**mysql> select \* from tbl\_employeee;**

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

| id | name | salary | dno |

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

| 101 | Swetha | 50000 | 10 |

| 103 | Avantika | 5000 | 20 |

| 104 | Janikaa | 45000 | 20 |

| 105 | Tanishka | 60000 | 10 |

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

4 rows in set (0.00 sec)

**mysql> select dno,count(\*) from tbl\_employeee group by dno;**

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

| dno | count(\*) |

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

| 10 | 2 |

| 20 | 2 |

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

2 rows in set (0.00 sec)

mysql> select dno,count(\*) from tbl\_employeee group by dno having min(salary)=3000;

Empty set (0.00 sec)

**Count of dno which has minimum salary**

**mysql> select dno,count(\*) from tbl\_employeee group by dno having min(salary)=5000;**

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

| dno | count(\*) |

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

| 20 | 2 |

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

1 row in set (0.00 sec)

**Converting into uppercase**

**mysql> select upper(name) from tbl\_employeee;**

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

| upper(name) |

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

| SWETHA |

| AVANTIKA |

| JANIKAA |

| TANISHKA |

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

**View**

* A view is a database object that has no values.
* Its contents are based on the base table.
* It contains rows and columns similar to the real table.In MySQL,the view is a virtual table created by joining one or more tables.
* It is operated similarly to the base table but does not contain any data of its own.

**Creating the view.**

**mysql> create view myview1 as select \* from tbl\_employeee where dno=10;**

Query OK, 0 rows affected (0.01 sec)

**mysql> select \* from myview1;**

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

| id | name | salary | dno |

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

| 101 | Swetha | 50000 | 10 |

| 105 | Tanishka | 60000 | 10 |

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

2 rows in set (0.00 sec)

**Updating the view can reflect in the base table.**

**mysql> update myview1 set salary=70000 where id=101;**

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

**mysql> select \* from tbl\_employeee;**

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

| id | name | salary | dno |

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

| 101 | Swetha | 70000 | 10 |

| 103 | Avantika | 5000 | 20 |

| 104 | Janikaa | 45000 | 20 |

| 105 | Tanishka | 60000 | 10 |

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

4 rows in set (0.00 sec)

**Updating in the base table can also reflects in view.**

**mysql> update tbl\_employeee set salary=null where dno=10;**

Query OK, 2 rows affected (0.01 sec)

Rows matched: 2 Changed: 2 Warnings: 0

**mysql> select \* from myview1;**

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

| id | name | salary | dno |

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

| 101 | Swetha | NULL | 10 |

| 105 | Tanishka | NULL | 10 |

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

2 rows in set (0.00 sec)

**Types of view**

1.Simple view:

Creating a view from one table

2.Complex view:

Creating a view from multiple table

**Joins**

**Two types of join**

1. Inner join (By default, it is in inner join)

Display matching records from both tables.

Two types

1.Equi join(=)

2.Non\_Equi join( other than =)

2. Outer join

1.Left outer join

2.Right outer join

3.Full outer join.(Doesn’t support in MySQL,support in oracle),cross join supported in mysql.

**Creating two tables Agents,Customers**

**Table : Agent**

**mysql> create table Agents(AGENT\_CODE varchar(5),AGENT\_NAME varchar(10),WORKING\_AGENT varchar(20));**

Query OK, 0 rows affected (0.04 sec)

mysql> desc Agents;

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

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

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

| AGENT\_CODE | varchar(5) | YES | | NULL | |

| AGENT\_NAME | varchar(10) | YES | | NULL | |

| WORKING\_AGENT | varchar(20) | YES | | NULL | |

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

3 rows in set (0.00 sec)

**Insert values into table Agent**

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 (0.01 sec)

mysql> insert into Agents values("A103","agent3","Bangalore");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Agents values("A104","agent4","Bangalore");

Query OK, 1 row affected (0.01 sec)

**mysql> select \* from Agents;**

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

| AGENT\_CODE | AGENT\_NAME | WORKING\_AGENT |

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

| A101 | agent1 | Chennai |

| A102 | agent2 | Chennai |

| A103 | agent3 | Bangalore |

| A104 | agent4 | Bangalore |

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

4 rows in set (0.00 sec)

**Create table : Customer**

**mysql> create table Customers (CUSTOMER\_CODE varchar(5),CUSTOMER\_NAME varchar(10),CUSTOMER\_AREA varchar(20));**

Query OK, 0 rows affected (0.04 sec)

mysql> desc Customers;

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

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

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

| CUSTOMER\_CODE | varchar(5) | YES | | NULL | |

| CUSTOMER\_NAME | varchar(10) | YES | | NULL | |

| CUSTOMER\_AREA | varchar(20) | YES | | NULL | |

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

3 rows in set (0.00 sec)

**Insert values into table Customer**

mysql> insert into Customers values("C101","Customer1","Chennai");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Customers values("C102","Customer2","Chennai");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Customers values("C103","Customer3","Chennai");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Customers values("C104","Customer4","Bangalore");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Customers values("C105","Customer5","Bangalore");

Query OK, 1 row affected (0.01 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> alter table Agents rename column WORKING\_AGENT to WORKING\_AREA;**

Query OK, 0 rows affected (0.01 sec)

Records: 0 Duplicates: 0 Warnings: 0

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> 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 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> insert into Agents values("A105","agent5","Mumbai");

Query OK, 1 row affected (0.01 sec)

mysql> insert into Customers values("C106","Customer6","Kolkata");

Query OK, 1 row affected (0.01 sec)

mysql> SELECT \* from Agents;

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

| AGENT\_CODE | AGENT\_NAME | WORKING\_AREA |

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

| A101 | agent1 | Chennai |

| A102 | agent2 | Chennai |

| A103 | agent3 | Bangalore |

| A104 | agent4 | Bangalore |

| A105 | agent5 | Mumbai |

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

5 rows in set (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 |

| C106 | Customer6 | Kolkata |

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

6 rows in set (0.00 sec)

**Left outer join**

**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)

**Right outer join**

**mysql> select A.Agent\_code,A.Agent\_name,C.Customer\_name from agents A right outer 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 |

| NULL | NULL | Customer6 |

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

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 | Kolkata |

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

11 rows in set (0.00 sec)

**Cross join**

mysql> select \* from Agents cross join Customers;

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

| AGENT\_CODE | AGENT\_NAME | WORKING\_AREA | CUSTOMER\_CODE | CUSTOMER\_NAME | CUSTOMER\_AREA |

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

| A105 | agent5 | Mumbai | 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 | Mumbai | 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 | Mumbai | 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 | Mumbai | 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 | Mumbai | 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 | Mumbai | C106 | Customer6 | Kolkata |

| A104 | agent4 | Bangalore | C106 | Customer6 | Kolkata |

| A103 | agent3 | Bangalore | C106 | Customer6 | Kolkata |

| A102 | agent2 | Chennai | C106 | Customer6 | Kolkata |

| A101 | agent1 | Chennai | C106 | Customer6 | Kolkata |

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

30 rows in set (0.00 sec)