Q1. Create the tables for User, Circle, User_Circle, Messages and User_Inbox (to be created with help of Triggers)

And

Q2. Insert the rows into the created tables (User, Circle, User_Circle, and Messages).

a.User Table

```
create table User(
 User_Name VARCHAR(40) NOT NULL,
 User_ID integer not nULL,
 Password VARCHAR(100) NOT NULL,
 Gender CHAR(1) NOT NULL,
 Email_ID VARCHAR(100) NOT NULL,
 UserContact integer(10) NOT NULL,
 CreatedBy VARCHAR(40) NOT NULL,
 Creation_date DATE,
 PRIMARY KEY ( User_ID)
);
INSERT INTO User values
('Booma',101,'PwdBooma','F','booma@gmail.com',9876543765,'Admin1','2019-03-03');
INSERT INTO User values
('Devi',102,'PwdDevi','F','devi@gmail.com',9652788225,'Admin1','2019-03-03');
INSERT INTO User values
('Harish',103,'PwdHari','M','Hari@gmail.com',8976545678,'Admin1','2019-03-03');
INSERT INTO User values
('Kavin',104,'PwdKavin','M','Kavin@gmail.com',998787009,'Admin2','2019-03-02');
```

Select * from User:

Output:

```
codingground Execute SQL Online (SQLite v3.20.1)
                                                                                                                                                                                                                                                                                                   Project
& Execute main.sql STDIN
                                                                                                                                                                                ı.lı Result
            BEGIN TRANSACTION;
                                                                                                                                                                                  $sqlite3 database.sdb < main.sql
                                                                                                                                                                                  | Second | 101 | PwdBooma | F | Dooma@gmail.com | 9876543765 | Admin1 | 2019-03-03 |
| Devi | 102 | PwdDevi | F | devi@gmail.com | 9652788225 | Admin1 | 2019-03-03 |
| Harish | 103 | PwdHari | M | Hari@gmail.com | 8976545678 | Admin1 | 2019-03-03 |
| Kavin | 104 | PwdKavin | M | Kavin@gmail.com | 998787009 | Admin2 | 2019-03-02 |
            create table User(
   User_Name VARCHAR(40) NOT NULL,
                User_Name VARCHAR(40) NOT NULL,
User_ID integer not nulL,
Password VARCHAR(100) NOT NULL,
Gender CHAR(1) NOT NULL,
Email_ID VARCHAR(100) NOT NULL,
UserContact integer(10) NOT NULL,
CreatedBy VARCHAR(40) NOT NULL,
Creation_date DATE,
PRIMARY KEY ( User_ID)
             INSERT INTO User values
                      ma',101,'PwdBooma','F','booma@gmail.com',9876543765,'Admin1','2019-03-03'
            INSERT INTO User values
                                                              ,'devi@gmail.com',9652788225,'Admin1','2019-03-03');
                          ',102,'PwdDevi','F
INTO User values
                                                         ','M','Hari@gmail.com',8976545678,'Admin1','2019-03-03');
             (`Harish`,103,`PwdHari`,
INSERT INTO User values
                          n',104,'PwdKav
* from User;
```

b.Circle Table

```
create table Circle(
Circle_Name VARCHAR(40) NOT NULL,
Circle_ID INT NOT NULL,
CreatedBy VARCHAR(40) NOT NULL,
Creation_date DATE,
PRIMARY KEY ( Circle_ID)
);
INSERT INTO Circle values('Circle1','9001','Admin1','2019-03-03');
INSERT INTO Circle values('Circle2','9002','Admin2','2019-03-03');
INSERT INTO Circle values('Circle3','9003','Admin1','2019-03-03');
INSERT INTO Circle values('Circle4','9004','Admin2','2019-03-03');
```

Output:

Select * from Circle;

```
| BEGIN TRANSACTION; | Sqlite3 database.sdb < main.sql | Stolin | Sqlite3 | Stolin | Sqlite3 | S
```

c. User Circle Table

create table User_Circle(User_ID INT NOT NULL, Circle_ID INT NOT NULL, Subscribe_Unsubscribe CHAR(1) NOT NULL, FOREIGN KEY (User_ID) REFERENCES User(User_ID), FOREIGN KEY (Circle_ID) REFERENCES Circle(Circle_ID));

```
INSERT INTO User_Circle values('101','9004','Y');
INSERT INTO User_Circle values('102','9002','N');
INSERT INTO User_Circle values('103','9003','Y');
INSERT INTO User_Circle values('104','9001','Y');
```

Output:

Select * from User_Circle;

```
codingground
                                Execute SQL Online (SQLite v3.20.1) [3]
Execute main.sql STDIN
                                                                                                                    ı.lı Result
        BEGIN TRANSACTION;
                                                                                                                      $sqlite3 database.sdb < main.sql</pre>
                                                                                                                      Circle1 | 9001 | Admin1 | 2019-03-03
                                                                                                                      Circle2 9002 Admin2 2019-03-03
       create table User_Circle(
                                                                                                                      Circle3 9003 Admin1 2019-03-03
           User_ID INT NOT NULL,
Circle_ID INT NOT NULL,
                                                                                                                      Circle4 9004 Admin2 2019-03-03
           Subscribe_Unsubscribe CHAR(1) NOT NULL,
FOREIGN KEY (User_ID) REFERENCES User(User_ID)
FOREIGN KEY (Circle_ID) REFERENCES Circle(Circle_ID));
       INSERT INTO User_Circle values('101','9004','Y');
       INSERT INTO User_Circle values('102','9002','N');
INSERT INTO User_Circle values('103','9003','Y');
  14 INSERT INTO User_Circle values('104','9001',
       Select * from User_Circle;
```

d. Message Table

create table Message(msgID Varchar primary key, SentByUser_ID INT NOT NULL, RecByUser_ID INT,

Msg varchar(200), SentOn date not null, RecOn date not null, CircleFlag char(1) not null, Circle_ID INT NOT NULL);

INSERT INTO Message values

```
('MSG001','101','104','Hi','2019-03-02','2019-03-03','N','');
```

INSERT INTO Message values

```
('MSG002','104','103','Hello','2019-03-03','2019-03-04','N','');
```

INSERT INTO Message values

```
('MSG003','103','','Welcome','2019-03-04','2019-03-05','Y','9002');
```

INSERT INTO Message values

```
('MSG004','102','101','Congrats','2019-03-03','2019-03-03','N','');
```

Output:

Select * from Message;

```
codingground
                               Execute SQL Online (SQLite v3.20.1) [7]
                                                                                                               I.II Result
Execute main.sql STDIN
       BEGIN TRANSACTION;
                                                                                                                $sqlite3 database.sdb < main.sql</pre>
                                                                                                                MSG001|101|104|Hi|2019-03-02|2019-03-03|N|
       /* Message TABLE */
create table Message(msgID Varchar primary key,
                                                                                                                MSG002 | 104 | 103 | Hello | 2019-03-03 | 2019-03-04 | N |
MSG003 | 103 | | Welcome | 2019-03-04 | 2019-03-05 | Y | 9002
        SentByUser_ID INT NOT NULL,
RecByUser_ID INT,
                                                                                                                MSG004 | 102 | 101 | Congrats | 2019 - 03 - 03 | 2019 - 03 - 03 | N |
        Msg varchar(200), SentOn date not null, RecOn date not null ,CircleFlag char(1 ) not null, Circle_ID INT NOT NULL);
       INSERT INTO Message values
                                         ,'2019-03-02','2019-03-03','N','');
       INSERT INTO Message values
                             103', 'Hello', '2019-03-03', '2019-03-04', 'N', '');
        INSERT INTO Message values
       INSERT INTO Message values
       ('MSG004','102','101','Congrats','2019-03-03','2019-03-03','N','');
       Select * from Message;
```

e. User Inbox table:

Create table User_Inbox(messageId Varchar, Message varchar, From_user varchar);

INSERT INTO User_Inbox values('MSG001','Hi','Booma');

INSERT INTO User_Inbox values('MSG002','Hello','Kavin');

INSERT INTO User_Inbox values('MSG003','Welcome','Harish');

Output:

select * from User_Inbox;

03. Fetch the row from User table based on Id and Password.

select * from User where User_ID=101 and Password='PwdBooma';

04. Fetch all the rows from Circle table based on the field created by.

select * from Circle where CreatedBy='Admin2';

```
BEGIN TRANSACTION;

create table Circle(
Circle_Name VARCHAR(40) NOT NULL,
Circle_ID INT NOT NULL,
CreatedBy VARCHAR(40) NOT NULL,
CreatedBy VARCHAR(40) NOT NULL,
PRIMARY KEY ( Circle_ID)

);

INSERT INTO Circle values('Circle1','9001','Admin1','2019-03-03');
INSERT INTO Circle values('Circle2','9002','Admin2','2019-03-03');
INSERT INTO Circle values('Circle3','9003','Admin1','2019-03-03');
INSERT INTO Circle values('Circle4','9004','Admin2','2019-03-03');

Sselect * from Circle where CreatedBy='Admin2';

select * from Circle where CreatedBy='Admin2';
```

Q5. Fetch all the Circles created after the particular Date.

select * from Circle where Creation_date > '2019-03-04'

```
codingground
                                   Execute SQL Online (SQLite v3.20.1) [3]
Execute main.sql STDIN
                                                                                                                           ı.lı Result
        BEGIN TRANSACTION;
                                                                                                                              salite3 database.sdb < main.sal
                                                                                                                              Circle3|9003|Admin1|2019-03-05
       create table Circle(
                                                                                                                             Circle4 9004 Admin2 2019-03-06
           Circle_Name VARCHAR(40) NOT NULL,
            Circle_ID INT NOT NULL
            CreatedBy VARCHAR(40) NOT NULL,
           Creation_date DATE,
            PRIMARY KEY ( Circle_ID)
 INSERT INTO Circle values('Circle1','9001','Admin1','2019-02-01');
INSERT INTO Circle values('Circle2','9002','Admin2','2019-03-02');
INSERT INTO Circle values('Circle3','9003','Admin1','2019-03-05');
INSERT INTO Circle values('Circle4','9004','Admin2','2019-03-06');
      select * from Circle where Creation_date > '2019-03-04'
```

06. Fetch all the User Ids from UserCircle table subscribed to particular Circle.

Select User_ID from User_Circle where Subscribe_Unsubscribe='Y' and Circle_ID='9004';

```
codingground
                              Execute SQL Online (SQLite v3.20.1) [7]
Execute main.sql STDIN
                                                                                                            ı.lı Result
      BEGIN TRANSACTION;
                                                                                                              $salite3 database.sdb < main.sql</pre>
                                                                                                              101
       create table User_Circle(
                                                                                                              103
          User_ID INT NOT NULL,
Circle_ID INT NOT NULL,
          Subscribe_Unsubscribe CHAR(1) NOT NULL,
          FOREIGN KEY (User ID) REFERENCES User(User ID)
FOREIGN KEY (Circle_ID) REFERENCES Circle(Circle_ID));
      INSERT INTO User_Circle values('101','9004','Y');
      INSERT INTO User_Circle values('102','9002','N');
INSERT INTO User_Circle values('103','9004','Y');
      INSERT INTO User_Circle values('104','9001','Y'
        Select User ID from User Circle where Subscribe Unsubscribe='Y' and Circle ID
```

07. Write UpDate guery to unsubscribe to particular Circle for the given User Id.

Update User_Circle set Subscribe_Unsubscribe='N' where User_ID='101';

```
codingground
                                Execute SQL Online (SQLite v3.20.1) [7]
                                                                                                                    ı.lı Result
& Execute main.sql STDIN
        BEGIN TRANSACTION;
                                                                                                                      $sqlite3 database.sdb < main.sql</pre>
                                                                                                                      101|9004|Y
        create table User_Circle(
                                                                                                                      102 9002 N
           User_ID INT NOT NULL,
Circle_ID INT NOT NULL,
                                                                                                                      103 | 9004 | Y
                                                                                                                      104 | 9001 | Y
           Subscribe_Unsubscribe CHAR(1) NOT NULL,
                                                                                                                      101|9004|N
           FOREIGN KEY (User ID) REFERENCES User(User ID)
FOREIGN KEY (Circle_ID) REFERENCES Circle(Circle_ID));
                                                                                                                      102 9002 N
                                                                                                                      104 9001 Y
       INSERT INTO User_Circle values('101','9004','Y');
      INSERT INTO User Circle values('102','9002','N');
INSERT INTO User Circle values('103','9004','Y');
INSERT INTO User Circle values('104','9001','Y');
        Select * from User_Circle;
         pdate User_Circle set Subscribe_Unsubscribe='N' where User_ID='101';
         elect * from User_Circle;
```

08. Fetch all the Messages from the Messages table sent by a particular User

<u>SQL Query:</u> Select * from Message where SentByUser_ID='101';

Output:

09. Fetch all the Messages from the Messages table received by a particular User

SQL Query: Select * from Message where RecByUser_ID='103';

Output:

```
codingground | Execute SQL Online (SQLite v3.20.1)
Execute main.sql STDIN
      BEGIN TRANSACTION;
                                                                                                   $sqlite3 database.sdb < main.sql</pre>
                                                                                                   MSG002|104|103|Hello|2019-03-03|2019-03-04|N|
                                                                                                   MSG003 | 103 | 103 | Welcome | 2019-03-04 | 2019-03-05 | Y | 9002
      create table Message(msgID Varchar primary key,
       SentByUser_ID INT NOT NULL,
       RecByUser_ID INT,
Msg varchar(200), SentOn date not null, RecOn date not null, CircleFlag char(1
) not null, Circle_ID INT NOT NULL);
      INSERT INTO Message values
                                   ','2019-03-02','2019-03-03','N','');
      INSERT INTO Message values
       INSERT INTO Message values
                                    come','2019-03-04','2019-03-05','Y','9002');
      INSERT INTO Message values
      INSERT INTO Message values
                                                    2019-03-03','2019-03-03','N','');
        elect * from Message where RecByUser_ID='103';
```

Q10. Fetch all the Messages from the Messages table sent/received by a particular User. (both the Messages)

<u>SQL Query:</u> Select * from Message where SentByUser_ID='101' or RecByUser_ID='102';

Output:

```
codingground Execute SQL Online (SQLite v3.20.1)
     BEGIN TRANSACTION;
                                                                                                      $sqlite3 database.sdb < main.sql
MSG001|101|104|Hi|2019-03-02|2019-03-03|N|
                                                                                                      MSG005|101|102|Have a nice day|2019-03-03|2019-03-03|N|
     create table Message(msgID Varchar primary key,
      SentByUser_ID INT NOT NULL,
      RecByUser_ID INT,
Msg varchar(200), SentOn date not null, RecOn date not null, CircleFlag char(1
) not null, Circle_ID INT NOT NULL);
     INSERT INTO Message values
                                   ','2019-03-02','2019-03-03','N','');
     INSERT INTO Message values
     INSERT INTO Message values
                                  clcome','2019-03-04','2019-03-05','Y','9002');
     INSERT INTO Message values
                                   ngrats','2019-03-03','2019-03-03','N','');
     ('MSG004','102','101','Cong
INSERT INTO Message values
               ','101','102','Have a nice day','2019-03-03','2019-03-03','N','');
       elect * from Message where SentByUser_ID='101' or RecByUser_ID='102
```

Q11. Write a query to send Message from particular User to another User (Use Message table insert statement)

Message table structure:

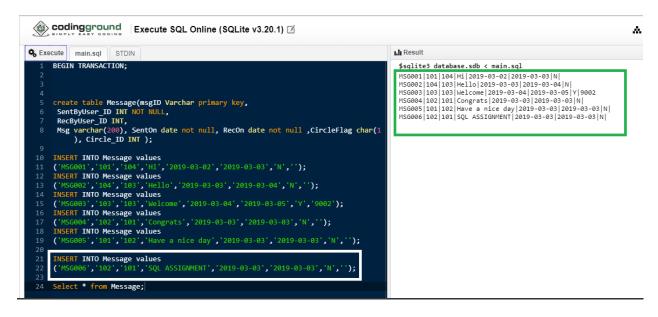
create table Message(msgID Varchar primary key, SentByUser_ID INT NOT NULL, RecByUser_ID INT,

Msg varchar(200), SentOn date not null, RecOn date not null, CircleFlag char(1), Circle_ID INT);

SOL Ouerv:

INSERT INTO Message values ('MSG006','102','101','SQL ASSIGNMENT','2019-03-03','2019-03-03','N','');

Output:



Q12. Write a query to send Message from particular User to particular Circle(Use Message table - insert statement)

```
create table User_Circle(
User_ID INT NOT NULL,
Circle_ID INT NOT NULL,
Subscribe_Unsubscribe CHAR(1) NOT NULL,
FOREIGN KEY (User_ID) REFERENCES User(User_ID)
FOREIGN KEY (Circle_ID) REFERENCES Circle(Circle_ID));

INSERT INTO User_Circle values('101','9004','Y');
INSERT INTO User_Circle values('102','9002','N');
INSERT INTO User_Circle values('103','9004','Y');
INSERT INTO User_Circle values('104','9001','Y');
Select * from User_Circle;

/*Message Table*/
```

create table Message(msgID Varchar primary key,

SentByUser_ID INT NOT NULL, RecByUser_ID INT, Msg varchar(200), SentOn date not null, RecOn date not null);

INSERT INTO Message values

('MSG001','101','104','Hi','2019-03-02','2019-03-03');

INSERT INTO Message values

('MSG002','104','103','Hello','2019-03-03','2019-03-04');

INSERT INTO Message values

('MSG003','103','103','Welcome','2019-03-04','2019-03-05');

INSERT INTO Message values

('MSG004','102','101','Congrats','2019-03-03','2019-03-03');

INSERT INTO Message values

('MSG006','102','101','SQL ASSIGNMENT','2019-03-03','2019-03-03');

Select * from Message where RecByUser_ID IN(select User_ID from User_Circle where Circle_ID='9004')

SQL Query:

Select * from Message where **RecByUser_ID IN**(select User_ID from User_Circle where Circle_ID='9004')

Output:

```
$sqlite3 database.sdb < main.sql</pre>
                                                                                                                                               101 | 9004 |
 create table User_Circle(
                                                                                                                                               102 | 9002 | N
103 | 9004 | Y
     User_ID INT NOT NULL,
Circle_ID INT NOT NULL
                                                                                                                                               104 9001
     Subscribe Unsubscribe CHAR(1) NOT NULL,
FOREIGN KEY (User_ID) REFERENCES User(User_ID)
FOREIGN KEY (Circle_ID) REFERENCES Circle(Circle_ID));
                                                                                                                                               104|9901|Y
MSG002|104 103 Hello|2019-03-03|2019-03-04
MSG003|103 103 Welcome|2019-03-04|2019-03-05
MSG004|102 101 Congrats|2019-03-03|2019-03-03
MSG006|102 101 SQL ASSIGNMENT|2019-03-03|2019-03-03
 INSERT INTO User_Circle values('101'
INSERT INTO User Circle values INSERT INTO User Circle values INSERT INTO User Circle values INSERT INTO User Circle values
 Select * from User_Circle;
create table Message(msgID Varchar primary key,
   SentByUser_ID INT NOT NULL, RecByUser_ID INT, Msg varchar(200), SentOn date
   not null, RecOn date not null);
INSERT INTO Message values
                                            ','2019-03-02','2019-03-03');
 INSERT INTO Message values
('MSG002','104','103','Hello','2019-03-03','2019-03-04');
INSERT INTO Message values
                                         Welcome','2019-03-04','2019-03-05');
 INSERT INTO Message values
                                           ongrats','2019-03-03','2019-03-03');
INSERT INTO Message values
                                                RecByUser_ID IN( select User_ID from User_Circle
```

Q13. Write a query to delete particular Message which you received from User(User Inbox table - delete statement)

```
/* USER INBOX*/
```

Create table User_Inbox(messageId Varchar, Message varchar, From_user varchar);

INSERT INTO User_Inbox values('MSG001','Hi','Booma');

INSERT INTO User_Inbox values('MSG002','Hello','Kavin');

INSERT INTO User_Inbox values('MSG003','Welcome','Harish');

INSERT INTO User_Inbox values('MSG004','Have a good day!!!','Swetha');

select * from User_Inbox;

delete from User_Inbox where From_user='Booma';

select * from User_Inbox;

SOL Ouery: DELETE FROM USER_INBOX WHERE FROM_USER='BOOMA';

Output:

```
codingground
                              Execute SQL Online (SQLite v3.20.1) [7]
                                                                                                              ı.lı Result
Execute main.sql STDIN
       BEGIN TRANSACTION;
                                                                                                                $sqlite3 database.sdb < main.sql</pre>
                                                                                                                MSG001|Hi|Booma
                                                                                                                MSG002|Hello|Kavin
       Create table User Inbox(messageId Varchar, Message varchar, From user varchar);
                                                                                                                MSG003|Welcome|Harish
                                                                                                                MSG004|Have a good day!!!|Swetha
MSG002|Hello|Kavin
       INSERT INTO User_Inbox values('MSG001','Hi','Booma');
                                                                                                                MSG003|Welcome|Harish
      INSERT INTO User_Inbox values('MSG002','Hello','Kavin');
INSERT INTO User_Inbox values('MSG003','Welcome','Harish');
INSERT INTO User_Inbox values('MSG004','Have a good day!!!','Swetha');
                                                                                                                MSG004|Have a good day!!!|Swetha
      select * from User_Inbox;
      delete from User_Inbox where From_user='Bo
      select * from User_Inbox;
```

Q14. Write a query to delete particular Message which you received from particular Circle(User Inbox table - delete statement)

Delete FROM [User_Inbox] WHERE From_user IN(SELECT circle FROM CIRCLE WHERE CIRCLE='circle2')

BEGIN TRANSACTION:

```
create table Circle(
    Circle_Name VARCHAR(40) NOT NULL,
    Circle_ID INT NOT NULL,
    CreatedBy VARCHAR(40) NOT NULL,
    Creation_date DATE,
    PRIMARY KEY ( Circle_ID)
);
```

INSERT INTO Circle values ('Circle1','9001','Admin1','2019-03-03');

INSERT INTO Circle values ('Circle2', '9002', 'Admin2', '2019-03-03');

INSERT INTO Circle values ('Circle3','9003','Admin1','2019-03-03');

