**##------Section 1. Creation of tables-------**

**-- Section 1 Code Authorship : Shreya Mariam Varghese - svarghe**

## Donor Table - Code Authorship : Shreya Mariam Varghese - svarghe

CREATE TABLE Donor (

DonorId INT PRIMARY KEY NOT NULL,

Name CHAR(200) NOT NULL,

Contact BIGINT(50) NOT NULL,

Email VARCHAR(200) NOT NULL,

BloodType VARCHAR(200) NOT NULL,

DOB DATE NOT NULL,

Gender VARCHAR(200) NOT NULL,

Address VARCHAR(200) NOT NULL

);

## Recipient Table - Code Authorship : Shreya Mariam Varghese - svarghe

CREATE TABLE Recipient (

RecipientId INT PRIMARY KEY NOT NULL,

Name CHAR(200) NOT NULL,

Contact BIGINT(50) NOT NULL,

Email VARCHAR(200) NOT NULL,

RequiredBloodType VARCHAR(200) NOT NULL,

DOB DATE NOT NULL,

Gender VARCHAR(200) NOT NULL,

Address VARCHAR(200) NOT NULL

);

## BloodBank Table - Code Authorship : Shreya Mariam Varghese - svarghe

CREATE TABLE BloodBank (

BloodBankId INT PRIMARY KEY NOT NULL,

Name VARCHAR(200) NOT NULL,

Contact VARCHAR(200),

Helpline VARCHAR(200),

Address VARCHAR(200),

State VARCHAR(200) NOT NULL,

District VARCHAR(200) NOT NULL,

City VARCHAR(200) NOT NULL,

Pincode BIGINT(50),

Fax VARCHAR(200),

Website VARCHAR(200),

Category VARCHAR(200),

ServiceTime VARCHAR(200)

);

## Appointment Table - Code Authorship : Shreya Mariam Varghese - svarghe

CREATE TABLE Appointment (

AppointmentId INT PRIMARY KEY NOT NULL,

DonorId INT,

RecipientId INT,

BloodBankId INT NOT NULL,

Date DATE NOT NULL,

Time TIME NOT NULL,

FOREIGN KEY (DonorId) REFERENCES Donor(DonorId),

FOREIGN KEY (RecipientId) REFERENCES Recipient(RecipientId),

FOREIGN KEY (BloodBankId) REFERENCES BloodBank(BloodBankId)

);

## BloodSample Table - Code Authorship : Shreya Mariam Varghese - svarghe

CREATE TABLE BloodSample (

SampleId INT PRIMARY KEY NOT NULL AUTO\_INCREMENT,

DonorId INT,

BloodBankId INT NOT NULL,

CollectionDate DATE NOT NULL,

ExpirationDate DATE NOT NULL,

BloodType VARCHAR(200) NOT NULL,

HaemoglobinLevel VARCHAR(200),

RBCCount VARCHAR(200),

WBCCount VARCHAR(200),

Quantity INT(50),

FOREIGN KEY (DonorId) REFERENCES Donor(DonorId),

FOREIGN KEY (BloodBankId) REFERENCES BloodBank(BloodBankId)

);

## BloodTransfusion Table - Code Authorship : Shreya Mariam Varghese - svarghe

CREATE TABLE BloodTransfusion (

TransfusionId INT PRIMARY KEY NOT NULL AUTO\_INCREMENT,

BloodBankId INT NOT NULL,

RecipientId INT NOT NULL,

SampleId INT NOT NULL,

TransfusionDate DATE NOT NULL,

BloodType VARCHAR(200) NOT NULL,

TransfusedQuantity VARCHAR(200),

TransfusionStatus VARCHAR(200) NOT NULL,

FOREIGN KEY (RecipientId) REFERENCES Recipient(RecipientId),

FOREIGN KEY (BloodBankId) REFERENCES BloodBank(BloodBankId),

FOREIGN KEY (SampleId) REFERENCES BloodSample(SampleId)

);

## Inventory Table - Code Authorship : Shreya Mariam Varghese - svarghe

CREATE TABLE Inventory (

BloodBankId INT NOT NULL,

BloodType VARCHAR(200) NOT NULL,

Quantity INT(200)NOT NULL,

FOREIGN KEY (BloodBankId) REFERENCES BloodBank(BloodBankId)

);

## Nodal Table - Code Authorship : Shreya Mariam Varghese - svarghe

CREATE TABLE Nodal (

BloodBankId INT NOT NULL,

OfficerName VARCHAR(200) NOT NULL,

OfficerContact VARCHAR(200),

OfficerEmail VARCHAR(200),

OfficerQualification varchar(200)

);

#Code Authorship : Shreya Mariam Varghese - svarghe

## Drop Table Commands

DROP table Inventory;

DROP table Appointment;

DROP table BloodTransfusion;

DROP table Donor;

DROP table Recipient;

Drop table Nodal;

Drop table mastertable;

DROP table BloodSample;

DROP table BloodBank;

**##------Section 2. Insert and Update Commands-----**

**-- Section2. Code Authorship : Jerin Easo Thomas - jerithom**

## BloodBank Insert, Update, Truncate and Delete Commands

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

ALTER TABLE BloodBank

MODIFY Contact VARCHAR(100),

MODIFY Helpline VARCHAR(100);

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

SELECT \* FROM BloodBank

where State = 'Maharashtra' and city = 'Aurangabad';

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

TRUNCATE TABLE BloodBank;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

delete from BloodBank

where 1=1;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO BloodBank

SELECT Sr\_No, Blood\_Bank\_Name, concat(Contact\_No, ', ', Mobile) as Contact, Helpline, Address, State, District, City, Pincode, Fax, Website, Category, Service\_Time

FROM blood\_bank\_mastertable;

## Blood Tranfusion Insert commands

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO BloodTransfusion (TransfusionId, BloodBankId, RecipientId, SampleId, TransfusionDate, BloodType, TransfusedQuantity, TransfusionStatus)

VALUES (1, 1300, 1, 1, '2023-04-01', 'B+', 1, 'Complete');

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select RequiredBloodType from Recipient where RecipientId is not null;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from BloodTransfusion;

##Inventory Table Insert and Delete Commands

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

DELETE FROM Inventory;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Inventory (BloodBankId, BloodType, Quantity)

select A.BloodBankId, BloodType, sum(Quantity) as Quantity

from BloodBank A

INNER JOIN

BloodSample B

on A.BloodBankId = B.BloodBankId

group by 1,2;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from Inventory;

## Nodal Table Insert and Delete Commands

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

SELECT \* FROM Nodal;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

delete from Nodal

where (OfficerName = '' or OfficerName = 'NA' or OfficerName = 'Dr.' or OfficerName = 'N/A');

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Nodal

select Sr\_No, Nodal\_Officer, concat(Contact\_Nodal\_Officer, ', ', Mobile\_Nodal\_Officer) as OfficerContact, Email\_Nodal\_Officer, Qualification\_Nodal\_Officer

from blood\_bank\_mastertable;

## Data Insert to blood\_bank\_mastertable, the csv data for which is taken from Kaggle and inserted into BloodBank Table

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from blood\_bank\_mastertable;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

UPDATE blood\_bank\_mastertable SET Contact\_No = CONCAT(Contact\_No, ', ', Mobile);

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select Contact\_No, Mobile, concat(Contact\_No, ', ', Mobile) as Contact from blood\_bank\_mastertable;

## ---------Blood Donation process.-----------

##Initially the donor would have to create an account and the data for which would be inserted in the donor table.

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Donor (DonorId, Name, Contact, Email, BloodType, DOB, Gender, Address)

VALUES (2, 'Shreya Varghese', 8256748193, 'svarge@gmail.com', 'A+', '1999-04-17', 'Female', 'Thane, Mumbai, Maharashtra, India'),

(3, 'Chaitrali Ghanekar', 9215674712, 'chaitu@gmail.com', 'B+', '2000-04-20', 'Female', 'Karvenagar, Pune, Maharashtra, India'),

(4, 'Sushant Menon', 982279745, 'sushantmenon.com', 'A+', '2000-01-19', 'Male', 'Dandibeach, Surat, Gujarat, India'),

(5, 'Sakshi Sitoot', 936758123, 'ssitoot.com', 'AB+', '1997-10-31', 'Female', 'Meera Road, Surat, Maharashtra, India');

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Donor (DonorId, Name, Contact, Email, BloodType, DOB, Gender, Address)

VALUES (6, 'Vicktor Dennis', 8192481950, 'vdennis@gmail.com', 'O+', '1997-06-12', 'Male', 'Camp, Pune, Maharashtra, India'),

(7, 'Yash Vibhute', 9876541236, 'yash12@gmail.com', 'B+', '2000-06-14', 'Male', 'Chinchwad, Pune, Maharashtra, India'),

(8, 'Saurav', 8127784371, 'saurav98@gmail.com', 'AB-', '1998-10-07', 'Male', 'Hyderabad, India'),

(9, 'Atharv Bagade', 8135671034, 'atharvbagade@gmail.com', 'A-', '1998-11-24', 'Male', 'Andheri, Mumbai, Maharashtra, India'),

(10, 'Bhargave Desai', 9912674123, 'bdesai@gmail.com', 'O-', '1997-4-30', 'Male', 'Mumbai, Maharashtra, India');

## Once data is inserted the donor would have to crete an appointment to a particular hospital and the data for which

## would be inserted in Appointment table

## Below code is to insert records into appointment table for both Donor and Receipient, it also includes some update queries.

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

ALTER TABLE Appointment DROP FOREIGN KEY appointment\_ibfk\_1;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

ALTER TABLE Appointment

ADD CONSTRAINT FOREIGN KEY (RecipientId) REFERENCES Recipient(RecipientId);

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

ALTER TABLE Appointment

ADD CONSTRAINT appointment\_ibfk\_3

FOREIGN KEY (BloodBankId) REFERENCES BloodBank(BloodBankId);

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Appointment (AppointmentId, DonorId, BloodBankId, Date, Time)

VALUES (1, 1, 1298, '2023-04-04', '16:00:00');

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Appointment (AppointmentId, DonorId, BloodBankId, Date, Time)

VALUES (4, 3, 1271, '2023-02-14', '09:00:00'),

(5, 4, 1269, '2022-12-22', '16:15:00'),

(6, 5, 1287, '2022-11-21', '12:00:00'),

(7, 6, 1273, '2023-01-07', '10:45:00'),

(8, 7, 1271, '2023-03-25', '13:00:00'),

(9, 8, 1292, '2022-10-01', '15:30:00'),

(10, 9, 1301, '2023-2-07', '8:45:00'),

(11, 10, 1299, '2023-04-02', '10:15:00');

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from Appointment;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

delete from Appointment

where AppointmentID = 1;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Appointment (AppointmentId, DonorId, RecipientId, BloodBankId, Date, Time)

SELECT 2, 2, -999, BloodBankId, '2023-04-05', '13:00:00'

FROM BloodBank

WHERE BloodBankId = '1297'

LIMIT 1;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

SELECT constraint\_name

FROM information\_schema.table\_constraints

WHERE table\_name = 'Appointment'

AND constraint\_type = 'FOREIGN KEY';

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from Donor;

## After appointment scheduling the Donor can now donot the blood at the respective Blood Bank and the data for the blood sample would be inserted in BloodSample table.

## Insert Queries provided below.

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO BloodSample (SampleId, DonorId, BloodBankId, CollectionDate, ExpirationDate, BloodType, Quantity)

VALUES (1, 1, 1298, '2023-04-04', '2023-07-03', 'B+', 1);

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO BloodSample (SampleId, DonorId, BloodBankId, CollectionDate, ExpirationDate, BloodType, Quantity)

VALUES (2, 2, 1297, '2023-03-31', '2023-06-30', 'A+', 2);

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO BloodSample (SampleId, DonorId, BloodBankId, CollectionDate, ExpirationDate, BloodType, Quantity)

VALUES (3, 3, 1271, '2023-03-31', '2023-06-30', 'A+', 2);

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO BloodSample (DonorId, BloodBankId, CollectionDate, ExpirationDate, BloodType, Quantity)

SELECT A.DonorId, A.BloodBankId, A.Date as CollectionDate, DATE\_ADD(A.Date, INTERVAL 180 DAY) AS ExpirationDate, B.BloodType, 1 AS Quantity

FROM Appointment A

INNER JOIN

Donor B

ON A.DonorId = B.DonorId

where A.DonorId > 3;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from BloodSample;

## After the data has been added in the BloodSample table the Invertory table is updated.

# ---------Blood tranfusion/receiving process--------

## Initially the recipeint would have to create and a check in the inventory if the required blood type is

## avaiable in the particular bank

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from Recipient;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Recipient (RecipientId, Name, Contact, Email, RequiredBloodType, DOB, Gender, Address)

VALUES (1, 'Ani Chatterji', 9998765381, 'anichat@gmail.com', 'B+', '1998-01-21', 'Male', 'Baner, Pune, Maharashtra, India');

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Recipient (RecipientId, Name, Contact, Email, RequiredBloodType, DOB, Gender, Address)

VALUES (2, 'Sarfaraz', 9998765413, 'sarfaraz@gmail.com', 'A+', '1998-09-14', 'Male', 'Baner, Pune, Maharashtra, India');

## Inventory view

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

create view ViewInventory as

select I.BloodBankId,B.Name,B.Contact,B.State, B.City, I.BloodType, I.Quantity

from Inventory I

inner join

BloodBank B

on I.BloodBankId = B.BloodBankId;

## Based on the inventory the recipient as to book an appointment at the Blood Bank.

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from Appointment where AppointmentID = 2;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from ViewInventory where BloodBankId = 1297;

## After making an appointment an entry to BloodTransfusion would be made with status as Initiated.

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO BloodTransfusion(BloodBankId, RecipientId, SampleId, TransfusionDate, BloodType, TransfusedQuantity, TransfusionStatus)

select A.BloodBankId,A.RecipientId,B.SampleId, A.Date, R.RequiredBloodType, 1 as TransfusedQuantity, 'Initiated' as TransfusionStatus

from Appointment A

inner join

Recipient R

inner join (select SampleId from BloodSample where BloodBankId = '1297' limit 1) B

on A.RecipientId = R.RecipientId

where A.RecipientId = 2;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from BloodTransfusion;

## Once Blood has been Tranfused the hospital user can update the Sample quatity

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from BloodSample;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

update BloodSample set Quantity = 1

where BloodBankId = 1297;

## Once Sample has been update then update the Inventory Table.

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from Inventory;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

DELETE FROM Inventory;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

INSERT INTO Inventory (BloodBankId, BloodType, Quantity)

select A.BloodBankId, BloodType, sum(Quantity) as Quantity

from BloodBank A

INNER JOIN

BloodSample B

on A.BloodBankId = B.BloodBankId

group by 1,2;

#Section2. Code Authorship : Jerin Easo Thomas - jerithom

select \* from ViewInventory;

**##------- Section 3. Views created------**

**-- Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan**

# Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan

CREATE OR REPLACE VIEW INVENTORYVIEW AS

# Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan

SELECT bb.BloodBankId,bb.name,bb.contact,bb.helpline,bb.email

,bb.address,bb.state,bb.state,bb.district,bb.city,bb.pincode,bb.website,inv.BloodType,inv.Quantity

FROM BloodBank bb

join inventory inv

on bb.BloodBankId = inv.BloodBankId;

-- View to check appointments of Donors

# Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan

CREATE OR REPLACE VIEW DonorAppointmentView AS

# Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan

SELECT don.name,don.contact,don.BloodType,don.gender,app.appointmentDate,app.appointmentTime

from Appointment app

join Donor don

on app.donorId=don.donorId;

-- View to check appointments of Recipients

# Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan

CREATE OR REPLACE VIEW DonorAppointmentView AS

# Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan

SELECT rec.name,rec.contact,rec.BloodType,rec.gender,rec.appointmentDate,rec.appointmentTime

from Appointment app

join Recipients rec

on app.recipientId=rec.recipientId;

-- Update to be called from Blood Bank Employees while collecting blood samples from Donor.

# Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan

update BloodSample set CollectionDate=curdate(),ExpirationDate=curdate()+180,BloodType=bloodType

,HaemoglobinLevel=Hlevel,RBCCount=RBCCnt,WBCCount=WBCCnt,Quantity=BloodQuantityDonated

where SampleID=sampleId and DonorId=donorId and bloodBankId=bloodBankId;

-- Update to be called when the the blood has been collected from the donor to increase the inventory and show the same to recipients

# Section 3. Code Authorship : Aniruddho Swapan Chatterjee - caswapan

update Inventory set Quantity=Quantity+BloodQuantityDonated where BloodBankId=bloodBankId;