//Name -Prerana Gajare Roll no-SI41 Class-SEIT

2 h) Join- natural join, join, left join, right join, self-join, joining multiple tables

SOURCE CODE :-

//To check the foreign key in each of the below tables

mysql> set foreign\_key\_checks=1;

Query OK, 0 rows affected (0.01 sec)

//To create a table name emp containing employee id and name

mysql> create table emp(eid int primary key,name varchar(10))engine=innodb;

Query OK, 0 rows affected (0.04 sec)

//To create the table name proj containing project id,employee id working on the project and project name

mysql> create table proj(pid int primary key,eid int,name varchar(10),foreign key(eid) references emp(eid)) engine=innodb;

Query OK, 0 rows affected (0.04 sec)

//To describe table emp

mysql> desc emp;

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

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

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

| eid | int | NO | PRI | NULL | |

| name | varchar(10) | YES | | NULL | |

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

2 rows in set (0.03 sec)

//To describe table proj

mysql> desc proj;

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

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

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

| pid | int | NO | PRI | NULL | |

| eid | int | YES | MUL | NULL | |

| name | varchar(10) | YES | | NULL | |

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

3 rows in set (0.00 sec)

//To insert values in emp table

mysql> insert into emp values(1,"Riya"),(2,"Kishan"),(3,"Pooja");

Query OK, 3 rows affected (0.01 sec)

Records: 3 Duplicates: 0 Warnings: 0

mysql> insert into emp values(4,"Ram");

Query OK, 1 row affected (0.01 sec)

//To insert values in proj table

mysql> insert into proj values(1,1,"erp"),(2,1,"web"),(3,2,"ml"),(4,3,"ai");

Query OK, 4 rows affected (0.01 sec)

Records: 4 Duplicates: 0 Warnings: 0

mysql> insert into proj(pid,name) values(5,"java");

Query OK, 1 row affected (0.01 sec)

//To display all the rows and coloumn of emp table

mysql> select \* from emp;

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

| eid | name |

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

| 1 | Riya |

| 2 | Kishan |

| 3 | Pooja |

| 4 | Ram |

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

4 rows in set (0.00 sec)

//To display all the rows and coloumn of proj table

mysql> select \* from proj;

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

| pid | eid | name |

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

| 1 | 1 | erp |

| 2 | 1 | web |

| 3 | 2 | ml |

| 4 | 3 | ai |

| 5 | NULL | java |

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

5 rows in set (0.00 sec)

//To display cross product of two tables(emp and proj)

mysql> select \* from emp,proj;

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

| eid | name | pid | eid | name |

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

| 4 | Ram | 1 | 1 | erp |

| 3 | Pooja | 1 | 1 | erp |

| 2 | Kishan | 1 | 1 | erp |

| 1 | Riya | 1 | 1 | erp |

| 4 | Ram | 2 | 1 | web |

| 3 | Pooja | 2 | 1 | web |

| 2 | Kishan | 2 | 1 | web |

| 1 | Riya | 2 | 1 | web |

| 4 | Ram | 3 | 2 | ml |

| 3 | Pooja | 3 | 2 | ml |

| 2 | Kishan | 3 | 2 | ml |

| 1 | Riya | 3 | 2 | ml |

| 4 | Ram | 4 | 3 | ai |

| 3 | Pooja | 4 | 3 | ai |

| 2 | Kishan | 4 | 3 | ai |

| 1 | Riya | 4 | 3 | ai |

| 4 | Ram | 5 | NULL | java |

| 3 | Pooja | 5 | NULL | java |

| 2 | Kishan | 5 | NULL | java |

| 1 | Riya | 5 | NULL | java |

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

20 rows in set (0.01 sec)

//To display data from both the table where common attribute(eid) have matching values for both the tables

mysql> select \* from emp,proj

-> where emp.eid=proj.eid;

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

| eid | name | pid | eid | name |

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

| 1 | Riya | 1 | 1 | erp |

| 1 | Riya | 2 | 1 | web |

| 2 | Kishan | 3 | 2 | ml |

| 3 | Pooja | 4 | 3 | ai |

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

4 rows in set (0.00 sec)

//To display cross product of two tables(emp and proj) using join

mysql> select \* from emp join proj;

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

| eid | name | pid | eid | name |

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

| 4 | Ram | 1 | 1 | erp |

| 3 | Pooja | 1 | 1 | erp |

| 2 | Kishan | 1 | 1 | erp |

| 1 | Riya | 1 | 1 | erp |

| 4 | Ram | 2 | 1 | web |

| 3 | Pooja | 2 | 1 | web |

| 2 | Kishan | 2 | 1 | web |

| 1 | Riya | 2 | 1 | web |

| 4 | Ram | 3 | 2 | ml |

| 3 | Pooja | 3 | 2 | ml |

| 2 | Kishan | 3 | 2 | ml |

| 1 | Riya | 3 | 2 | ml |

| 4 | Ram | 4 | 3 | ai |

| 3 | Pooja | 4 | 3 | ai |

| 2 | Kishan | 4 | 3 | ai |

| 1 | Riya | 4 | 3 | ai |

| 4 | Ram | 5 | NULL | java |

| 3 | Pooja | 5 | NULL | java |

| 2 | Kishan | 5 | NULL | java |

| 1 | Riya | 5 | NULL | java |

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

20 rows in set (0.00 sec)

//To display employee eid,name and project name after takinng cross product of two tables(emp and proj) using join

mysql> select emp.eid,emp.name,proj.name from emp join proj;

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

| eid | name | name |

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

| 4 | Ram | erp |

| 3 | Pooja | erp |

| 2 | Kishan | erp |

| 1 | Riya | erp |

| 4 | Ram | web |

| 3 | Pooja | web |

| 2 | Kishan | web |

| 1 | Riya | web |

| 4 | Ram | ml |

| 3 | Pooja | ml |

| 2 | Kishan | ml |

| 1 | Riya | ml |

| 4 | Ram | ai |

| 3 | Pooja | ai |

| 2 | Kishan | ai |

| 1 | Riya | ai |

| 4 | Ram | java |

| 3 | Pooja | java |

| 2 | Kishan | java |

| 1 | Riya | java |

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

20 rows in set (0.00 sec)

//To display all the records after takinng cross product of two tables(emp and proj) using join on the basis that they have common attribute(eid) having matching values for both the tables

mysql> select \* from emp join proj

-> on emp.eid=proj.eid;

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

| eid | name | pid | eid | name |

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

| 1 | Riya | 1 | 1 | erp |

| 1 | Riya | 2 | 1 | web |

| 2 | Kishan | 3 | 2 | ml |

| 3 | Pooja | 4 | 3 | ai |

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

4 rows in set (0.00 sec)

//To display employee eid,name and project name after takinng cross product of two tables(emp and proj) using join on the basis that they have common attribute(eid) having matching values for both the tables

mysql> select emp.eid,emp.name,proj.name from emp join proj

-> on emp.eid=proj.eid;

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

| eid | name | name |

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

| 1 | Riya | erp |

| 1 | Riya | web |

| 2 | Kishan | ml |

| 3 | Pooja | ai |

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

4 rows in set (0.00 sec)

//To display join of two tables(emp and proj) on the basis that they havecommon attribute(eid) having matching values for both the tables and where employee table eid is equal to1

mysql> select \* from emp join proj

-> on emp.eid=proj.eid

-> where emp.eid=1;

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

| eid | name | pid | eid | name |

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

| 1 | Riya | 1 | 1 | erp |

| 1 | Riya | 2 | 1 | web |

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

2 rows in set (0.00 sec)

//To display inner join/join of two tables(emp and proj) on the basis that they have common attribute(eid) having matching values for both the tables

mysql> select \* from emp inner join proj

-> on emp.eid=proj.eid;

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

| eid | name | pid | eid | name |

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

| 1 | Riya | 1 | 1 | erp |

| 1 | Riya | 2 | 1 | web |

| 2 | Kishan | 3 | 2 | ml |

| 3 | Pooja | 4 | 3 | ai |

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

4 rows in set (0.00 sec)

//To display inner join/join of two tables(emp and proj) on the basis that they have common attribute(eid) having matching values for both the tables and where employee table eid is equal to1

mysql> select \* from emp inner join proj

-> on emp.eid=proj.eid

-> where emp.eid=1;

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

| eid | name | pid | eid | name |

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

| 1 | Riya | 1 | 1 | erp |

| 1 | Riya | 2 | 1 | web |

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

2 rows in set (0.01 sec)

//To display records of employee assigned a project ,also records of employee who have not being assigned a project on the basis that they have common attribute(eid) having matching values for both the tables

mysql> select \* from emp left join proj

-> on emp.eid=proj.eid;

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

| eid | name | pid | eid | name |

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

| 1 | Riya | 1 | 1 | erp |

| 1 | Riya | 2 | 1 | web |

| 2 | Kishan | 3 | 2 | ml |

| 3 | Pooja | 4 | 3 | ai |

| 4 | Ram | NULL | NULL | NULL |

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

5 rows in set (0.00 sec)

//To display records of project assigned to a employee,also records of project who have not being assigned to a employee on the basis that they have common attribute(eid) having matching values for both the tables

mysql> select \* from proj left join emp

-> on emp.eid=proj.eid;

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

| pid | eid | name | eid | name |

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

| 1 | 1 | erp | 1 | Riya |

| 2 | 1 | web | 1 | Riya |

| 3 | 2 | ml | 2 | Kishan |

| 4 | 3 | ai | 3 | Pooja |

| 5 | NULL | java | NULL | NULL |

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

5 rows in set (0.00 sec)

//To display records of employee assigned a project ,also records of employee who have not being assigned a project using 'using' as eid is common attribute if emp and proj table

mysql> select \* from emp left outer join proj

-> using(eid);

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

| eid | name | pid | name |

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

| 1 | Riya | 1 | erp |

| 1 | Riya | 2 | web |

| 2 | Kishan | 3 | ml |

| 3 | Pooja | 4 | ai |

| 4 | Ram | NULL | NULL |

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

5 rows in set (0.00 sec)

//To display records of project assigned to a employee,also records of project who have not being assigned to a employee using 'using' as eid iscommon attribute if emp and proj table

mysql> select \* from proj left outer join emp

-> using(eid);

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

| eid | pid | name | name |

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

| 1 | 1 | erp | Riya |

| 1 | 2 | web | Riya |

| 2 | 3 | ml | Kishan |

| 3 | 4 | ai | Pooja |

| NULL | 5 | java | NULL |

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

5 rows in set (0.00 sec)

//To display records of project assigned to a employee,also records of project who have not being assigned to a employee on the basis that they have common attribute(eid) having matching values for both the tables

mysql> select \* from emp right join proj

-> on emp.eid=proj.eid;

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

| eid | name | pid | eid | name |

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

| 1 | Riya | 1 | 1 | erp |

| 1 | Riya | 2 | 1 | web |

| 2 | Kishan | 3 | 2 | ml |

| 3 | Pooja | 4 | 3 | ai |

| NULL | NULL | 5 | NULL | java |

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

5 rows in set (0.00 sec)

//To display full join between emp and proj table

mysql> select \* from emp full join proj;

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

| eid | name | pid | eid | name |

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

| 4 | Ram | 1 | 1 | erp |

| 3 | Pooja | 1 | 1 | erp |

| 2 | Kishan | 1 | 1 | erp |

| 1 | Riya | 1 | 1 | erp |

| 4 | Ram | 2 | 1 | web |

| 3 | Pooja | 2 | 1 | web |

| 2 | Kishan | 2 | 1 | web |

| 1 | Riya | 2 | 1 | web |

| 4 | Ram | 3 | 2 | ml |

| 3 | Pooja | 3 | 2 | ml |

| 2 | Kishan | 3 | 2 | ml |

| 1 | Riya | 3 | 2 | ml |

| 4 | Ram | 4 | 3 | ai |

| 3 | Pooja | 4 | 3 | ai |

| 2 | Kishan | 4 | 3 | ai |

| 1 | Riya | 4 | 3 | ai |

| 4 | Ram | 5 | NULL | java |

| 3 | Pooja | 5 | NULL | java |

| 2 | Kishan | 5 | NULL | java |

| 1 | Riya | 5 | NULL | java |

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

20 rows in set (0.00 sec)

//To display full join between emp and proj table

mysql> select \* from proj full join emp;

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

| pid | eid | name | eid | name |

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

| 1 | 1 | erp | 4 | Ram |

| 1 | 1 | erp | 3 | Pooja |

| 1 | 1 | erp | 2 | Kishan |

| 1 | 1 | erp | 1 | Riya |

| 2 | 1 | web | 4 | Ram |

| 2 | 1 | web | 3 | Pooja |

| 2 | 1 | web | 2 | Kishan |

| 2 | 1 | web | 1 | Riya |

| 3 | 2 | ml | 4 | Ram |

| 3 | 2 | ml | 3 | Pooja |

| 3 | 2 | ml | 2 | Kishan |

| 3 | 2 | ml | 1 | Riya |

| 4 | 3 | ai | 4 | Ram |

| 4 | 3 | ai | 3 | Pooja |

| 4 | 3 | ai | 2 | Kishan |

| 4 | 3 | ai | 1 | Riya |

| 5 | NULL | java | 4 | Ram |

| 5 | NULL | java | 3 | Pooja |

| 5 | NULL | java | 2 | Kishan |

| 5 | NULL | java | 1 | Riya |

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

20 rows in set (0.00 sec)

//To display all records from proj table having employee working on more than one project

mysql> select \* from proj

-> group by eid

-> having count(eid)>1;

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

| pid | eid | name |

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

| 1 | 1 | erp |

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

1 row in set (0.00 sec)

//To display eid from proj table having employee working on more than one project

mysql> select eid from proj

-> group by eid

-> having count(eid)>1;

+------+

| eid |

+------+

| 1 |

+------+

1 row in set (0.00 sec)

//To display self join of proj table

mysql> select \* from proj p1,proj p2;

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

| pid | eid | name | pid | eid | name |

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

| 5 | NULL | java | 1 | 1 | erp |

| 4 | 3 | ai | 1 | 1 | erp |

| 3 | 2 | ml | 1 | 1 | erp |

| 2 | 1 | web | 1 | 1 | erp |

| 1 | 1 | erp | 1 | 1 | erp |

| 5 | NULL | java | 2 | 1 | web |

| 4 | 3 | ai | 2 | 1 | web |

| 3 | 2 | ml | 2 | 1 | web |

| 2 | 1 | web | 2 | 1 | web |

| 1 | 1 | erp | 2 | 1 | web |

| 5 | NULL | java | 3 | 2 | ml |

| 4 | 3 | ai | 3 | 2 | ml |

| 3 | 2 | ml | 3 | 2 | ml |

| 2 | 1 | web | 3 | 2 | ml |

| 1 | 1 | erp | 3 | 2 | ml |

| 5 | NULL | java | 4 | 3 | ai |

| 4 | 3 | ai | 4 | 3 | ai |

| 3 | 2 | ml | 4 | 3 | ai |

| 2 | 1 | web | 4 | 3 | ai |

| 1 | 1 | erp | 4 | 3 | ai |

| 5 | NULL | java | 5 | NULL | java |

| 4 | 3 | ai | 5 | NULL | java |

| 3 | 2 | ml | 5 | NULL | java |

| 2 | 1 | web | 5 | NULL | java |

| 1 | 1 | erp | 5 | NULL | java |

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

25 rows in set (0.00 sec)

//To display self join of proj table where eid of p1 is equal to eid of p2 and pid of p1 is not equal to pid of p2

mysql> select \* from proj p1,proj p2

-> where p1.eid=p2.eid and p1.pid <> p2.pid;

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

| pid | eid | name | pid | eid | name |

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

| 2 | 1 | web | 1 | 1 | erp |

| 1 | 1 | erp | 2 | 1 | web |

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

2 rows in set (0.00 sec)

//To create an table name emp1 containing employee id,employee name,department id,manager id

mysql> create table emp1(id int,name varchar(10),dept\_id int ,manag\_id

int);

Query OK, 0 rows affected (0.02 sec)

//To describe table emp1

mysql> desc emp1;

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

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

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

| id | int | YES | | NULL | |

| name | varchar(10) | YES | | NULL | |

| dept\_id | int | YES | | NULL | |

| manag\_id | int | YES | | NULL | |

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

4 rows in set (0.00 sec)

//Inserting records in table emp1

mysql> insert into emp1(id,name,dept\_id) values(1,"a",4);

Query OK, 1 row affected (0.01 sec)

mysql> insert into emp1 values(2,"b",1,1),(3,"c",2,1),(4,"d",5,2);

Query OK, 3 rows affected (0.00 sec)

Records: 3 Duplicates: 0 Warnings: 0

//To display all of the records from emp1 table

mysql> select \* from emp1;

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

| id | name | dept\_id | manag\_id |

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

| 1 | a | 4 | NULL |

| 2 | b | 1 | 1 |

| 3 | c | 2 | 1 |

| 4 | d | 5 | 2 |

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

4 rows in set (0.00 sec)

//To display self join of emp1 table

mysql> select \* from emp1 e1,emp1 e2;

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

| id | name | dept\_id | manag\_id | id | name | dept\_id | manag\_id |

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

| 4 | d | 5 | 2 | 1 | a | 4 | NULL |

| 3 | c | 2 | 1 | 1 | a | 4 | NULL |

| 2 | b | 1 | 1 | 1 | a | 4 | NULL |

| 1 | a | 4 | NULL | 1 | a | 4 | NULL |

| 4 | d | 5 | 2 | 2 | b | 1 | 1 |

| 3 | c | 2 | 1 | 2 | b | 1 | 1 |

| 2 | b | 1 | 1 | 2 | b | 1 | 1 |

| 1 | a | 4 | NULL | 2 | b | 1 | 1 |

| 4 | d | 5 | 2 | 3 | c | 2 | 1 |

| 3 | c | 2 | 1 | 3 | c | 2 | 1 |

| 2 | b | 1 | 1 | 3 | c | 2 | 1 |

| 1 | a | 4 | NULL | 3 | c | 2 | 1 |

| 4 | d | 5 | 2 | 4 | d | 5 | 2 |

| 3 | c | 2 | 1 | 4 | d | 5 | 2 |

| 2 | b | 1 | 1 | 4 | d | 5 | 2 |

| 1 | a | 4 | NULL | 4 | d | 5 | 2 |

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

16 rows in set (0.00 sec)

//To display self join of emp1 table where manager id from allies table e1 of emp1 matches to id from allies table e2 of emp1

mysql> select \* from emp1 e1,emp1 e2

-> where e1.manag\_id=e2.id;

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

| id | name | dept\_id | manag\_id | id | name | dept\_id | manag\_id |

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

| 3 | c | 2 | 1 | 1 | a | 4 | NULL |

| 2 | b | 1 | 1 | 1 | a | 4 | NULL |

| 4 | d | 5 | 2 | 2 | b | 1 | 1 |

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

3 rows in set (0.00 sec)

//To display employee id,employee name, manager name from self joining of emp1 table where manager id from allies table e1 of emp1 matches to id from allies table e2 of emp1

mysql> select e1.id,e1.name,e2.name from emp1 e1,emp1 e2

-> where e1.manag\_id=e2.id;

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

| id | name | name |

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

| 3 | c | a |

| 2 | b | a |

| 4 | d | b |

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

3 rows in set (0.00 sec

//Creating table student

mysql> create table student(s\_id int primary key, fname varchar(10), lname varchar(10))engine=innodb;

Query OK, 0 rows affected (0.04 sec)

//Creating table subject

mysql> create table subject(sub\_id int primary key,sub\_name varchar(10))engine=innodb;

Query OK, 0 rows affected (0.04 sec)

//Creating table teacher

mysql> create table teacher(t\_id int primary key,t\_name varchar(10))engine=innodb;

Query OK, 0 rows affected (0.04 sec)

//Creating table sd\_base

mysql> create table sd\_base (s\_id int,sub\_id int,t\_id int,marks int,foreign key(s\_id) references student(s\_id),foreign key(sub\_id) references subject(sub\_id),foreign key(t\_id) references teacher(t\_id))engine=innodb;

Query OK, 0 rows affected (0.06 sec)

//Inserting records into student table

mysql> insert into student values(1,"Pooja","Sharma"),(2,"Tarak","Mehta"),(3,"Survir","Suri");

Query OK, 3 rows affected (0.06 sec)

Records: 3 Duplicates: 0 Warnings: 0

//Inserting records into subject table

mysql> insert into subject values(11,"OOP"),(12,"DSA"),(13,"DBMS");

Query OK, 3 rows affected (0.01 sec)

Records: 3 Duplicates: 0 Warnings: 0

//Inserting records into teacher table

mysql> insert into teacher values(1001,"Sarika"),(1002,"Raj"),(1003,"Anjali");

Query OK, 3 rows affected (0.01 sec)

Records: 3 Duplicates: 0 Warnings: 0

//Inserting records into sd\_base table

mysql> insert into sd\_base values(1,11,1001,94),(2,12,1002,75),(3,13,1003,84);

Query OK, 3 rows affected (0.01 sec)

Records: 3 Duplicates: 0 Warnings: 0

//Display all records from student table

mysql> select \* from student;

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

| s\_id | fname | lname |

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

| 1 | Pooja | Sharma |

| 2 | Tarak | Mehta |

| 3 | Survir | Suri |

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

3 rows in set (0.02 sec)

//Display all records from subject table

mysql> select \* from subject;

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

| sub\_id | sub\_name |

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

| 11 | OOP |

| 12 | DSA |

| 13 | DBMS |

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

3 rows in set (0.00 sec)

//Display all records from teacher table

mysql> select \* from teacher;

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

| t\_id | t\_name |

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

| 1001 | Sarika |

| 1002 | Raj |

| 1003 | Anjali |

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

3 rows in set (0.00 sec)

//Display all records from sd\_base table

mysql> select \* from sd\_base;

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

| s\_id | sub\_id | t\_id | marks |

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

| 1 | 11 | 1001 | 94 |

| 2 | 12 | 1002 | 75 |

| 3 | 13 | 1003 | 84 |

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

3 rows in set (0.00 sec)

//Joining two tables sd\_base and student

mysql> select \* from sd\_base join student;

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

| s\_id | sub\_id | t\_id | marks | s\_id | fname | lname |

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

| 3 | 13 | 1003 | 84 | 1 | Pooja | Sharma |

| 2 | 12 | 1002 | 75 | 1 | Pooja | Sharma |

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma |

| 3 | 13 | 1003 | 84 | 2 | Tarak | Mehta |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta |

| 1 | 11 | 1001 | 94 | 2 | Tarak | Mehta |

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri |

| 2 | 12 | 1002 | 75 | 3 | Survir | Suri |

| 1 | 11 | 1001 | 94 | 3 | Survir | Suri |

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

9 rows in set (0.00 sec)

//Joining two tables sd\_base and student on the basis of same s\_id in both tables

mysql> select \* from sd\_base join student

-> on sd\_base.s\_id=student.s\_id;

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

| s\_id | sub\_id | t\_id | marks | s\_id | fname | lname |

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

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta |

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri |

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

3 rows in set (0.00 sec)

//Joining two tables sd\_base and student on the basis of same s\_id in both tables and show student name ,sub\_id,t\_id,marks.

mysql> select student.fname,sub\_id,t\_id,marks from sd\_base join student

-> on sd\_base.s\_id=student.s\_id;

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

| fname | sub\_id | t\_id | marks |

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

| Pooja | 11 | 1001 | 94 |

| Tarak | 12 | 1002 | 75 |

| Survir | 13 | 1003 | 84 |

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

3 rows in set (0.00 sec)

//Joining two tables sd\_base with student on the basis of same s\_id in both tables and teacher table

mysql> select \* from sd\_base join student on sd\_base.s\_id=student.s\_id

-> join teacher;

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

| s\_id | sub\_id | t\_id | marks | s\_id | fname | lname | t\_id | t\_name |

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

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri | 1001 | Sarika |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta | 1001 | Sarika |

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma | 1001 | Sarika |

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri | 1002 | Raj |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta | 1002 | Raj |

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma | 1002 | Raj |

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri | 1003 | Anjali |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta | 1003 | Anjali |

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma | 1003 | Anjali |

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

9 rows in set (0.00 sec)

//Joining two tables sd\_base with student on the basis of same s\_id in both tables ,with teacher on the basis of same t\_id in both tables and show student name ,sub\_name,t\_name,marks.

mysql> select student.fname,sub\_id,t\_name,marks from sd\_base join student on sd\_base.s\_id=student.s\_id

-> join teacher on sd\_base.t\_id=teacher.t\_id;

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

| fname | sub\_id | t\_name | marks |

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

| Pooja | 11 | Sarika | 94 |

| Tarak | 12 | Raj | 75 |

| Survir | 13 | Anjali | 84 |

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

3 rows in set (0.00 sec)

//Joining two tables sd\_base with student on the basis of same s\_id in both tables ,with teacher on the basis of same t\_id in both tables and subject table

mysql> select \* from sd\_base join student on sd\_base.s\_id=student.s\_id

-> join teacher on sd\_base.t\_id=teacher.t\_id

-> join subject;

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

| s\_id | sub\_id | t\_id | marks | s\_id | fname | lname | t\_id | t\_name | sub\_id | sub\_name |

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

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri | 1003 | Anjali | 11 | OOP |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta | 1002 | Raj | 11 | OOP |

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma | 1001 | Sarika | 11 | OOP |

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri | 1003 | Anjali | 12 | DSA |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta | 1002 | Raj | 12 | DSA |

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma | 1001 | Sarika | 12 | DSA |

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri | 1003 | Anjali | 13 | DBMS |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta | 1002 | Raj | 13 | DBMS |

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma | 1001 | Sarika | 13 | DBMS |

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

9 rows in set (0.00 sec)

//Joining two tables sd\_base with student on the basis of same s\_id in both tables ,with teacher on the basis of same t\_id in both tables,with subject on the basis of same sub\_id in both tables and show student name ,sub\_name,t\_name,marks.

mysql> select student.fname,sub\_name,t\_name,marks from sd\_base join student on sd\_base.s\_id=student.s\_id

-> join teacher on sd\_base.t\_id=teacher.t\_id

-> join subject on sd\_base.sub\_id=subject.sub\_id;

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

| fname | sub\_name | t\_name | marks |

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

| Pooja | OOP | Sarika | 94 |

| Tarak | DSA | Raj | 75 |

| Survir | DBMS | Anjali | 84 |

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

3 rows in set (0.00 sec)

//Joining two tables sd\_base with student using same s\_id in both tables ,with teacher using same t\_id in both tables,with subject using same sub\_id in both tables and show student name ,sub\_name,t\_name,marks.

mysql> select student.fname,subject.sub\_name,teacher.t\_name,sd\_base.marks from sd\_base

-> join student using(s\_id)

-> join subject using(sub\_id)

-> join teacher using(t\_id);

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

| fname | sub\_name | t\_name | marks |

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

| Pooja | OOP | Sarika | 94 |

| Tarak | DSA | Raj | 75 |

| Survir | DBMS | Anjali | 84 |

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

3 rows in set (0.03 sec)

//Naturally joining sd\_base and student table

mysql> select \* from sd\_base natural join student;

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

| s\_id | sub\_id | t\_id | marks | fname | lname |

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

| 1 | 11 | 1001 | 94 | Pooja | Sharma |

| 2 | 12 | 1002 | 75 | Tarak | Mehta |

| 3 | 13 | 1003 | 84 | Survir | Suri |

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

3 rows in set (0.00 sec)

//Naturally joining sd\_base and teacher table

mysql> select \* from sd\_base natural join teacher;

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

| t\_id | s\_id | sub\_id | marks | t\_name |

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

| 1001 | 1 | 11 | 94 | Sarika |

| 1002 | 2 | 12 | 75 | Raj |

| 1003 | 3 | 13 | 84 | Anjali |

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

3 rows in set (0.00 sec)

//Naturally joining sd\_base and teacher table and show s\_id,t\_name,sub\_id,marks

mysql> select s\_id,t\_name,sub\_id,marks from sd\_base natural join teacher;

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

| s\_id | t\_name | sub\_id | marks |

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

| 1 | Sarika | 11 | 94 |

| 2 | Raj | 12 | 75 |

| 3 | Anjali | 13 | 84 |

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

3 rows in set (0.00 sec)

//Naturally joining sd\_base table with student,teacher,subject.

mysql> select \* from sd\_base natural join student

-> natural join teacher

-> natural join subject;

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

| sub\_id | t\_id | s\_id | marks | fname | lname | t\_name | sub\_name |

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

| 11 | 1001 | 1 | 94 | Pooja | Sharma | Sarika | OOP |

| 12 | 1002 | 2 | 75 | Tarak | Mehta | Raj | DSA |

| 13 | 1003 | 3 | 84 | Survir | Suri | Anjali | DBMS |

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

3 rows in set (0.00 sec)

//Naturally joining sd\_base table with student,teacher,subject and show student name ,sub\_name,t\_name,marks.

mysql> select student.fname,sub\_name,t\_name,marks from sd\_base natural join student

-> natural join subject

-> natural join teacher;

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

| fname | sub\_name | t\_name | marks |

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

| Pooja | OOP | Sarika | 94 |

| Tarak | DSA | Raj | 75 |

| Survir | DBMS | Anjali | 84 |

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

3 rows in set (0.00 sec)

//Taking cross product of sd\_base,student,teacher and subject table using where clause for condition

mysql> select \* from sd\_base,student,teacher,subject

-> where sd\_base.s\_id=student.s\_id and sd\_base.t\_id=teacher.t\_id and sd\_base.sub\_id=subject.sub\_id;

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

| s\_id | sub\_id | t\_id | marks | s\_id | fname | lname | t\_id | t\_name | sub\_id | sub\_name |

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

| 1 | 11 | 1001 | 94 | 1 | Pooja | Sharma | 1001 | Sarika | 11 | OOP |

| 2 | 12 | 1002 | 75 | 2 | Tarak | Mehta | 1002 | Raj | 12 | DSA |

| 3 | 13 | 1003 | 84 | 3 | Survir | Suri | 1003 | Anjali | 13 | DBMS |

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

3 rows in set (0.00 sec)

//Taking cross product of sd\_base,student,teacher and subject table using where clause for condition and show student name ,sub\_name,t\_name,marks.

mysql> select student.fname,sub\_name,t\_name,marks from sd\_base,student,teacher,subject

-> where sd\_base.s\_id=student.s\_id and sd\_base.t\_id=teacher.t\_id and sd\_base.sub\_id=subject.sub\_id;

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

| fname | sub\_name | t\_name | marks |

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

| Pooja | OOP | Sarika | 94 |

| Tarak | DSA | Raj | 75 |

| Survir | DBMS | Anjali | 84 |

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

3 rows in set (0.00 sec)

//To create a dummy table(s\_id,t\_id,marks) from current table,

mysql> create table dummy select s\_id,t\_id,marks from sd\_base;

Query OK, 3 rows affected (0.03 sec)

Records: 3 Duplicates: 0 Warnings: 0

//Display dummy table

mysql> select \* from dummy;

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

| s\_id | t\_id | marks |

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

| 1 | 1001 | 94 |

| 2 | 1002 | 75 |

| 3 | 1003 | 84 |

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

3 rows in set (0.00 sec)

//To copy structure of current table(sd\_base )

mysql> create table dumb like sd\_base;

Query OK, 0 rows affected (0.06 sec)

//Describing the structure of the table

mysql> desc dumb;

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

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

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

| s\_id | int | YES | MUL | NULL | |

| sub\_id | int | YES | MUL | NULL | |

| t\_id | int | YES | MUL | NULL | |

| marks | int | YES | | NULL | |

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

4 rows in set (0.01 sec)

//using auto\_increment- to automatically increment the roll no

mysql> create table stu(rollno int auto\_increment primary key,name varchar(10),city varchar(10));

Query OK, 0 rows affected (0.02 sec)

//Insert record in stu table

mysql> insert into stu (name,city) values("pooja","pune");

Query OK, 1 row affected (0.00 sec)

//Display record from stu table

mysql> select \* from stu;

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

| rollno | name | city |

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

| 1 | pooja | pune |

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

1 row in set (0.00 sec)

//Insert records in stu table

mysql> insert into stu (name,city) values("peru","nagpur"),("ravi","goa");

Query OK, 2 rows affected (0.00 sec)

Records: 2 Duplicates: 0 Warnings: 0

//Display records from stu table

mysql> select \* from stu;

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

| rollno | name | city |

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

| 1 | pooja | pune |

| 2 | peru | nagpur |

| 3 | ravi | goa |

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

3 rows in set (0.00 sec)

//Using alter table statement set auto\_increment to 7

mysql> alter table stu

-> auto\_increment=7;

Query OK, 3 rows affected (0.05 sec)

Records: 3 Duplicates: 0 Warnings: 0

//Insert record in stu table

mysql> insert into stu (name,city) values ("ram","puri");

Query OK, 1 row affected (0.00 sec)

//Display records from stu table

mysql> select \* from stu;

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

| rollno | name | city |

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

| 1 | pooja | pune |

| 2 | peru | nagpur |

| 3 | ravi | goa |

| 7 | ram | puri |

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

4 rows in set (0.00 sec)

//Insert records in stu table

mysql> insert into stu (name,city) values ("pooja","dehu"),("Roopa","Nigdi");

Query OK, 2 rows affected (0.00 sec)

Records: 2 Duplicates: 0 Warnings: 0

//Display records from stu table

mysql> select \* from stu;

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

| rollno | name | city |

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

| 1 | pooja | pune |

| 2 | peru | nagpur |

| 3 | ravi | goa |

| 7 | ram | puri |

| 8 | pooja | dehu |

| 9 | Roopa | Nigdi |

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

6 rows in set (0.00 sec)