

## SQL 15<sup>th</sup> Nov and 17<sup>th</sup> Nov practice

```
mysql> show databases;
```

```
+-----+
| Database      |
+-----+
| customer_behaviour |
| db            |
| information_schema |
| mysql         |
| performance_schema |
| samplecustomerdb |
| sys          |
+-----+
```

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

```
mysql> create database nit;
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql> show databases;
```

```
+-----+
| Database      |
+-----+
| customer_behaviour |
| db            |
| information_schema |
| mysql         |
| nit          |
+-----+
```

```
| performance_schema |
```

```
| samplecustomerdb  |
```

```
| sys                |
```

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

8 rows in set (0.00 sec)

```
mysql> use nit;
```

Database changed

```
mysql> create table student(
```

```
    -> name varchar(30),
```

```
    -> id int not null primary key,
```

```
    -> address varchar(50),
```

```
    -> marks int);
```

Query OK, 0 rows affected (0.05 sec)

```
mysql> desc student;
```

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

```
| Field | Type      | Null | Key | Default | Extra |
```

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

```
| name  | varchar(30) | YES  |     | NULL    |      |
```

```
| id    | int         | NO   | PRI | NULL    |      |
```

```
| address | varchar(50) | YES  |     | NULL    |      |
```

```
| marks | int         | YES  |     | NULL    |      |
```

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

4 rows in set (0.01 sec)

```
mysql> show tables;
```

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

| Tables\_in\_nit |

+-----+

| student |

+-----+

1 row in set (0.01 sec)

```
mysql> insert into student(marks,id,name,address)values(78, 12, 'prakash', 'hyd');
```

Query OK, 1 row affected (0.03 sec)

```
mysql> insert into strudent values('kodi', 40, 'bng', 66);
```

ERROR 1146 (42S02): Table 'nit.strudent' doesn't exist

```
mysql> insert into student values('kodi', 40, 'bng', 66);
```

Query OK, 1 row affected (0.03 sec)

```
mysql> insert into student values('alex', 45, 'hyd', 79), ('cathu', 17, 'delhi', 90), ('dolly', 48, 'pune', 67), ('chancy', 78, 'mumbaoi', 34);
```

'>

```
'> insert into student values('alex', 45, 'hyd', 79), ('cathu', 17, 'delhi', 90), ('dolly', 48, 'pune', 67), ('chancy', 78, 'mumbaoi', 34);
```

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 ", 17, 'delhi', 90), ('dolly', 48, 'pune', 67), ('chancy', 78, 'mumbaoi', 34);

' at line 1

```
mysql> insert into student values('alex', 45, 'hyd', 79), ('cathy', 17, 'delhi', 90), ('dolly', 48, 'pune', 67), ('chancy', 78, 'mumbai', 34);
```

Query OK, 4 rows affected (0.03 sec)

Records: 4 Duplicates: 0 Warnings: 0

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

```
+-----+----+-----+-----+
| name  | id | address | marks |
+-----+----+-----+-----+
| prakash | 12 | hyd    | 78 |
| cathy  | 17 | delhi  | 90 |
| kodi   | 40 | bng    | 66 |
| alex   | 45 | hyd    | 79 |
| dolly  | 48 | pune   | 67 |
| chancy | 78 | mumbai | 34 |
+-----+----+-----+-----+
```

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

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

```
+-----+
| name  |
+-----+
| prakash |
| cathy  |
| kodi   |
| alex   |
| dolly  |
| chancy |
+-----+
```

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

```
mysql> select * from student where id=12;
```

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

```
| name | id | address | marks |
```

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

```
| prakash | 12 | hyd | 78 |
```

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

1 row in set (0.00 sec)

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

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

```
| name | id | address | marks |
```

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

```
| prakash | 12 | hyd | 78 |
```

```
| cathy | 17 | delhi | 90 |
```

```
| kodi | 40 | bng | 66 |
```

```
| alex | 45 | hyd | 79 |
```

```
| dolly | 48 | pune | 67 |
```

```
| chancy | 78 | mumbai | 34 |
```

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

6 rows in set (0.00 sec)

```
mysql> insert into student values('sam', 12, 'hyd', 56);
```

ERROR 1062 (23000): Duplicate entry '12' for key 'student.PRIMARY'

```
mysql> update student set address='chennai' where id=45;
```

Query OK, 1 row affected (0.03 sec)

Rows matched: 1 Changed: 1 Warnings: 0

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

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

```
| name | id | address | marks |
```

```

+-----+----+-----+-----+
| prakash | 12 | hyd   | 78 |
| cathy   | 17 | delhi | 90 |
| kodi    | 40 | bng   | 66 |
| alex    | 45 | chennai | 79 |
| dolly   | 48 | pune  | 67 |
| chancy  | 78 | mumbai | 34 |

```

```

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

```

6 rows in set (0.00 sec)

```
mysql> update student set address='chennai' where address='mumbai';
```

Query OK, 1 row affected (0.03 sec)

Rows matched: 1 Changed: 1 Warnings: 0

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

```

+-----+----+-----+-----+
| name   | id | address | marks |
+-----+----+-----+-----+
| prakash | 12 | hyd     | 78 |
| cathy   | 17 | delhi   | 90 |
| kodi    | 40 | bng     | 66 |
| alex    | 45 | chennai | 79 |
| dolly   | 48 | pune    | 67 |
| chancy  | 78 | chennai | 34 |

```

```

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

```

6 rows in set (0.00 sec)

```
mysql> show tables;
```

```
+-----+
| Tables_in_nit |
```

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

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

1 row in set (0.00 sec)

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

```
+-----+-----+-----+-----+
| name   | id | address | marks |
```

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

```
| prakash | 12 | hyd    | 78 |
```

```
| cathy   | 17 | delhi   | 90 |
```

```
| kodi    | 40 | bng     | 66 |
```

```
| alex    | 45 | chennai | 79 |
```

```
| dolly   | 48 | pune    | 67 |
```

```
| chancy  | 78 | chennai | 34 |
```

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

6 rows in set (0.00 sec)

```
mysql> alter table student add phoneNo = 123;
```

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 '= 123' at line 1

```
mysql> alter table student add phoneNo int;
```

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

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

```

+-----+----+-----+-----+-----+
| name  | id | address | marks | phoneNo |
+-----+----+-----+-----+-----+
| prakash | 12 | hyd    | 78 | NULL |
| cathy  | 17 | delhi  | 90 | NULL |
| kodi   | 40 | bng    | 66 | NULL |
| alex   | 45 | chennai | 79 | NULL |
| dolly  | 48 | pune   | 67 | NULL |
| chancy | 78 | chennai | 34 | NULL |
+-----+----+-----+-----+-----+

```

6 rows in set (0.00 sec)

```
mysql> update student set phoneNo=123;
```

Query OK, 6 rows affected (0.03 sec)

Rows matched: 6 Changed: 6 Warnings: 0

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

```

+-----+----+-----+-----+-----+
| name  | id | address | marks | phoneNo |
+-----+----+-----+-----+-----+
| prakash | 12 | hyd    | 78 | 123 |
| cathy  | 17 | delhi  | 90 | 123 |
| kodi   | 40 | bng    | 66 | 123 |
| alex   | 45 | chennai | 79 | 123 |
| dolly  | 48 | pune   | 67 | 123 |
| chancy | 78 | chennai | 34 | 123 |
+-----+----+-----+-----+-----+

```

6 rows in set (0.00 sec)



```
mysql> update student set phoneNo = 456 where id=12;
```

```
Query OK, 1 row affected (0.03 sec)
```

```
Rows matched: 1  Changed: 1  Warnings: 0
```

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

```
+-----+----+-----+-----+-----+
| name  | id | address | marks | phoneNo |
+-----+----+-----+-----+-----+
| prakash | 12 | hyd    | 78 | 456 |
| cathy  | 17 | delhi  | 90 | 123 |
| kodi   | 40 | bng    | 66 | 123 |
| alex   | 45 | chennai | 79 | 123 |
| dolly  | 48 | pune   | 67 | 123 |
| chancy | 78 | chennai | 34 | 123 |
+-----+----+-----+-----+-----+
```

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

```
mysql> desc student;
```

```
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(30) | YES  |     | NULL    |       |
| id    | int        | NO   | PRI | NULL    |       |
| address | varchar(50) | YES  |     | NULL    |       |
| marks | int        | YES  |     | NULL    |       |
| phoneNo | int        | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
```

5 rows in set (0.01 sec)

```
mysql> alter table student modify column name varchar(60);
```

Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc student;
```

| Field   | Type        | Null | Key | Default | Extra |
|---------|-------------|------|-----|---------|-------|
| name    | varchar(60) | YES  |     | NULL    |       |
| id      | int         | NO   | PRI | NULL    |       |
| address | varchar(50) | YES  |     | NULL    |       |
| marks   | int         | YES  |     | NULL    |       |
| phoneNo | int         | YES  |     | NULL    |       |

5 rows in set (0.00 sec)

```
mysql> alter table student drop column phoneNo;
```

Query OK, 0 rows affected (0.05 sec)

Records: 0 Duplicates: 0 Warnings: 0

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

| name    | id | address | marks |
|---------|----|---------|-------|
| prakash | 12 | hyd     | 78    |
| cathy   | 17 | delhi   | 90    |

|        |    |         |    |  |
|--------|----|---------|----|--|
| kodi   | 40 | bng     | 66 |  |
| alex   | 45 | chennai | 79 |  |
| dolly  | 48 | pune    | 67 |  |
| chancy | 78 | chennai | 34 |  |

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

6 rows in set (0.00 sec)

mysql> delete from student where name='kodi';

Query OK, 1 row affected (0.03 sec)

mysql> select \* from student;

|                          |    |         |       |  |
|--------------------------|----|---------|-------|--|
| +-----+----+-----+-----+ |    |         |       |  |
| name                     | id | address | marks |  |
| +-----+----+-----+-----+ |    |         |       |  |
| prakash                  | 12 | hyd     | 78    |  |
| cathy                    | 17 | delhi   | 90    |  |
| alex                     | 45 | chennai | 79    |  |
| dolly                    | 48 | pune    | 67    |  |
| chancy                   | 78 | chennai | 34    |  |

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

5 rows in set (0.00 sec)

mysql> select sum(marks) from student;

|            |  |
|------------|--|
| +-----+    |  |
| sum(marks) |  |
| +-----+    |  |
| 348        |  |

+-----+

1 row in set (0.03 sec)

```
mysql> select avg(marks) from student;
```

```
+-----+
| avg(marks) |
+-----+
|   69.6000 |
+-----+
```

1 row in set (0.00 sec)

```
mysql> select count(marks) from student;
```

```
+-----+
| count(marks) |
+-----+
|           5 |
+-----+
```

1 row in set (0.02 sec)

```
mysql> select min(marks) from student;
```

```
+-----+
| min(marks) |
+-----+
|          34 |
+-----+
```

1 row in set (0.02 sec)

```
mysql> select max(marks) from student;
```

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

```
| max(marks) |
```

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

```
|    90 |
```

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

1 row in set (0.00 sec)

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

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

```
| name  | id | address | marks |
```

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

```
| prakash | 12 | hyd    | 78 |
```

```
| cathy   | 17 | delhi   | 90 |
```

```
| alex    | 45 | chennai | 79 |
```

```
| dolly   | 48 | pune    | 67 |
```

```
| chancy  | 78 | chennai | 34 |
```

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

5 rows in set (0.00 sec)

```
mysql> select * from student order by marks;
```

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

```
| name  | id | address | marks |
```

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

```
| chancy | 78 | chennai | 34 |
```

```
| dolly  | 48 | pune    | 67 |
```

```
| prakash | 12 | hyd    | 78 |
```

```
| alex   | 45 | chennai | 79 |
```

```
| cathy  | 17 | delhi   | 90 |
```

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

5 rows in set (0.00 sec)

```
mysql> select * from student order by marks desc;
```

| name    | id | address | marks |
|---------|----|---------|-------|
| cathy   | 17 | delhi   | 90    |
| alex    | 45 | chennai | 79    |
| prakash | 12 | hyd     | 78    |
| dolly   | 48 | pune    | 67    |
| chancy  | 78 | chennai | 34    |

5 rows in set (0.00 sec)

```
mysql> select * from student where name='a%';
```

Empty set (0.00 sec)

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

| name | id | address | marks |
|------|----|---------|-------|
| alex | 45 | chennai | 79    |

1 row in set (0.02 sec)

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

| name | id | address | marks |
|------|----|---------|-------|
|------|----|---------|-------|

```
+-----+----+-----+-----+
| cathy | 17 | delhi | 90 |
| dolly | 48 | pune | 67 |
| chancy | 78 | chennai | 34 |
```

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

3 rows in set (0.00 sec)

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

```
+-----+----+-----+-----+
| name | id | address | marks |
```

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

```
| cathy | 17 | delhi | 90 |
```

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

1 row in set (0.00 sec)

mysql> select \* from student where name like '%s\_';

```
+-----+----+-----+-----+
| name | id | address | marks |
```

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

```
| prakash | 12 | hyd | 78 |
```

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

1 row in set (0.00 sec)

mysql> create table emp(id int not null primary key, salary int, empcode int, name varchar(30));

Query OK, 0 rows affected (0.06 sec)

mysql> insert into emp values(12, 20000, 102, 'aman'), (23, 60000, 104, 'arup'), (78, 30000, 105, 'max'), (80, 25000, 103, 'ram'), (34, 90000, 106, 'sam');

Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

```
mysql> select * from emp;
```

| id | salary | empcode | name |
|----|--------|---------|------|
| 12 | 20000  | 102     | aman |
| 23 | 60000  | 104     | arup |
| 34 | 90000  | 106     | sam  |
| 78 | 30000  | 105     | max  |
| 80 | 25000  | 103     | ram  |

5 rows in set (0.00 sec)

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

| name    | id | address | marks |
|---------|----|---------|-------|
| prakash | 12 | hyd     | 78    |
| cathy   | 17 | delhi   | 90    |
| alex    | 45 | chennai | 79    |
| dolly   | 48 | pune    | 67    |
| chancy  | 78 | chennai | 34    |

5 rows in set (0.00 sec)

```
mysql> show tables;
```



```
+-----+
| Tables_in_nit |
```

```
+-----+
| emp      |
| student  |
```

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

2 rows in set (0.00 sec)

```
mysql> select * from student inner join emp on student.id=emp.id;
```

```
+-----+----+-----+-----+----+-----+-----+-----+
| name  | id | address | marks | id | salary | empcode | name |
+-----+----+-----+-----+----+-----+-----+-----+
| prakash | 12 | hyd    | 78 | 12 | 20000 | 102 | aman |
| chancy  | 78 | chennai | 34 | 78 | 30000 | 105 | max  |
```

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

2 rows in set (0.00 sec)

```
mysql> select * from emp inner join student on emp.id= student.id;
```

```
+---+-----+-----+-----+-----+---+-----+-----+
| id | salary | empcode | name | name  | id | address | marks |
+---+-----+-----+-----+-----+---+-----+-----+
| 12 | 20000 | 102 | aman | prakash | 12 | hyd    | 78 |
| 78 | 30000 | 105 | max  | chancy  | 78 | chennai | 34 |
```

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

2 rows in set (0.00 sec)

```
mysql> select * from student left join emp on student.id=emp.id;
```

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

| name    | id | address | marks | id   | salary | empcode | name |
|---------|----|---------|-------|------|--------|---------|------|
| prakash | 12 | hyd     | 78    | 12   | 20000  | 102     | aman |
| cathy   | 17 | delhi   | 90    | NULL | NULL   | NULL    | NULL |
| alex    | 45 | chennai | 79    | NULL | NULL   | NULL    | NULL |
| dolly   | 48 | pune    | 67    | NULL | NULL   | NULL    | NULL |
| chancy  | 78 | chennai | 34    | 78   | 30000  | 105     | max  |

5 rows in set (0.00 sec)

```
mysql> select * from emp left join student on student.id=emp.id;
```

| id | salary | empcode | name | name    | id   | address | marks |
|----|--------|---------|------|---------|------|---------|-------|
| 12 | 20000  | 102     | aman | prakash | 12   | hyd     | 78    |
| 23 | 60000  | 104     | arup | NULL    | NULL | NULL    | NULL  |
| 34 | 90000  | 106     | sam  | NULL    | NULL | NULL    | NULL  |
| 78 | 30000  | 105     | max  | chancy  | 78   | chennai | 34    |
| 80 | 25000  | 103     | ram  | NULL    | NULL | NULL    | NULL  |

5 rows in set (0.00 sec)

```
mysql> select * from student right join emp on student.id=emp.id;
```

| name    | id   | address | marks | id | salary | empcode | name |
|---------|------|---------|-------|----|--------|---------|------|
| prakash | 12   | hyd     | 78    | 12 | 20000  | 102     | aman |
| NULL    | NULL | NULL    | NULL  | 23 | 60000  | 104     | arup |

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| NULL    | NULL    | NULL    | NULL    | 34      | 90000   | 106     | sam     |         |
| chancy  | 78      | chennai | 34      | 78      | 30000   | 105     | max     |         |
| NULL    | NULL    | NULL    | NULL    | 80      | 25000   | 103     | ram     |         |
| +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ |

5 rows in set (0.00 sec)

mysql> select \* from emp right join student on student.id=emp.id;

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ |
| id      | salary  | empcode | name    | name    | id      | address | marks   |         |
| +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ |
| 12      | 20000   | 102     | aman    | prakash | 12      | hyd     | 78      |         |
| NULL    | NULL    | NULL    | NULL    | cathy   | 17      | delhi   | 90      |         |
| NULL    | NULL    | NULL    | NULL    | alex    | 45      | chennai | 79      |         |
| NULL    | NULL    | NULL    | NULL    | dolly   | 48      | pune    | 67      |         |
| 78      | 30000   | 105     | max     | chancy  | 78      | chennai | 34      |         |
| +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ |

5 rows in set (0.00 sec)

mysql> select \* from student cross join emp on student.id=emp.id;

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ |
| name    | id      | address | marks   | id      | salary  | empcode | name    |         |
| +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ |
| prakash | 12      | hyd     | 78      | 12      | 20000   | 102     | aman    |         |
| chancy  | 78      | chennai | 34      | 78      | 30000   | 105     | max     |         |
| +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ | +-----+ |

2 rows in set (0.00 sec)

mysql> select \* from student cross join emp;

```

+-----+---+-----+-----+---+-----+-----+-----+
| name  | id | address | marks | id | salary | empcode | name |
+-----+---+-----+-----+---+-----+-----+-----+
| chancy | 78 | chennai | 34 | 12 | 20000 | 102 | aman |
| dolly  | 48 | pune   | 67 | 12 | 20000 | 102 | aman |
| alex   | 45 | chennai | 79 | 12 | 20000 | 102 | aman |
| cathy  | 17 | delhi  | 90 | 12 | 20000 | 102 | aman |
| prakash | 12 | hyd    | 78 | 12 | 20000 | 102 | aman |
| chancy | 78 | chennai | 34 | 23 | 60000 | 104 | arup |
| dolly  | 48 | pune   | 67 | 23 | 60000 | 104 | arup |
| alex   | 45 | chennai | 79 | 23 | 60000 | 104 | arup |
| cathy  | 17 | delhi  | 90 | 23 | 60000 | 104 | arup |
| prakash | 12 | hyd    | 78 | 23 | 60000 | 104 | arup |
| chancy | 78 | chennai | 34 | 34 | 90000 | 106 | sam  |
| dolly  | 48 | pune   | 67 | 34 | 90000 | 106 | sam  |
| alex   | 45 | chennai | 79 | 34 | 90000 | 106 | sam  |
| cathy  | 17 | delhi  | 90 | 34 | 90000 | 106 | sam  |
| prakash | 12 | hyd    | 78 | 34 | 90000 | 106 | sam  |
| chancy | 78 | chennai | 34 | 78 | 30000 | 105 | max  |
| dolly  | 48 | pune   | 67 | 78 | 30000 | 105 | max  |
| alex   | 45 | chennai | 79 | 78 | 30000 | 105 | max  |
| cathy  | 17 | delhi  | 90 | 78 | 30000 | 105 | max  |
| prakash | 12 | hyd    | 78 | 78 | 30000 | 105 | max  |
| chancy | 78 | chennai | 34 | 80 | 25000 | 103 | ram  |
| dolly  | 48 | pune   | 67 | 80 | 25000 | 103 | ram  |
| alex   | 45 | chennai | 79 | 80 | 25000 | 103 | ram  |
| cathy  | 17 | delhi  | 90 | 80 | 25000 | 103 | ram  |
| prakash | 12 | hyd    | 78 | 80 | 25000 | 103 | ram  |

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25 rows in set (0.00 sec)