | Abhimanyu |   50 |
| 10 | Asish  |   48 |
| 11 | Rohit  |  100 |
+-----+-----+-----+
```

11 rows in set (0.00 sec)

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

rn	name	marks
4	Abhishek	70
9	Abhimanyu	50
10	Asish	48

3 rows in set (0.00 sec)

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

rn	name	marks
1	Viraj	80.923
3	Suraj	90

2 rows in set (0.00 sec)

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

rn	name	marks
2	Saurabh	NULL

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

1 row in set (0.00 sec)

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

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

```
| rn | name | marks |
```

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

```
| 1 | Viraj | 80.923 |
```

```
| 4 | Abhishek | 70 |
```

```
| 5 | Rohit | 45 |
```

```
| 6 | Vicky | 64 |
```

```
| 8 | Hardik | 35 |
```

```
| 9 | Abhimanyu | 50 |
```

```
| 10 | Asish | 48 |
```

```
| 11 | Rohit | 100 |
```

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

8 rows in set (0.00 sec)

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

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

```
| rn | name | marks |
```

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

```
| 1 | Viraj | 80.923 |
```

```
| 6 | Vicky | 64 |
```

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

2 rows in set (0.00 sec)

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

```
+-----+-----+-----+
| rn  | name  | marks |
+-----+-----+-----+
|  5  | Rohit |   45  |
|  8  | Hardik |   35  |
| 11  | Rohit |  100  |
+-----+-----+-----+
```

```
3 rows in set (0.00 sec)
```

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

```
+-----+-----+-----+
| rn  | name  | marks |
+-----+-----+-----+
|  1  | Viraj | 80.923 |
|  3  | Suraj |   90  |
|  5  | Rohit |   45  |
|  6  | Vicky |   64  |
|  7  | Mehul |   73  |
| 10  | Asish |   48  |
| 11  | Rohit |  100  |
+-----+-----+-----+
```

```
7 rows in set (0.00 sec)
```

```
mysql> select * from student;
```

```

+-----+-----+-----+
| rn | name | marks |
+-----+-----+-----+
| 1 | Viraj | 80.923 |
| 2 | Saurabh | NULL |
| 3 | Suraj | 90 |
| 4 | Abhishek | 70 |
| 5 | Rohit | 45 |
| 6 | Vicky | 64 |
| 7 | Mehul | 73 |
| 8 | Hardik | 35 |
| 9 | Abhimanyu | 50 |
| 10 | Asish | 48 |
| 11 | Rohit | 100 |
+-----+-----+-----+
11 rows in set (0.00 sec)

```

mysql> select * from student where marks between 45 and 75;

```

+-----+-----+-----+
| rn | name | marks |
+-----+-----+-----+
| 4 | Abhishek | 70 |
| 5 | Rohit | 45 |
| 6 | Vicky | 64 |
| 7 | Mehul | 73 |
| 9 | Abhimanyu | 50 |

```

```
| 10 | Asish | 48 |
```

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

```
6 rows in set (0.01 sec)
```

```
mysql>
```