Name: Onasvee Banarse

Roll no:09

TE COMP 1

Design at least 10 SQL queries for suitable database application using SQL DML statements:

all types of Joins, Sub-Query and View.

1. Create table physician (reg\_no primary, name, tel\_no, city).
2. Create table patient (p\_id int primary, p\_name varchar(10), street varchar(10), city varchar(10)).
3. create table visit ( reg\_no int,p\_id int,date\_of\_visit date, fee int, FOREIGN KEY (p\_id) REFERENCES patient(p\_id), FOREIGN KEY (reg\_no) REFERENCES physician(reg\_no)).

1. Find name and city of patient who visited a physician on 13 July 2017.

1. Get the name of physician and total number of patients visited him.

1. Get the details of date wise fees collected at clinic group by date\_of\_visit.
2. Take join of physician and visit (inner, left, right, full outer join)

[reg\_no, name, p\_id, date\_of\_visit].

1. Take join of patient and visit (inner, left, right, full outer join) [p\_name, city, reg\_no, date\_of\_visit].
2. Create view for date wise fees collected at clinic. Apply operations on view.
3. Create view on patient (p\_name, reg\_no, date\_of\_visit).Apply operations on view.

**--------------------------------------------------Q1---------------------------------------------------**

mysql> create table physician(reg\_no int primary key , name varchar(20),tel\_no int, city varchar(20));

Query OK, 0 rows affected (0.03 sec)

**---------------------------------------------------Q2--------------------------------------------------**

mysql> create table patient(p\_id int primary key ,p\_name varchar(20),street varchar(20),city varchar(20));

Query OK, 0 rows affected (0.03 sec)

mysql> desc physician;

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

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

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

| reg\_no | int | NO | PRI | NULL | |

| name | varchar(20) | YES | | NULL | |

| tel\_no | int | YES | | NULL | |

| city | varchar(20) | YES | | NULL | |

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

4 rows in set (0.00 sec)

mysql> desc patient;

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

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

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

| p\_id | int | NO | PRI | NULL | |

| p\_name | varchar(20) | YES | | NULL | |

| street | varchar(20) | YES | | NULL | |

| city | varchar(20) | YES | | NULL | |

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

4 rows in set (0.00 sec)

**-------------------------------------------------Q3----------------------------------------------------**

mysql> CREATE TABLE visit(reg\_no INT, p\_id INT, date\_of\_visit DATE,fee int, FOREIGN KEY(p\_id) REFERENCES patient(p\_id), FOREIGN KEY(reg\_no) REFERENCES physician(reg\_no));

Query OK, 0 rows affected (0.04 sec)

mysql> desc visit;

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

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

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

| reg\_no | int | YES | MUL | NULL | |

| p\_id | int | YES | MUL | NULL | |

| date\_of\_visit | date | YES | | NULL | |

| fee | int | YES | | NULL | |

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

4 rows in set (0.00 sec)

mysql> insert into physician values(101,'DR.hello',1234567890,'pune');

Query OK, 1 row affected (0.01 sec)

mysql> insert into physician values(102,'DR.welcome',987654320,'delhi');

Query OK, 1 row affected (0.01 sec)

mysql> insert into physician values(103,'DR.byebye',676754378,'mumbai');

Query OK, 1 row affected (0.01 sec)

mysql> select \* from physician;

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

| reg\_no | name | tel\_no | city |

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

| 101 | DR.hello | 1234567890 | pune |

| 102 | DR.welcome | 987654320 | delhi |

| 103 | DR.byebye | 676754378 | mumbai |

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

3 rows in set (0.00 sec)

mysql> insert into patient values(1,'henry','airportRD','pune');

Query OK, 1 row affected (0.01 sec)

mysql> insert into patient values(2,'mark','ganeshRD','mumbai');

Query OK, 1 row affected (0.01 sec)

mysql> insert into patient values(3,'tony','tataRD','delhi');

Query OK, 1 row affected (0.01 sec)

mysql> insert into patient values(4,'trump','gujRD','goa');

Query OK, 1 row affected (0.01 sec)

mysql> select \* from patient;

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

| p\_id | p\_name | street | city |

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

| 1 | henry | airportRD | pune |

| 2 | mark | ganeshRD | mumbai |

| 3 | tony | tataRD | delhi |

| 4 | trump | gujRD | goa |

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

4 rows in set (0.00 sec)

mysql> insert into visit values(101,1,'2017-07-13',2000);

Query OK, 1 row affected (0.01 sec)

mysql> insert into visit values(101,1,'2017-07-13',3000);

Query OK, 1 row affected (0.01 sec)

mysql> insert into visit values(102,3,'2017-07-13',400);

Query OK, 1 row affected (0.01 sec)

mysql> insert into visit values(103,2,'2017-01-14',900);

Query OK, 1 row affected (0.00 sec)

mysql> select \*from visit;

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

| reg\_no | p\_id | date\_of\_visit | fee |

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

| 101 | 1 | 2017-07-13 | 2000 |

| 101 | 1 | 2017-07-13 | 3000 |

| 102 | 3 | 2017-07-13 | 400 |

| 103 | 2 | 2017-01-14 | 900 |

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

4 rows in set (0.00 sec)

**--------------------------------------------------Q4-------------------------------------------------**

mysql> select p\_name,city from patient where p\_id in(select p\_id from visit where date\_of\_visit='2017-07-13');

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

| p\_name | city |

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

| henry | pune |

| tony | delhi |

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

2 rows in set (0.00 sec)

**-------------------------------------------------Q5---------------------------------------------------**

mysql> select physician.name ,count(visit.p\_id) as "Total number of visits" from physician, visit where visit.reg\_no=physician.reg\_no group by physician.name , physician.name;

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

| name | Total number of visits |

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

| DR.hello | 2 |

| DR.welcome | 1 |

| DR.byebye | 1 |

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

3 rows in set (0.00 sec)

**--------------------------------------------------Q6-------------------------------------------------**

mysql> select date\_of\_visit as "date" , sum(fee) from visit group by date\_of\_visit;

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

| date | sum(fee) |

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

| 2017-07-13 | 5400 |

| 2017-01-14 | 900 |

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

2 rows in set (0.00 sec)

**---------------------------------------------------Q7-------------------------------------------------**

mysql> SELECT p.reg\_no,p.name,v.date\_of\_visit FROM physician p INNER JOIN visit v ON p.reg\_no=v.reg\_no;

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

| reg\_no | name | date\_of\_visit |

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

| 101 | DR.hello | 2017-07-13 |

| 101 | DR.hello | 2017-07-13 |

| 102 | DR.welcome | 2017-07-13 |

| 103 | DR.byebye | 2017-01-14 |

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

4 rows in set (0.00 sec)

mysql> SELECT physician.reg\_no,physician.name,visit.date\_of\_visit FROM physician INNER JOIN visit ON physician.reg\_no=visit.reg\_no;

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

| reg\_no | name | date\_of\_visit |

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

| 101 | DR.hello | 2017-07-13 |

| 101 | DR.hello | 2017-07-13 |

| 102 | DR.welcome | 2017-07-13 |

| 103 | DR.byebye | 2017-01-14 |

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

4 rows in set (0.00 sec)

------------------LEFT JOIN------------------------

mysql> SELECT physician.reg\_no,physician.name,visit.date\_of\_visit FROM physician LEFT JOIN visit ON physician.reg\_no=visit.reg\_no;

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

| reg\_no | name | date\_of\_visit |

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

| 101 | DR.hello | 2017-07-13 |

| 101 | DR.hello | 2017-07-13 |

| 102 | DR.welcome | 2017-07-13 |

| 103 | DR.byebye | 2017-01-14 |

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

4 rows in set (0.00 sec)

---------------------RIGHT JOIN---------------------------

mysql> SELECT physician.reg\_no,physician.name,visit.date\_of\_visit FROM physician RIGHT JOIN visit ON physician.reg\_no=visit.reg\_no;

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

| reg\_no | name | date\_of\_visit |

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

| 101 | DR.hello | 2017-07-13 |

| 101 | DR.hello | 2017-07-13 |

| 102 | DR.welcome | 2017-07-13 |

| 103 | DR.byebye | 2017-01-14 |

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

4 rows in set (0.00 sec)

**-----------------------------------------------Q8-----------------------------------------------------**

mysql> select patient.p\_name , patient.city , visit.reg\_no , visit.date\_of\_visit from patient inner join visit on patient.p\_id=visit.p\_id;

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

| p\_name | city | reg\_no | date\_of\_visit |

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

| henry | pune | 101 | 2017-07-13 |

| henry | pune | 101 | 2017-07-13 |

| mark | mumbai | 103 | 2017-01-14 |

| tony | delhi | 102 | 2017-07-13 |

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

4 rows in set (0.00 sec)

------------------LEFT JOIN------------------------

mysql> select patient.p\_name , patient.city , visit.reg\_no , visit.date\_of\_visit from patient LEFT join visit on patient.p\_id=visit.p\_id;

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

| p\_name | city | reg\_no | date\_of\_visit |

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

| henry | pune | 101 | 2017-07-13 |

| henry | pune | 101 | 2017-07-13 |

| mark | mumbai | 103 | 2017-01-14 |

| tony | delhi | 102 | 2017-07-13 |

| trump | goa | NULL | NULL |

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

5 rows in set (0.00 sec)

-------------------RIGHT JOIN----------------------

mysql> select patient.p\_name , patient.city , visit.reg\_no , visit.date\_of\_visit from patient RIGHT join visit on patient.p\_id=visit.p\_id;

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

| p\_name | city | reg\_no | date\_of\_visit |

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

| henry | pune | 101 | 2017-07-13 |

| henry | pune | 101 | 2017-07-13 |

| tony | delhi | 102 | 2017-07-13 |

| mark | mumbai | 103 | 2017-01-14 |

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

4 rows in set (0.00 sec)

**-----------------------------------------------Q9----------------------------------------------------**

mysql> create view question9 as select visit.reg\_no'REG\_no',visit.p\_id'P\_id',visit.fee "FEE", visit.date\_of\_visit"Date" from visit group by visit.date\_of\_visit;

Query OK, 0 rows affected (0.02 sec)

mysql> select \* from question9;

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

| REG\_no | P\_id | FEE | Date |

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

| 101 | 1 | 2000 | 2017-07-13 |

| 103 | 2 | 900 | 2017-01-14 |

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

2 rows in set (0.01 sec)

mysql> drop view question9;

Query OK, 0 rows affected (0.01 sec)

**----------------------------------------------Q10-----------------------------------------------------**

mysql> create view question10 as select visit.reg\_no'REG\_no',visit.p\_id'P\_id',visit.fee "FEE", visit.date\_of\_visit"Date" from visit ;

Query OK, 0 rows affected (0.01 sec)

mysql> select \* from question10;

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

| REG\_no | P\_id | FEE | Date |

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

| 101 | 1 | 2000 | 2017-07-13 |

| 101 | 1 | 3000 | 2017-07-13 |

| 102 | 3 | 400 | 2017-07-13 |

| 103 | 2 | 900 | 2017-01-14 |

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

4 rows in set (0.00 sec)

mysql> select p\_id from question10 where fee=2000;

+------+

| P\_id |

+------+

| 1 |

+------+

1 row in set (0.00 sec)

mysql> select p\_id,reg\_no from question10 where fee=2000;

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

| P\_id | REG\_no |

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

| 1 | 101 |

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

1 row in set (0.00 sec)

mysql> select question10.Date,patient.p\_name from question10,patient ;

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

| Date | p\_name |

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

| 2017-01-14 | henry |

| 2017-07-13 | henry |

| 2017-07-13 | henry |

| 2017-07-13 | henry |

| 2017-01-14 | mark |

| 2017-07-13 | mark |

| 2017-07-13 | mark |

| 2017-07-13 | mark |

| 2017-01-14 | tony |

| 2017-07-13 | tony |

| 2017-07-13 | tony |

| 2017-07-13 | tony |

| 2017-01-14 | trump |

| 2017-07-13 | trump |

| 2017-07-13 | trump |

| 2017-07-13 | trump |

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

16 rows in set (0.01 sec)

mysql> select question10.Date,patient.p\_name from question10,patient where question10.fee<1000 ;

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

| Date | p\_name |

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

| 2017-01-14 | henry |

| 2017-01-14 | mark |

| 2017-01-14 | tony |

| 2017-01-14 | trump |

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

8 rows in set (0.00 sec)

mysql>exit

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