```
nter password: **************
elcome to the MySQL monitor.  Commands end with ; or \g.
our MySQL connection id is 50
erver version: 8.0.39 MySQL Community Server - GPL

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

ysql> use nit;
atabase changed
ysql> create table students(id int,name varchar(20),address varchar(30),marks int);
RROR 1050 (42S01): Table 'students' already exists
ysql> desc students;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| id      | int         | YES  |     | NULL    |       |
| name    | varchar(20) | YES  |     | NULL    |       |
| address | varchar(30) | YES  |     | NULL    |       |
| marks   | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
 rows in set (0.01 sec)

ysql> select * from students;
mpty set (0.00 sec)

ysql> insert into students values(1,'ovi','pune',70),(2,'git','mumbai','87'),(7,'smith','nashik',90),(4,'priya','pune',70),(5,'isha','mumbai',90);
uery OK, 5 rows affected (0.01 sec)
ecords: 5  Duplicates: 0  Warnings: 0

ysql> select * from students;
+----+------+---------+-------+
| id | name | address | marks |
+----+------+---------+-------+
|  1 | ovi  | pune    |    70 |
|  2 | git  | mumbai  |    87 |
```

```
mysql> insert into students values(1, ovi, pune, 70);(2, git, mum
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from students;
+------+-------+---------+-------+
| id   | name  | address | marks |
+------+-------+---------+-------+
|    1 | ovi   | pune    |    70 |
|    2 | git   | mumbai  |    87 |
|    7 | smith | nashik  |    90 |
|    4 | priya | pune    |    70 |
|    5 | isha  | mumbai  |    90 |
+------+-------+---------+-------+
5 rows in set (0.00 sec)

mysql> alter table students modify column name varchar(40);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from students;
+------+-------+---------+-------+
| id   | name  | address | marks |
+------+-------+---------+-------+
|    1 | ovi   | pune    |    70 |
|    2 | git   | mumbai  |    87 |
|    7 | smith | nashik  |    90 |
|    4 | priya | pune    |    70 |
|    5 | isha  | mumbai  |    90 |
+------+-------+---------+-------+
5 rows in set (0.00 sec)

mysql> update students set phoneno=123;
ERROR 1054 (42S22): Unknown column 'phoneno' in 'field list'
mysql> alter table students add phoneno int;
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from students;
+------+-------+---------+-------+---------+
| id   | name  | address | marks | phoneno |
+------+-------+---------+-------+---------+
|    1 | ovi   | pune    |    70 |    NULL |
|    2 | git   | mumbai  |    87 |    NULL |
|    7 | smith | nashik  |    90 |    NULL |
|    4 | priya | pune    |    70 |    NULL |
|    5 | isha  | mumbai  |    90 |    NULL |
+------+-------+---------+-------+---------+
5 rows in set (0.00 sec)
```

```
mysql> update students set phoneno=123;
Query OK, 5 rows affected (0.01 sec)
Rows matched: 5  Changed: 5  Warnings: 0

mysql> select * from students;
+------+-------+---------+-------+---------+
| id   | name  | address | marks | phoneno |
+------+-------+---------+-------+---------+
|    1 | ovi   | pune    |    70 |     123 |
|    2 | git   | mumbai  |    87 |     123 |
|    7 | smith | nashik  |    90 |     123 |
|    4 | priya | pune    |    70 |     123 |
|    5 | isha  | mumbai  |    90 |     123 |
+------+-------+---------+-------+---------+
5 rows in set (0.00 sec)

mysql> update students set phoneno=456 where id=1;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> desc students;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| id      | int         | YES  |     | NULL    |       |
| name    | varchar(40) | YES  |     | NULL    |       |
| address | varchar(30) | YES  |     | NULL    |       |
| marks   | int         | YES  |     | NULL    |       |
| phoneno | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)

mysql> select * from students;
+------+-------+---------+-------+---------+
| id   | name  | address | marks | phoneno |
+------+-------+---------+-------+---------+
|    1 | ovi   | pune    |    70 |     456 |
|    2 | git   | mumbai  |    87 |     123 |
|    7 | smith | nashik  |    90 |     123 |
|    4 | priya | pune    |    70 |     123 |
|    5 | isha  | mumbai  |    90 |     123 |
+------+-------+---------+-------+---------+
5 rows in set (0.00 sec)

mysql> alter table students drop column phoneno;
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> select * from students;
+------+-------+---------+-------+
| id   | name  | address | marks |
+------+-------+---------+-------+
|    1 | ovi   | pune    |    70 |
|    2 | git   | mumbai  |    87 |
|    7 | smith | nashik  |    90 |
|    4 | priya | pune    |    70 |
|    5 | isha  | mumbai  |    90 |
+------+-------+---------+-------+
5 rows in set (0.00 sec)

mysql> select sum(marks) from students;
+------------+
| sum(marks) |
+------------+
|        407 |
+------------+
1 row in set (0.01 sec)

mysql> select avg(marks) from student;
+------------+
| avg(marks) |
+------------+
|    70.8333 |
+------------+
1 row in set (0.00 sec)

mysql> select count(name) from student;
+-------------+
| count(name) |
+-------------+
|           6 |
+-------------+
1 row in set (0.01 sec)

mysql> select avg(marks) from students;
+------------+
| avg(marks) |
+------------+
|    81.4000 |
+------------+
1 row in set (0.00 sec)

mysql> select count(name) from students;
+-------------+
| count(name) |
+-------------+
|           5 |
+-------------+
```

```
mysql> select max(marks) from students;
+------------+
| max(marks) |
+------------+
|         90 |
+------------+
1 row in set (0.00 sec)

mysql> select min(marks) from students;
+------------+
| min(marks) |
+------------+
|         70 |
+------------+
1 row in set (0.00 sec)

mysql> select * from students;
+------+-------+---------+-------+
| id   | name  | address | marks |
+------+-------+---------+-------+
|    1 | ovi   | pune    |    70 |
|    2 | git   | mumbai  |    87 |
|    7 | smith | nashik  |    90 |
|    4 | priya | pune    |    70 |
|    5 | isha  | mumbai  |    90 |
+------+-------+---------+-------+
5 rows in set (0.00 sec)

mysql> select * from students order by marks;
+------+-------+---------+-------+
| id   | name  | address | marks |
+------+-------+---------+-------+
|    1 | ovi   | pune    |    70 |
|    4 | priya | pune    |    70 |
|    2 | git   | mumbai  |    87 |
|    7 | smith | nashik  |    90 |
|    5 | isha  | mumbai  |    90 |
+------+-------+---------+-------+
5 rows in set (0.00 sec)

mysql> select * from students order by marks desc;
+------+-------+---------+-------+
| id   | name  | address | marks |
+------+-------+---------+-------+
|    7 | smith | nashik  |    90 |
|    5 | isha  | mumbai  |    90 |
|    2 | git   | mumbai  |    87 |
|    1 | ovi   | pune    |    70 |
|    4 | priya | pune    |    70 |
```

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

mysql> select * from students where name like '%s';
Empty set (0.01 sec)

mysql> select * from students where name like 's%';
+------+--------+---------+-------+
| id   | name   | address | marks |
+------+--------+---------+-------+
|    7 | smith  | nashik  |    90 |
+------+--------+---------+-------+
1 row in set (0.00 sec)

mysql> select * from students where name like '%a';
+------+--------+---------+-------+
| id   | name   | address | marks |
+------+--------+---------+-------+
|    4 | priya  | pune    |    70 |
|    5 | isha   | mumbai  |    90 |
+------+--------+---------+-------+
2 rows in set (0.00 sec)

mysql> select * from students where name like '_v%';
+------+--------+---------+-------+
| id   | name   | address | marks |
+------+--------+---------+-------+
|    1 | ovi    | pune    |    70 |
+------+--------+---------+-------+
1 row in set (0.00 sec)

mysql> select * from students where name like '%_t';
+------+--------+---------+-------+
| id   | name   | address | marks |
+------+--------+---------+-------+
|    2 | git    | mumbai  |    87 |
+------+--------+---------+-------+
1 row in set (0.00 sec)
```

```
mysql> desc emp1;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| id      | int         | NO   | PRI | NULL    |       |
| salary  | int         | YES  |     | NULL    |       |
| empcode | int         | YES  |     | NULL    |       |
| name    | varchar(20) | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> select * from emp1;
+----+--------+---------+------+
| id | salary | empcode | name |
+----+--------+---------+------+
|  1 |   2000 |     102 | aman |
|  3 |  90000 |     106 | sam  |
|  6 |   3000 |     105 | max  |
|  7 |   6000 |     104 | arup |
|  8 |   2500 |     103 | ram  |
+----+--------+---------+------+
5 rows in set (0.00 sec)

mysql> select * from students inner join emp1 on students.id=emp1.id;
+------+-------+---------+-------+----+--------+---------+------+
| id   | name  | address | marks | id | salary | empcode | name |
+------+-------+---------+-------+----+--------+---------+------+
|    1 | ovi   | pune    |    70 |  1 |   2000 |     102 | aman |
|    7 | smith | nashik  |    90 |  7 |   6000 |     104 | arup |
+------+-------+---------+-------+----+--------+---------+------+
2 rows in set (0.00 sec)

mysql> select * from students cross join emp1;
+------+-------+---------+-------+----+--------+---------+------+
| id   | name  | address | marks | id | salary | empcode | name |
+------+-------+---------+-------+----+--------+---------+------+
|    5 | isha  | mumbai  |    90 |  1 |   2000 |     102 | aman |
|    4 | priya | pune    |    70 |  1 |   2000 |     102 | aman |
|    7 | smith | nashik  |    90 |  1 |   2000 |     102 | aman |
|    2 | git   | mumbai  |    87 |  1 |   2000 |     102 | aman |
|    1 | ovi   | pune    |    70 |  1 |   2000 |     102 | aman |
|    5 | isha  | mumbai  |    90 |  3 |  90000 |     106 | sam  |
|    4 | priya | pune    |    70 |  3 |  90000 |     106 | sam  |
|    7 | smith | nashik  |    90 |  3 |  90000 |     106 | sam  |
|    2 | git   | mumbai  |    87 |  3 |  90000 |     106 | sam  |
|    1 | ovi   | pune    |    70 |  3 |  90000 |     106 | sam  |
|    5 | isha  | mumbai  |    90 |  6 |   3000 |     105 | max  |
|    4 | priya | pune    |    70 |  6 |   3000 |     105 | max  |
|    7 | smith | nashik  |    90 |  6 |   3000 |     105 | max  |
|    2 | git   | mumbai  |    87 |  6 |   3000 |     105 | max  |
|    1 | ovi   | pune    |    70 |  6 |   3000 |     105 | max  |
|    5 | isha  | mumbai  |    90 |  7 |   6000 |     104 | arup |
|    4 | priya | pune    |    70 |  7 |   6000 |     104 | arup |
|    7 | smith | nashik  |    90 |  7 |   6000 |     104 | arup |
|    2 | git   | mumbai  |    87 |  7 |   6000 |     104 | arup |
|    1 | ovi   | pune    |    70 |  7 |   6000 |     104 | arup |
|    5 | isha  | mumbai  |    90 |  8 |   2500 |     103 | ram  |
|    4 | priya | pune    |    70 |  8 |   2500 |     103 | ram  |
|    7 | smith | nashik  |    90 |  8 |   2500 |     103 | ram  |
|    2 | git   | mumbai  |    87 |  8 |   2500 |     103 | ram  |
|    1 | ovi   | pune    |    70 |  8 |   2500 |     103 | ram  |
+------+-------+---------+-------+----+--------+---------+------+
25 rows in set (0.00 sec)
```

```
+------+-------+---------+-------+-----+--------+---------+------+
| id   | name  | address | marks | id  | salary | empcode | name |
+------+-------+---------+-------+-----+--------+---------+------+
|    5 | isha  | mumbai  |    90 |   1 |   2000 |     102 | aman |
|    4 | priya | pune    |    70 |   1 |   2000 |     102 | aman |
|    7 | smith | nashik  |    90 |   1 |   2000 |     102 | aman |
|    2 | git   | mumbai  |    87 |   1 |   2000 |     102 | aman |
|    1 | ovi   | pune    |    70 |   1 |   2000 |     102 | aman |
|    5 | isha  | mumbai  |    90 |   3 |  90000 |     106 | sam  |
|    4 | priya | pune    |    70 |   3 |  90000 |     106 | sam  |
|    7 | smith | nashik  |    90 |   3 |  90000 |     106 | sam  |
|    2 | git   | mumbai  |    87 |   3 |  90000 |     106 | sam  |
|    1 | ovi   | pune    |    70 |   3 |  90000 |     106 | sam  |
|    5 | isha  | mumbai  |    90 |   6 |   3000 |     105 | max  |
|    4 | priya | pune    |    70 |   6 |   3000 |     105 | max  |
|    7 | smith | nashik  |    90 |   6 |   3000 |     105 | max  |
|    2 | git   | mumbai  |    87 |   6 |   3000 |     105 | max  |
|    1 | ovi   | pune    |    70 |   6 |   3000 |     105 | max  |
|    5 | isha  | mumbai  |    90 |   7 |   6000 |     104 | arup |
|    4 | priya | pune    |    70 |   7 |   6000 |     104 | arup |
|    7 | smith | nashik  |    90 |   7 |   6000 |     104 | arup |
|    2 | git   | mumbai  |    87 |   7 |   6000 |     104 | arup |
|    1 | ovi   | pune    |    70 |   7 |   6000 |     104 | arup |
|    5 | isha  | mumbai  |    90 |   8 |   2500 |     103 | ram  |
|    4 | priya | pune    |    70 |   8 |   2500 |     103 | ram  |
|    7 | smith | nashik  |    90 |   8 |   2500 |     103 | ram  |
|    2 | git   | mumbai  |    87 |   8 |   2500 |     103 | ram  |
|    1 | ovi   | pune    |    70 |   8 |   2500 |     103 | ram  |
+------+-------+---------+-------+-----+--------+---------+------+
25 rows in set (0.00 sec)

mysql> select * from students right join emp on students.id=emp.id;
ERROR 1146 (42S02): Table 'nit.emp' doesn't exist
mysql> select * from students right join emp on students.id=emp1.id;
ERROR 1146 (42S02): Table 'nit.emp' doesn't exist
mysql> select * from students right join emp1 on students.id=emp1.id;
+------+-------+---------+-------+-----+--------+---------+------+
| id   | name  | address | marks | id  | salary | empcode | name |
+------+-------+---------+-------+-----+--------+---------+------+
|    1 | ovi   | pune    |    70 |   1 |   2000 |     102 | aman |
| NULL | NULL  | NULL    |  NULL |   3 |  90000 |     106 | sam  |
| NULL | NULL  | NULL    |  NULL |   6 |   3000 |     105 | max  |
|    7 | smith | nashik  |    90 |   7 |   6000 |     104 | arup |
| NULL | NULL  | NULL    |  NULL |   8 |   2500 |     103 | ram  |
+------+-------+---------+-------+-----+--------+---------+------+
5 rows in set (0.00 sec)

mysql> select * from students left join emp1 on students.id=emp1.id;
+------+-------+---------+-------+------+--------+---------+------+
| id   | name  | address | marks | id   | salary | empcode | name |
+------+-------+---------+-------+------+--------+---------+------+
|    1 | ovi   | pune    |    70 |    1 |   2000 |     102 | aman |
|    2 | git   | mumbai  |    87 | NULL |   NULL |    NULL | NULL |
|    7 | smith | nashik  |    90 |    7 |   6000 |     104 | arup |
|    4 | priya | pune    |    70 | NULL |   NULL |    NULL | NULL |
|    5 | isha  | mumbai  |    90 | NULL |   NULL |    NULL | NULL |
+------+-------+---------+-------+------+--------+---------+------+
5 rows in set (0.00 sec)

mysql>
```