SQL :

mysql> show databases;
```
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mydb               |
| mysql              |
| performance_schema |
| purushoth          |
| sakila             |
| sys                |
| world              |
+--------------------+
8 rows in set (0.00 sec)
```

mysql> use mydb;
```
Database changed
mysql> create table tbl_employee(eid int(5),ename varchar(20),
esalary int(5));
Query OK, 0 rows affected, 2 warnings (0.02 sec)
```

mysql> show tables;
```
+----------------+
| Tables_in_mydb |
+----------------+
| tbl_employee   |
+----------------+
1 row in set (0.00 sec)
```

mysql> desc tbl_employee;
```
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

mysql> rename table tbl_employee to tbl_employee1;
```
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| tbl_employee1  |
+----------------+
1 row in set (0.00 sec)

mysql> rename table tbl_employee1 to tbl_employee;
Query OK, 0 rows affected (0.01 sec)

mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| tbl_employee   |
+----------------+
1 row in set (0.00 sec)

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> alter table tbl_employee add egender char(1);
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| egender | char(1)     | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> alter table tbl_employee modify egender varchar(10);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| egender | varchar(10) | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> alter table tbl_employee rename column egender to gender;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| gender  | varchar(10) | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> alter table tbl_employee rename column gender to egender;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| egender | varchar(10) | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> alter table tbl_employee drop column egender;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> drop table tbl_employee;
Query OK, 0 rows affected (0.01 sec)

mysql> show tables;
Empty set (0.00 sec)
```

                    (Day-2) DML(Data Manipulation Language):

```
mysql> use mydb;
Database changed
mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| countries      |
| dup_countries  |
| job_history    |
| jobs           |
+----------------+
4 rows in set (0.00 sec)

mysql> create table tbl_employee(eid int(5), ename varchar(20),esalary
int(5));
Query OK, 0 rows affected, 2 warnings (0.03 sec)

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
```

```
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> insert into tbl_employee values(101,'Magesh',25000);
Query OK, 1 row affected (0.00 sec)

mysql> insert into tbl_employee values(102,'Domnic',28000);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> insert into tbl_employee values(103,null,20000);
Query OK, 1 row affected (0.00 sec)

mysql> insert into tbl_employee (eid,ename) values(104,'Shiva');
Query OK, 1 row affected (0.01 sec)

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
|  103 | NULL   |   20000 |
|  104 | Shiva  |    NULL |
+------+--------+---------+
4 rows in set (0.00 sec)

mysql> select eid,esalary from tbl_employee;
+------+---------+
| eid  | esalary |
+------+---------+
|  101 |   25000 |
|  102 |   28000 |
|  103 |   20000 |
|  104 |    NULL |
```

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

mysql> select * from tbl_employee where esalary > 20000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where esalary >=  20000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
|  103 | NULL   |   20000 |
+------+--------+---------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename = 'Shiva';
+------+-------+---------+
| eid  | ename | esalary |
+------+-------+---------+
|  104 | Shiva |    NULL |
+------+-------+---------+
1 row in set (0.00 sec)

mysql> select * from tbl_employee where ename != 'Shiva';
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename is null;
+------+-------+---------+
| eid  | ename | esalary |
+------+-------+---------+
|  103 | NULL  |   20000 |
+------+-------+---------+
```

```
1 row in set (0.00 sec)

mysql> select * from tbl_employee where ename is not null;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
|  104 | Shiva  |    NULL |
+------+--------+---------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename is not null and esalary
= 28000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  102 | Domnic |   28000 |
+------+--------+---------+
1 row in set (0.00 sec)

mysql> select * from tbl_employee where ename is not null or esalary =
28000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
|  104 | Shiva  |    NULL |
+------+--------+---------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename is not null or esalary =
20000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
|  103 | NULL   |   20000 |
|  104 | Shiva  |    NULL |
+------+--------+---------+
4 rows in set (0.00 sec)

mysql> select * from tbl_employee where eid in (101,103,106);
```

```
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  103 | NULL   |   20000 |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where eid not in (101,103,106);
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  102 | Domnic |   28000 |
|  104 | Shiva  |    NULL |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where esalary between 20000 and
28000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  102 | Domnic |   28000 |
|  103 | NULL   |   20000 |
+------+--------+---------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee where esalary not between 20000 and
25000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  102 | Domnic |   28000 |
+------+--------+---------+
1 row in set (0.00 sec)

mysql> select * from tbl_employee where esalary between 28000 and
20000;
Empty set (0.00 sec)

mysql> select * from tbl_employee where ename like 'M%';
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
```

```
|  101 | Magesh |   25000 |
+------+--------+---------+
1 row in set (0.00 sec)
```

mysql> select * from tbl_employee where ename like '_M%';
```
Empty set (0.00 sec)
```

mysql> select * from tbl_employee where ename like '_O%';
```
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  102 | Domnic |   28000 |
+------+--------+---------+
1 row in set (0.00 sec)
```

mysql> select * from tbl_employee where ename like '__M%';
```
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  102 | Domnic |   28000 |
+------+--------+---------+
1 row in set (0.00 sec)
```

mysql> select * from tbl_employee where ename not like '_O%';
```
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   25000 |
|  104 | Shiva  |    NULL |
+------+--------+---------+
2 rows in set (0.00 sec)
```

mysql> commit;
```
Query OK, 0 rows affected (0.00 sec)
```

mysql> update tbl_employee set esalary=0;
```
Query OK, 4 rows affected (0.01 sec)
Rows matched: 4  Changed: 4  Warnings: 0
```

mysql> select * from tbl_employee;
```
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |       0 |
|  102 | Domnic |       0 |
```

```
|  103 | NULL   |       0 |
|  104 | Shiva  |       0 |
+------+--------+---------+
4 rows in set (0.00 sec)

mysql> rollback;
Query OK, 0 rows affected (0.00 sec)

mysql> select @@autocommit;
+--------------+
| @@autocommit |
+--------------+
|            1 |
+--------------+
1 row in set (0.00 sec)

mysql> set autocommit=0;
Query OK, 0 rows affected (0.00 sec)

mysql> select @@autocommit;
+--------------+
| @@autocommit |
+--------------+
|            0 |
+--------------+
1 row in set (0.00 sec)

mysql> update tbl_employee set esalary =10000 where eid=101;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |   10000 |
|  102 | Domnic |       0 |
|  103 | NULL   |       0 |
|  104 | Shiva  |       0 |
+------+--------+---------+
4 rows in set (0.00 sec)


mysql> rollback;  => Redo
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |       0 |
|  102 | Domnic |       0 |
|  103 | NULL   |       0 |
|  104 | Shiva  |       0 |
+------+--------+---------+
4 rows in set (0.00 sec)

mysql> update tbl_employee set esalary = 2000;
Query OK, 4 rows affected (0.00 sec)
Rows matched: 4  Changed: 4  Warnings: 0

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |    2000 |
|  102 | Domnic |    2000 |
|  103 | NULL   |    2000 |
|  104 | Shiva  |    2000 |
+------+--------+---------+
4 rows in set (0.00 sec)

mysql> commit;
Query OK, 0 rows affected (0.00 sec)

mysql> rollback;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |    2000 |
|  102 | Domnic |    2000 |
|  103 | NULL   |    2000 |
|  104 | Shiva  |    2000 |
+------+--------+---------+
4 rows in set (0.00 sec)
```

```
mysql> update tbl_employee set ename=null, esalary=0 where eid
in(101,103,106);
Query OK, 2 rows affected (0.00 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | NULL   |       0 |
|  102 | Domnic |    2000 |
|  103 | NULL   |       0 |
|  104 | Shiva  |    2000 |
+------+--------+---------+
4 rows in set (0.00 sec)

mysql> delete from tbl_employee;
Query OK, 4 rows affected (0.02 sec)

mysql> select * from tbl_employee;
Empty set (0.00 sec)

mysql> rollback;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | Magesh |    2000 |
|  102 | Domnic |    2000 |
|  103 | NULL   |    2000 |
|  104 | Shiva  |    2000 |
+------+--------+---------+
4 rows in set (0.00 sec)

mysql> select * from tbl_employee order by eid;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  102 | Domnic |    2000 |
|  103 | NULL   |    2000 |
|  104 | Shiva  |    2000 |
+------+--------+---------+
3 rows in set (0.00 sec)
```

```
mysql> select * from tbl_employee order by eid desc;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  104 | Shiva  |    2000 |
|  103 | NULL   |    2000 |
|  102 | Domnic |    2000 |
+------+--------+---------+
3 rows in set (0.00 sec)

mysql> update tbl_employee set esalary = 10000 where eid=104;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  102 | Domnic |    2000 |
|  103 | NULL   |    2000 |
|  104 | Shiva  |   10000 |
+------+--------+---------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee order by eid desc where
esalary=2000;
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 'where esalary=2000' at line 1

mysql> select * from tbl_employee where esalary=2000 order by eid
desc;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  103 | NULL   |    2000 |
|  102 | Domnic |    2000 |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename <=> null;
+------+-------+---------+
| eid  | ename | esalary |
+------+-------+---------+
```

```
|  103 | NULL  |    2000 |
+------+-------+---------+
1 row in set (0.00 sec)
```

mysql> select eid,ename from tbl_employee;
```
+------+--------+
| eid  | ename  |
+------+--------+
|  101 | Magesh |
|  102 | Domnic |
|  103 | NULL   |
|  104 | Shiva  |
+------+--------+
4 rows in set (0.00 sec)
```

mysql> select eid as "Employee id",ename "Employee Name" from tbl_employee;
```
+-------------+---------------+
| Employee id | Employee Name |
+-------------+---------------+
|         101 | Magesh        |
|         102 | Domnic        |
|         103 | NULL          |
|         104 | Shiva         |
+-------------+---------------+
4 rows in set (0.00 sec)
```

mysql> select now();
```
+---------------------+
| now()               |
+---------------------+
| 2023-10-03 09:53:54 |
+---------------------+
1 row in set (0.00 sec)
```

mysql> alter table tbl_employee add edno int(3);
```
Query OK, 0 rows affected, 1 warning (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 1
```

mysql> select * from tbl_employee;
```
+------+--------+---------+------+
| eid  | ename  | esalary | edno |
+------+--------+---------+------+
```

```
|  101 | Magesh |    2000 | NULL |
|  102 | Domnic |    2000 | NULL |
|  103 | NULL   |    2000 | NULL |
|  104 | Shiva  |    2000 | NULL |
+------+--------+---------+------+
4 rows in set (0.00 sec)
```

mysql> update tbl_employee set edno=10 where eid in(101,102);
```
Query OK, 2 rows affected (0.00 sec)
Rows matched: 2  Changed: 2  Warnings: 0
```

mysql> update tbl_employee set edno=20 where eid in(103);
```
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

mysql> update tbl_employee set edno=30 where eid in(104);
```
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

mysql> select * from tbl_employee;
```
+------+--------+---------+------+
| eid  | ename  | esalary | edno |
+------+--------+---------+------+
|  101 | Magesh |    2000 |   10 |
|  102 | Domnic |    2000 |   10 |
|  103 | NULL   |    2000 |   20 |
|  104 | Shiva  |    2000 |   30 |
+------+--------+---------+------+
4 rows in set (0.00 sec)
```

mysql> update tbl_employee set edno=20 where eid in(104);
```
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

mysql> select * from tbl_employee;
```
+------+--------+---------+------+
| eid  | ename  | esalary | edno |
+------+--------+---------+------+
|  101 | Magesh |    2000 |   10 |
|  102 | Domnic |    2000 |   10 |
|  103 | NULL   |    2000 |   20 |
|  104 | Shiva  |    2000 |   20 |
+------+--------+---------+------+
4 rows in set (0.00 sec)
```

```
mysql> create table tbl_dept (dno int(3),dname varchar(20));
Query OK, 0 rows affected, 1 warning (0.02 sec)

mysql> select * from tbl_dept;
Empty set (0.00 sec)

mysql> insert into tbl_dept value (10,"LD");
Query OK, 1 row affected (0.01 sec)

mysql> insert into tbl_dept value (20,"Project");
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_dept;
+------+---------+
| dno  | dname   |
+------+---------+
|   10 | LD      |
|   20 | Project |
+------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where edno = (select dno from
tbl_dept where dname= "LD");    => Subquery
+------+--------+---------+------+
| eid  | ename  | esalary | edno |
+------+--------+---------+------+
|  101 | Magesh |    2000 |   10 |        => Single Row/Value Sub
Query
|  102 | Domnic |    2000 |   10 |
+------+--------+---------+------+
2 rows in set (0.00 sec)


mysql> select dname from tbl_dept where dno=20;
+---------+
| dname   |
+---------+
| Project |
+---------+
1 row in set (0.00 sec)

mysql> select *  from tbl_dept where dno= (select edno from
tbl_employee where ename="Shiva");    => Subquery
+------+---------+
| dno  | dname   |
```

```
+------+---------+
|   20 | Project |
+------+---------+
1 row in set (0.00 sec)
```

mysql> select dname from tbl_dept where dno= (select edno from tbl_employee where ename="Shiva");   => Subquery

```
+---------+
| dname   |
+---------+
| Project |
+---------+
1 row in set (0.00 sec)
```

mysql> select *from tbl_employee;

```
+------+--------+---------+------+
| eid  | ename  | esalary | edno |
+------+--------+---------+------+
|  101 | Magesh |    2000 |   10 |
|  102 | Domnic |    2000 |   10 |
|  103 | NULL   |    2000 |   20 |
|  104 | Shiva  |    2000 |   20 |
+------+--------+---------+------+
4 rows in set (0.00 sec)
```

mysql> select dname from tbl_dept where dno=(select edno from tbl_employee where ename IS NULL);   => Subquery

```
+---------+
| dname   |
+---------+
| Project |
+---------+
1 row in set (0.00 sec)
```

mysql> update tbl_employee set esalary=esalary + 200 where edno=(select dno from tbl_dept where dname="LD"); => Subquery
```
Query OK, 2 rows affected (0.01 sec)
Rows matched: 2  Changed: 2  Warnings: 0
```

mysql> select *from tbl_employee;

```
+------+--------+---------+------+
| eid  | ename  | esalary | edno |
+------+--------+---------+------+
|  101 | Magesh |    2200 |   10 |
|  102 | Domnic |    2200 |   10 |
```

```
|  103 | NULL   |    2000 |   20 |
|  104 | Shiva  |    2000 |   20 |
+------+--------+---------+------+
4 rows in set (0.00 sec)

mysql> select dname from tbl_dept where dno in (select edno from
tbl_employee where eid in(101,103));    => Subquery
+---------+
| dname   |
| LD      |                           => Multiple Row/Value Sub Query
| Project |
+---------+
2 rows in set (0.00 sec)

mysql> select dname from tbl_dept where dno in (select edno from
tbl_employee where eid in(101,103));    => Subquery
+---------+
| dname   |
+---------+
| LD      |
| Project |
+---------+
2 rows in set (0.00 sec)

mysql> select dname from tbl_dept where dno in (select edno from
tbl_employee where esalary > 2000);     => Subquery
+-------+
| dname |
+-------+
| LD    |
+-------+
1 row in set (0.00 sec)

mysql> create table tbl_student (rno int(5) primary key, sname
varchar(20) not null,smarks int(3) check (smarks>0), smno int(10)
unique, sage int(3) default 15 );
Query OK, 0 rows affected, 4 warnings (0.02 sec)

mysql> insert into tbl_student (rno,sname,smarks,smno) values
(101,"Guna",85,123456);
Query OK, 1 row affected (0.01 sec)

mysql> select * from tbl_student;
+-----+-------+--------+--------+------+
| rno | sname | smarks | smno   | sage |
```

```
+-----+-------+--------+--------+------+
| 101 | Guna  |     85 | 123456 |   15 |
+-----+-------+--------+--------+------+
1 row in set (0.00 sec)
```

mysql> select * from Tbl_student;
```
+-----+-------+--------+--------+------+
| rno | sname | smarks | smno   | sage |
+-----+-------+--------+--------+------+
| 101 | Guna  |     85 | 123456 |   15 |
+-----+-------+--------+--------+------+
1 row in set (0.00 sec)
```

mysql> insert into tbl_student (rno,sname,smarks,smno) values (102,"JK",95,1234);
Query OK, 1 row affected (0.00 sec)

mysql> insert into tbl_student (rno,sname,smarks,smno) values (103,"Dinesh",95,123456789);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_student;
```
+-----+--------+--------+-----------+------+
| rno | sname  | smarks | smno      | sage |
+-----+--------+--------+-----------+------+
| 101 | Guna   |     85 |    123456 |   15 |
| 102 | JK     |     95 |      1234 |   15 |
| 103 | Dinesh |     95 | 123456789 |   15 |
+-----+--------+--------+-----------+------+
3 rows in set (0.00 sec)
```

mysql> update tbl_student set smarks=93 where rno=103;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from tbl_student;
```
+-----+--------+--------+-----------+------+
| rno | sname  | smarks | smno      | sage |
+-----+--------+--------+-----------+------+
| 101 | Guna   |     85 |    123456 |   15 |
| 102 | JK     |     95 |      1234 |   15 |
| 103 | Dinesh |     93 | 123456789 |   15 |
+-----+--------+--------+-----------+------+
3 rows in set (0.00 sec)
```

```
mysql> drop table tbl_student;
Query OK, 0 rows affected (0.01 sec)

mysql> create table tbl_student(srno int(5) primary key
auto_increment, sname varchar(20),smarks int(3));
Query OK, 0 rows affected, 2 warnings (0.02 sec)

mysql> insert into tbl_student (sname,smarks) values ("JK",95);
Query OK, 1 row affected (0.02 sec)

mysql> select * from tbl_student;
+------+-------+--------+
| srno | sname | smarks |
+------+-------+--------+
|    1 | JK    |     95 |
+------+-------+--------+
1 row in set (0.00 sec)

mysql> insert into tbl_student values (2,"Dinesh",93);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_student;
+------+--------+--------+
| srno | sname  | smarks |
+------+--------+--------+
|    1 | JK     |     95 |
|    2 | Dinesh |     93 |
+------+--------+--------+
2 rows in set (0.00 sec)

mysql> insert into tbl_student (sname,smarks) values ("Saravanan",98);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_student;
+------+-----------+--------+
| srno | sname     | smarks |
+------+-----------+--------+
|    1 | JK        |     95 |
|    2 | Dinesh    |     93 |
|    3 | Saravanan |     98 |
+------+-----------+--------+
3 rows in set (0.00 sec)

mysql> desc tbl_student;
```

```
+--------+-------------+------+-----+---------+----------------+
| Field  | Type        | Null | Key | Default | Extra          |
+--------+-------------+------+-----+---------+----------------+
| srno   | int         | NO   | PRI | NULL    | auto_increment |
| sname  | varchar(20) | YES  |     | NULL    |                |
| smarks | int         | YES  |     | NULL    |                |
+--------+-------------+------+-----+---------+----------------+
3 rows in set (0.00 sec)

mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| countries      |
| dup_countries  |
| job_history    |
| jobs           |
| tbl_dept       |
| tbl_employee   |
| tbl_student    |
+----------------+
7 rows in set (0.00 sec)

mysql> drop table tbl_employee;
Query OK, 0 rows affected (0.01 sec)

mysql> drop table tbl_dept;
Query OK, 0 rows affected (0.01 sec)

mysql> show tables;
+----------------+
| Tables_in_mydb |
+----------------+
| countries      |
| dup_countries  |
| job_history    |
| jobs           |
| tbl_student    |
+----------------+
5 rows in set (0.00 sec)

mysql> create table tbl_dept (dno int primary key,dname varchar(20));
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> create table tbl_employee (eid int primary key,ename
varchar(20),esalary int,dno int, foreign key (dno) references
tbl_dept(dno));
Query OK, 0 rows affected (0.04 sec)

mysql> desc tbl_dept;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| dno   | int         | NO   | PRI | NULL    |       |
| dname | varchar(20) | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | NO   | PRI | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| dno     | int         | YES  | MUL | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> insert into tbl_dept values (10,"LD");
Query OK, 1 row affected (0.01 sec)

mysql> insert into tbl_employee values (101,"Domnic",4000,10);
Query OK, 1 row affected (0.01 sec)

                        (Day-4) (Group By)
mysql> select * from tbl_employee;
+-----+--------+---------+------+
| eid | ename  | esalary | dno  |
+-----+--------+---------+------+
| 101 | Domnic |    4000 |   10 |
+-----+--------+---------+------+
1 row in set (0.00 sec)

mysql> create table tbl_employee1 as select * from tbl_employee;
Query OK, 1 row affected (0.02 sec)
Records: 1  Duplicates: 0  Warnings: 0

mysql> select * from tbl_employee1;
```

```
+-----+--------+---------+------+
| eid | ename  | esalary | dno  |
+-----+--------+---------+------+
| 101 | Domnic |    4000 |   10 |
+-----+--------+---------+------+
1 row in set (0.00 sec)

mysql> create table tbl_employee2 as select * from tbl_employee where
1=2;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee2;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | NO   |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| dno     | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> select * from tbl_employee2;
Empty set (0.00 sec)

mysql> insert into tbl_employee1 values (102,"Madhan",3000,20);
Query OK, 1 row affected (0.01 sec)

mysql> insert into tbl_employee1 values (103,"Aravind",4000,20);
Query OK, 1 row affected (0.02 sec)

mysql> select * from tbl_employee1;
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |   10 |
| 102 | Madhan  |    3000 |   20 |
| 103 | Aravind |    4000 |   20 |
+-----+---------+---------+------+
3 rows in set (0.00 sec)

mysql> insert into tbl_employee1 values (104,"Shiva",4500,10);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into tbl_employee1 values (105,"Mahesh",4800,20);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_employee1;
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |   10 |
| 102 | Madhan  |    3000 |   20 |
| 103 | Aravind |    4000 |   20 |
| 104 | Shiva   |    4500 |   10 |
| 105 | Mahesh  |    4800 |   20 |
+-----+---------+---------+------+
5 rows in set (0.00 sec)

mysql> select count(*) from tbl_employee1;    => Count function
+----------+
| count(*) |
+----------+
|        5 |
+----------+
1 row in set (0.00 sec)

mysql> select count(*) from tbl_employee1 group by dno;
+----------+
| count(*) |
+----------+
|        2 |
|        3 |
+----------+
2 rows in set (0.00 sec)

mysql> select dno,count(*) from tbl_employee1 group by dno;
+------+----------+
| dno  | count(*) |
+------+----------+
|   10 |        2 |
|   20 |        3 |
+------+----------+
2 rows in set (0.00 sec)

mysql> select dno as "Department No",count(*) as "No of Employees"
from tbl_employee1 group by dno;
+---------------+-----------------+
| Department No | No of Employees |
```

```
+--------------+----------------+
|           10 |              2 |
|           20 |              3 |
+--------------+----------------+
2 rows in set (0.00 sec)

mysql> select dno as "Department No",count(*) as "No of Employees"
from tbl_employee1 group by dno order by dno desc;
+--------------+----------------+
| Department No | No of Employees |
+--------------+----------------+
|           20 |              3 |
|           10 |              2 |
+--------------+----------------+
2 rows in set (0.00 sec)

mysql> select dno,sum(esalary) from tbl_employee1 group by dno;
+------+--------------+
| dno  | sum(esalary) |
+------+--------------+
|   10 |         8500 |
|   20 |        11800 |
+------+--------------+
2 rows in set (0.00 sec)

mysql> select dno as "Department No",sum(esalary) as "Sum of Employee
Salary" from tbl_employee1 group by dno;   => Sum function
+--------------+-----------------------+
| Department No | Sum of Employee Salary |
+--------------+-----------------------+
|           10 |                  8500 |
|           20 |                 11800 |
+--------------+-----------------------+
2 rows in set (0.00 sec)

mysql> select dno as "Department No",avg(esalary) as "Average of
Employee Salary" from tbl_employee1 group by dno;  => Avg Function
+--------------+---------------------------+
| Department No | Average of Employee Salary |
+--------------+---------------------------+
|           10 |                 4250.0000 |
|           20 |                 3933.3333 |
+--------------+---------------------------+
2 rows in set (0.00 sec)
```

```
mysql> select min(esalary) as "Minimum Salary" from tbl_employee1;
+----------------+
| Minimum Salary |          => Min Function
+----------------+
|           3000 |
+----------------+
1 row in set (0.00 sec)

mysql> select min(esalary) as "Minimum Salary" from tbl_employee1
group by dno;                    => Min Function
+----------------+
| Minimum Salary |
+----------------+
|           4000 |
|           3000 |
+----------------+
2 rows in set (0.00 sec)

mysql> select dno as "Dept Wise",min(esalary) as "Minimum Salary" from
tbl_employee1 group by dno;      => Min Function
+-----------+----------------+
| Dept Wise | Minimum Salary |
+-----------+----------------+
|        10 |           4000 |
|        20 |           3000 |
+-----------+----------------+
2 rows in set (0.00 sec)

mysql> select dno as "Dept Wise",max(esalary) as "Maximum Salary" from
tbl_employee1 group by dno;        => Max Function
+-----------+----------------+
| Dept Wise | Maximum Salary |
+-----------+----------------+
|        10 |           4500 |
|        20 |           4800 |
+-----------+----------------+
2 rows in set (0.00 sec)

mysql> select max(esalary) as "Maximum Salary" from tbl_employee1;
+----------------+
| Maximum Salary |
+----------------+
|           4800 |
+----------------+
1 row in set (0.00 sec)
```

```
mysql> select dno as "Dept Wise",max(esalary) as "Maximum Salary" from
tbl_employee1 group by dno,ename;
+-----------+----------------+
| Dept Wise | Maximum Salary |
+-----------+----------------+
|        10 |           4000 |
|        20 |           3000 |
|        20 |           4000 |
|        10 |           4500 |
|        20 |           4800 |
+-----------+----------------+
5 rows in set (0.00 sec)

mysql> select dno as "Dept Wise",ename as "Employee Name",max(esalary)
as "Maximum Salary" from tbl_employee1 group by dno,ename;
+-----------+---------------+----------------+
| Dept Wise | Employee Name | Maximum Salary |
+-----------+---------------+----------------+
|        10 | Domnic        |           4000 |
|        20 | Madhan        |           3000 |
|        20 | Aravind       |           4000 |
|        10 | Shiva         |           4500 |
|        20 | Mahesh        |           4800 |
+-----------+---------------+----------------+
5 rows in set (0.00 sec)

mysql> select reverse(ename) from tbl_employee1;  => reverse function
+----------------+
| reverse(ename) |
+----------------+
| cinmoD         |
| nahdaM         |
| dnivarA        |
| avihS          |
| hsehaM         |
+----------------+
5 rows in set (0.00 sec)

mysql> select eid, reverse(ename) from tbl_employee1;
+-----+----------------+
| eid | reverse(ename) |          => reverse function
+-----+----------------+
| 101 | cinmoD         |
| 102 | nahdaM         |
```

```
| 103 | dnivarA       |
| 104 | avihS         |
| 105 | hsehaM        |
+-----+---------------+
5 rows in set (0.00 sec)
```

mysql> select eid, upper(ename) from tbl_employee1;
```
+-----+--------------+
| eid | upper(ename) |
+-----+--------------+                => upper function
| 101 | DOMNIC       |
| 102 | MADHAN       |
| 103 | ARAVIND      |
| 104 | SHIVA        |
| 105 | MAHESH       |
+-----+--------------+
5 rows in set (0.00 sec)
```

mysql> select eid, length(ename) from tbl_employee1;
```
+-----+---------------+
| eid | length(ename) |
+-----+---------------+          => length function
| 101 |             6 |
| 102 |             6 |
| 103 |             7 |
| 104 |             5 |
| 105 |             6 |
+-----+---------------+
5 rows in set (0.00 sec)
```

mysql> select max(esalary) from tbl_employee1;
```
+--------------+
| max(esalary) |
+--------------+
|         4800 |
+--------------+
1 row in set (0.00 sec)
```

mysql> select dno,max(esalary) from tbl_employee1 group by dno;
```
+------+--------------+
| dno  | max(esalary) |
+------+--------------+
|   10 |         4500 |
|   20 |         4800 |
+------+--------------+
```

2 rows in set (0.00 sec)

mysql> select eid,dno,max(esalary) from tbl_employee1 group by dno,eid;

```
+-----+------+--------------+
| eid | dno  | max(esalary) |
+-----+------+--------------+
| 101 |   10 |         4000 |
| 102 |   20 |         3000 |
| 103 |   20 |         4000 |
| 104 |   10 |         4500 |
| 105 |   20 |         4800 |
+-----+------+--------------+
5 rows in set (0.00 sec)
```

mysql> select eid,dno,ename,max(esalary) from tbl_employee1 group by dno,eid,ename;

```
+-----+------+---------+--------------+
| eid | dno  | ename   | max(esalary) |
+-----+------+---------+--------------+
| 101 |   10 | Domnic  |         4000 |
| 102 |   20 | Madhan  |         3000 |
| 103 |   20 | Aravind |         4000 |
| 104 |   10 | Shiva   |         4500 |
| 105 |   20 | Mahesh  |         4800 |
+-----+------+---------+--------------+
5 rows in set (0.00 sec)
```

(Day - 5) (View,Joints)

mysql> select * from tbl_employee1;

```
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |   10 |
| 102 | Madhan  |    3000 |   20 |
| 103 | Aravind |    4000 |   20 |
| 104 | Shiva   |    4500 |   10 |
| 105 | Mahesh  |    4800 |   20 |
+-----+---------+---------+------+
5 rows in set (0.00 sec)
```

mysql> select dno,count(*) from tbl_employee1 group by dno;

```
+------+----------+
| dno  | count(*) |
```

```
+------+----------+
|  10  |       2  |
|  20  |       3  |
+------+----------+
2 rows in set (0.00 sec)
```

mysql> select dno,count(*) from tbl_employee1 group by dno having
min(esalary)=3000;
```
+------+----------+
| dno  | count(*) |
+------+----------+
|  20  |       3  |
+------+----------+
1 row in set (0.00 sec)
```

mysql> select * from tbl_employee1 order by eid,esalary desc;
```
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |  10  |
| 102 | Madhan  |    3000 |  20  |
| 103 | Aravind |    4000 |  20  |
| 104 | Shiva   |    4500 |  10  |
| 105 | Mahesh  |    4800 |  20  |
+-----+---------+---------+------+
5 rows in set (0.00 sec)
```

mysql> select * from tbl_employee1 order by eid desc,esalary;
```
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 105 | Mahesh  |    4800 |  20  |
| 104 | Shiva   |    4500 |  10  |
| 103 | Aravind |    4000 |  20  |
| 102 | Madhan  |    3000 |  20  |
| 101 | Domnic  |    4000 |  10  |
+-----+---------+---------+------+
5 rows in set (0.00 sec)
```

mysql> select * from tbl_employee1 order by eid,esalary;
```
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |  10  |
| 102 | Madhan  |    3000 |  20  |
```

```
| 103 | Aravind |    4000 |   20 |
| 104 | Shiva   |    4500 |   10 |
| 105 | Mahesh  |    4800 |   20 |
+-----+---------+---------+------+
5 rows in set (0.00 sec)
```

mysql> select * from tbl_employee1 order by eid,esalary,dno desc;
```
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |   10 |
| 102 | Madhan  |    3000 |   20 |
| 103 | Aravind |    4000 |   20 |
| 104 | Shiva   |    4500 |   10 |
| 105 | Mahesh  |    4800 |   20 |
+-----+---------+---------+------+
5 rows in set (0.00 sec)
```

mysql> select dno,count(*) from tbl_employee1 group by dno having min(esalary)=3000 order by dno desc;
```
+------+----------+
| dno  | count(*) |
+------+----------+
|   20 |        3 |
+------+----------+
1 row in set (0.00 sec)
```

mysql> select dno,eid from tbl_employee1 group by dno,eid;
```
+------+-----+
| dno  | eid |
+------+-----+
|   10 | 101 |
|   20 | 102 |
|   20 | 103 |
|   10 | 104 |
|   20 | 105 |
+------+-----+
5 rows in set (0.00 sec)
```

mysql> select dno,eid from tbl_employee1 group by dno,eid order by dno;
```
+------+-----+
| dno  | eid |
+------+-----+
|   10 | 101 |
```

```
|   10 | 104 |
|   20 | 102 |
|   20 | 103 |
|   20 | 105 |
+------+-----+
5 rows in set (0.00 sec)
```

mysql> select dno,eid from tbl_employee1 group by dno,eid order by dno,eid;
```
+------+-----+
| dno  | eid |
+------+-----+
|   10 | 101 |
|   10 | 104 |
|   20 | 102 |
|   20 | 103 |
|   20 | 105 |
+------+-----+
5 rows in set (0.00 sec)
```

mysql> select dno,eid from tbl_employee1 group by dno,eid order by dno desc,eid;
```
+------+-----+
| dno  | eid |
+------+-----+
|   20 | 102 |
|   20 | 103 |
|   20 | 105 |
|   10 | 101 |
|   10 | 104 |
+------+-----+
5 rows in set (0.00 sec)
```

mysql> select dno,eid from tbl_employee1 group by dno,eid order by eid,dno;
```
+------+-----+
| dno  | eid |
+------+-----+
|   10 | 101 |
|   20 | 102 |
|   20 | 103 |
|   10 | 104 |
|   20 | 105 |
+------+-----+
5 rows in set (0.00 sec)
```

```
mysql> create view MyView as select * from tbl_employee1 where dno=10;
Query OK, 0 rows affected (0.01 sec)

mysql> select * from MyView;
+-----+--------+---------+------+
| eid | ename  | esalary | dno  |            => View
+-----+--------+---------+------+
| 101 | Domnic |    4000 |   10 |
| 104 | Shiva  |    4500 |   10 |
+-----+--------+---------+------+
2 rows in set (0.00 sec)

mysql> create view MyView2 as select * from tbl_employee1 where
dno=20;
Query OK, 0 rows affected (0.01 sec)

mysql> select * from MyView2;
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 102 | Madhan  |    3000 |   20 |
| 103 | Aravind |    4000 |   20 |
| 105 | Mahesh  |    4800 |   20 |
+-----+---------+---------+------+
3 rows in set (0.00 sec)

mysql> insert into MyView (eid,ename,esalary,dno) values
(106,"Naga",3500,10);
Query OK, 1 row affected (0.00 sec)

mysql> select * from MyView;
+-----+--------+---------+------+
| eid | ename  | esalary | dno  |
+-----+--------+---------+------+
| 101 | Domnic |    4000 |   10 |
| 104 | Shiva  |    4500 |   10 |
| 106 | Naga   |    3500 |   10 |
+-----+--------+---------+------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee1;
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
```

```
| 101 | Domnic  |    4000 |   10 |
| 102 | Madhan  |    3000 |   20 |
| 103 | Aravind |    4000 |   20 |
| 104 | Shiva   |    4500 |   10 |
| 105 | Mahesh  |    4800 |   20 |
| 106 | Naga    |    3500 |   10 |
+-----+---------+---------+------+
6 rows in set (0.00 sec)
```

mysql> select * from tbl_employee1 order by esalary;
```
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 102 | Madhan  |    3000 |   20 |
| 106 | Naga    |    3500 |   10 |
| 101 | Domnic  |    4000 |   10 |
| 103 | Aravind |    4000 |   20 |
| 104 | Shiva   |    4500 |   10 |
| 105 | Mahesh  |    4800 |   20 |
+-----+---------+---------+------+
6 rows in set (0.00 sec)
```

mysql> update tbl_employee set esalary=3700 where eid=106;
```
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0  Changed: 0  Warnings: 0
```

mysql> select * from tbl_employee1;
```
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |   10 |
| 102 | Madhan  |    3000 |   20 |
| 103 | Aravind |    4000 |   20 |
| 104 | Shiva   |    4500 |   10 |
| 105 | Mahesh  |    4800 |   20 |
| 106 | Naga    |    3500 |   10 |
+-----+---------+---------+------+
6 rows in set (0.00 sec)
```

mysql> update tbl_employee1 set esalary=3700 where eid=106;
```
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

mysql> select * from tbl_employee1;
```
+-----+---------+---------+------+
```

```
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |   10 |
| 102 | Madhan  |    3000 |   20 |
| 103 | Aravind |    4000 |   20 |
| 104 | Shiva   |    4500 |   10 |
| 105 | Mahesh  |    4800 |   20 |
| 106 | Naga    |    3700 |   10 |
+-----+---------+---------+------+
6 rows in set (0.00 sec)
```

mysql> select * from MyView;
```
+-----+---------+---------+------+
| eid | ename   | esalary | dno  |
+-----+---------+---------+------+
| 101 | Domnic  |    4000 |   10 |
| 104 | Shiva   |    4500 |   10 |
| 106 | Naga    |    3700 |   10 |
+-----+---------+---------+------+
3 rows in set (0.00 sec)
```

mysql> create table agents(Agent_Code varchar(10) primary key,Agent_Name varchar(20),Working_Area varchar(20));
```
Query OK, 0 rows affected (0.02 sec)       => Joins
```

mysql> insert into agents values ("A101","agent1","chennai");
```
Query OK, 1 row affected (0.01 sec)
```

mysql> insert into agents values ("A102","agent2","chennai");
```
Query OK, 1 row affected (0.00 sec)
```

mysql> insert into agents values ("A103","agent3","Bangalore");
```
Query OK, 1 row affected (0.00 sec)
```

mysql> insert into agents values ("A104","agent4","Bangalore");
```
Query OK, 1 row affected (0.00 sec)
```

mysql> select * from agents;
```
+------------+------------+--------------+
| Agent_Code | Agent_Name | Working_Area |
+------------+------------+--------------+
| A101       | agent1     | chennai      |
| A102       | agent2     | chennai      |
| A103       | agent3     | Bangalore    |
| A104       | agent4     | Bangalore    |
```

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

mysql> create table customers(Customer_Code varchar(10),Customer_Name
varchar(20),Customer_Area varchar(20));
Query OK, 0 rows affected (0.02 sec)

mysql> insert into customers values ("C101","customer1","chennai");
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values ("C102","customer2","chennai");
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values ("C103","customer3","chennai");
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values ("C104","customer4","Bangalore");
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values ("C105","customer5","Bangalore");
Query OK, 1 row affected (0.00 sec)

mysql> select * from customers;
+---------------+---------------+---------------+
| Customer_Code | Customer_Name | Customer_Area |
+---------------+---------------+---------------+
| C101          | customer1     | chennai       |
| C102          | customer2     | chennai       |
| C103          | customer3     | chennai       |
| C104          | customer4     | Bangalore     |
| C105          | customer5     | Bangalore     |
+---------------+---------------+---------------+
5 rows in set (0.00 sec)

mysql> select
agents.Agent_Code,agents.Agent_Name,customers.Customer_Name from
agents,customers where agents.Working_Area=customers.Customer_Area;
+------------+------------+---------------+
| Agent_Code | Agent_Name | Customer_Name |
+------------+------------+---------------+
| A102       | agent2     | customer1     |
| A101       | agent1     | customer1     |
| A102       | agent2     | customer2     |
| A101       | agent1     | customer2     |
| A102       | agent2     | customer3     |
```

```
| A101        | agent1      | customer3      |
| A104        | agent4      | customer4      |
| A103        | agent3      | customer4      |
| A104        | agent4      | customer5      |
| A103        | agent3      | customer5      |
+-----------+-----------+--------------+
10 rows in set (0.00 sec)
```

mysql> **select a.Agent_Code,a.Agent_Name,c.Customer_Name from agents a**
,customers c where a.Working_Area=c.Customer_Area;

```
+-----------+-----------+--------------+
| Agent_Code | Agent_Name | Customer_Name |
+-----------+-----------+--------------+
| A102        | agent2      | customer1      |
| A101        | agent1      | customer1      |
| A102        | agent2      | customer2      |
| A101        | agent1      | customer2      |
| A102        | agent2      | customer3      |
| A101        | agent1      | customer3      |
| A104        | agent4      | customer4      |
| A103        | agent3      | customer4      |
| A104        | agent4      | customer5      |
| A103        | agent3      | customer5      |
+-----------+-----------+--------------+
10 rows in set (0.00 sec)
```

mysql> **select**
agents.Agent_Code,agents.Agent_Name,customers.Customer_Name from
agents join customers on agents.Working_Area=customers.Customer_Area;

```
+-----------+-----------+--------------+
| Agent_Code | Agent_Name | Customer_Name |
+-----------+-----------+--------------+
| A102        | agent2      | customer1      |
| A101        | agent1      | customer1      |
| A102        | agent2      | customer2      |
| A101        | agent1      | customer2      |
| A102        | agent2      | customer3      |
| A101        | agent1      | customer3      |
| A104        | agent4      | customer4      |
| A103        | agent3      | customer4      |
| A104        | agent4      | customer5      |
| A103        | agent3      | customer5      |
+-----------+-----------+--------------+
10 rows in set (0.00 sec)
```

```
mysql> select a.Agent_Code,a.Agent_Name,c.Customer_Name from agents a
join customers c on a.Working_Area=c.Customer_Area;
+------------+------------+---------------+
| Agent_Code | Agent_Name | Customer_Name |
+------------+------------+---------------+
| A102       | agent2     | customer1     |
| A101       | agent1     | customer1     |
| A102       | agent2     | customer2     |
| A101       | agent1     | customer2     |
| A102       | agent2     | customer3     |
| A101       | agent1     | customer3     |
| A104       | agent4     | customer4     |
| A103       | agent3     | customer4     |
| A104       | agent4     | customer5     |
| A103       | agent3     | customer5     |
+------------+------------+---------------+
10 rows in set (0.00 sec)

mysql> select a.Agent_Code,a.Agent_Name,c.Customer_Name from agents a
inner join customers c on a.Working_Area=c.Customer_Area;
+------------+------------+---------------+
| Agent_Code | Agent_Name | Customer_Name |
+------------+------------+---------------+
| A102       | agent2     | customer1     |
| A101       | agent1     | customer1     |
| A102       | agent2     | customer2     |
| A101       | agent1     | customer2     |
| A102       | agent2     | customer3     |
| A101       | agent1     | customer3     |
| A104       | agent4     | customer4     |
| A103       | agent3     | customer4     |
| A104       | agent4     | customer5     |
| A103       | agent3     | customer5     |
+------------+------------+---------------+
10 rows in set (0.00 sec)

mysql> select a.Agent_Code,a.Agent_Name,c.Customer_Name from agents a
inner join customers c on a.Working_Area!=c.Customer_Area;
+------------+------------+---------------+
| Agent_Code | Agent_Name | Customer_Name |
+------------+------------+---------------+
| A104       | agent4     | customer1     |
| A103       | agent3     | customer1     |
| A104       | agent4     | customer2     |
| A103       | agent3     | customer2     |
```

```
| A104       | agent4     | customer3     |
| A103       | agent3     | customer3     |
| A102       | agent2     | customer4     |
| A101       | agent1     | customer4     |
| A102       | agent2     | customer5     |
| A101       | agent1     | customer5     |
+-----------+-----------+--------------+
10 rows in set (0.00 sec)
```

mysql> select a.Agent_Code,a.Agent_Name,c.Customer_Name from agents a left outer join customers c on a.Working_Area=c.Customer_Area;

```
+-----------+-----------+--------------+
| Agent_Code | Agent_Name | Customer_Name |
+-----------+-----------+--------------+
| A101       | agent1     | customer3     |
| A101       | agent1     | customer2     |
| A101       | agent1     | customer1     |
| A102       | agent2     | customer3     |
| A102       | agent2     | customer2     |
| A102       | agent2     | customer1     |
| A103       | agent3     | customer5     |
| A103       | agent3     | customer4     |
| A104       | agent4     | customer5     |
| A104       | agent4     | customer4     |
| A105       | agent5     | NULL          |
+-----------+-----------+--------------+
11 rows in set (0.00 sec)
```

mysql> select * from agents a left outer join customers c on a.Working_Area=c.Customer_Area;

```
+-----------+-----------+-------------+--------------+----------
----+--------------+
| Agent_Code | Agent_Name | Working_Area | Customer_Code |
Customer_Name | Customer_Area |
+-----------+-----------+-------------+--------------+----------
----+--------------+
| A101       | agent1     | chennai      | C103          | customer3
| chennai      |
| A101       | agent1     | chennai      | C102          | customer2
| chennai      |
| A101       | agent1     | chennai      | C101          | customer1
| chennai      |
| A102       | agent2     | chennai      | C103          | customer3
| chennai      |
```

```
| A102        | agent2      | chennai      | C102          | customer2
| chennai      |
| A102        | agent2      | chennai      | C101          | customer1
| chennai      |
| A103        | agent3      | Bangalore    | C105          | customer5
| Bangalore    |
| A103        | agent3      | Bangalore    | C104          | customer4
| Bangalore    |
| A104        | agent4      | Bangalore    | C105          | customer5
| Bangalore    |
| A104        | agent4      | Bangalore    | C104          | customer4
| Bangalore    |
| A105        | agent5      | Coimbatore   | NULL          | NULL
| NULL         |
+-----------+-----------+-------------+--------------+-----------
----+--------------+
11 rows in set (0.00 sec)
```

mysql> select * from agents a right outer join customers c on a.Working_Area=c.Customer_Area;

```
+-----------+-----------+-------------+--------------+-----------
----+--------------+
| Agent_Code | Agent_Name | Working_Area | Customer_Code |
Customer_Name | Customer_Area |
+-----------+-----------+-------------+--------------+-----------
----+--------------+
| A102        | agent2      | chennai      | C101          | customer1
| chennai      |
| A101        | agent1      | chennai      | C101          | customer1
| chennai      |
| A102        | agent2      | chennai      | C102          | customer2
| chennai      |
| A101        | agent1      | chennai      | C102          | customer2
| chennai      |
| A102        | agent2      | chennai      | C103          | customer3
| chennai      |
| A101        | agent1      | chennai      | C103          | customer3
| chennai      |
| A104        | agent4      | Bangalore    | C104          | customer4
| Bangalore    |
| A103        | agent3      | Bangalore    | C104          | customer4
| Bangalore    |
| A104        | agent4      | Bangalore    | C105          | customer5
| Bangalore    |
```

| A103 | agent3 | Bangalore | C105 | customer5
| Bangalore |
| NULL | NULL | NULL | C106 | customer6
| Dindugul |
+-----------+-----------+------------+-------------+----------
----+--------------+
11 rows in set (0.00 sec)

mysql> select * from agents cross join customers;
+-----------+-----------+------------+-------------+----------
----+--------------+
| Agent_Code | Agent_Name | Working_Area | Customer_Code |
Customer_Name | Customer_Area |
+-----------+-----------+------------+-------------+----------
----+--------------+
| A105 | agent5 | Coimbatore | C101 | customer1
| chennai |
| A104 | agent4 | Bangalore | C101 | customer1
| chennai |
| A103 | agent3 | Bangalore | C101 | customer1
| chennai |
| A102 | agent2 | chennai | C101 | customer1
| chennai |
| A101 | agent1 | chennai | C101 | customer1
| chennai |
| A105 | agent5 | Coimbatore | C102 | customer2
| chennai |
| A104 | agent4 | Bangalore | C102 | customer2
| chennai |
| A103 | agent3 | Bangalore | C102 | customer2
| chennai |
| A102 | agent2 | chennai | C102 | customer2
| chennai |
| A101 | agent1 | chennai | C102 | customer2
| chennai |
| A105 | agent5 | Coimbatore | C103 | customer3
| chennai |
| A104 | agent4 | Bangalore | C103 | customer3
| chennai |
| A103 | agent3 | Bangalore | C103 | customer3
| chennai |
| A102 | agent2 | chennai | C103 | customer3
| chennai |
| A101 | agent1 | chennai | C103 | customer3
| chennai |

```
| A105       | agent5     | Coimbatore   | C104          | customer4
| Bangalore     |
| A104       | agent4     | Bangalore    | C104          | customer4
| Bangalore     |
| A103       | agent3     | Bangalore    | C104          | customer4
| Bangalore     |
| A102       | agent2     | chennai      | C104          | customer4
| Bangalore     |
| A101       | agent1     | chennai      | C104          | customer4
| Bangalore     |
| A105       | agent5     | Coimbatore   | C105          | customer5
| Bangalore     |
| A104       | agent4     | Bangalore    | C105          | customer5
| Bangalore     |
| A103       | agent3     | Bangalore    | C105          | customer5
| Bangalore     |
| A102       | agent2     | chennai      | C105          | customer5
| Bangalore     |
| A101       | agent1     | chennai      | C105          | customer5
| Bangalore     |
| A105       | agent5     | Coimbatore   | C106          | customer6
| Dindugul      |
| A104       | agent4     | Bangalore    | C106          | customer6
| Dindugul      |
| A103       | agent3     | Bangalore    | C106          | customer6
| Dindugul      |
| A102       | agent2     | chennai      | C106          | customer6
| Dindugul      |
| A101       | agent1     | chennai      | C106          | customer6
| Dindugul      |
+-----------+-----------+-------------+--------------+----------
----+--------------+
30 rows in set (0.00 sec)
```

mysql> select * from agents a left outer join customers c on a.Working_Area=c.Customer_Area union select * from agents a right outer join customers c on a.working_Area=c.Customer_Area;

```
+-----------+-----------+-------------+--------------+----------
----+--------------+
| Agent_Code | Agent_Name | Working_Area | Customer_Code |
Customer_Name | Customer_Area |
+-----------+-----------+-------------+--------------+----------
----+--------------+
| A101       | agent1     | chennai      | C103          | customer3
| chennai       |
```

A101	agent1	chennai	C102	customer2	chennai
A101	agent1	chennai	C101	customer1	chennai
A102	agent2	chennai	C103	customer3	chennai
A102	agent2	chennai	C102	customer2	chennai
A102	agent2	chennai	C101	customer1	chennai
A103	agent3	Bangalore	C105	customer5	Bangalore
A103	agent3	Bangalore	C104	customer4	Bangalore
A104	agent4	Bangalore	C105	customer5	Bangalore
A104	agent4	Bangalore	C104	customer4	Bangalore
A105	agent5	Coimbatore	NULL	NULL	NULL
NULL	NULL	NULL	C106	customer6	Dindugul

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

12 rows in set (0.00 sec)