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-- Blood Bank Donation Database Management System
-- A DBMS Project made by Vatsalya Kumar Mishra(2K21/CO/509) and Vicky
Kumar(2K21/CO/513)
-- Creation of 'Bloodbank' database
CREATE DATABASE BLOODBANK;
USE BLOODBANK;
-- Creation of 'BB_Manager' table
CREATE TABLE BB_Manager (
    M_id int NOT NULL PRIMARY KEY,
    mName varchar(100) NOT NULL,
    m_phNo bigint
);
-- Value insertion
INSERT into BB_Manager
VALUES (101, 'Vatsalya', 9693959671),
      (102, 'Vicky', 9693959672),
      (103, 'Light', 9693959673),
      (104, 'Eren', 9693959674),
      (105, 'Mikasa', 9693959675),
      (106, 'Goku', 9693959676),
      (107, 'Itachi', 9693959677),
      (108, 'Naruto', 9693959678),
      (109, 'Luffy', 9693959679),
      (110, 'Levi', 9693959680);
-- Display table
select *
from BB_Manager;
-- Creation of 'Recording_Staff' table
CREATE TABLE Recording_Staff (
    reco_ID int NOT NULL PRIMARY KEY,
    reco_Name varchar(100) NOT NULL,
    reco_phNo bigint
);
-- Value insertion
INSERT into Recording_Staff
VALUES (101012, 'Tanjiro', 4044846553),
      (101112, 'Zenitsu', 4045856553),
      (101212, 'Inosuke', 4045806553),
      (101312, 'Mitsuri', 4045806553),
      (101412, 'Nezuko', 4045806553),
      (101512, 'Muzan', 4045806553),
      (101612, 'Akaza', 4045806553),
      (101712, 'Tengen', 4045816553),
      (101812, 'Rengoku', 4045826553),
      (101912, 'Kokushibo', 4045836553);
-- Display table
select *
from Recording_Staff;

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-- Creation of 'City' table
CREATE TABLE City (
    City_ID int NOT NULL PRIMARY KEY,
    City_name varchar(100) NOT NULL
);

-- Value insertion
INSERT into City
VALUES (1100, 'Asgard'),
    (1200, 'Paradis'),
    (1300, 'Marley'),
    (1400, 'Wakanda'),
    (1500, 'Valhalla'),
    (1600, 'Madripor'),
    (1700, 'Hogwarts'),
    (1800, 'Sokovia'),
    (1900, 'Kamar-Taj'),
    (2000, 'Gotham');

-- Display table
select *
from City;

-- Creation of 'Blood_Donor' table
CREATE TABLE Blood_Donor (
    bd_ID int NOT NULL PRIMARY KEY,
    bd_name varchar(100) NOT NULL,
    bd_age varchar(100),
    bd_sex varchar(100),
    bd_Bgroup varchar(10),
    bd_reg_date date,
    reco_ID int NOT NULL,
    City_ID int NOT NULL,
    FOREIGN KEY(reco_ID) REFERENCES Recording_Staff(reco_ID),
    FOREIGN KEY(City_ID) REFERENCES City(City_ID)
);

-- Value insertion
INSERT into Blood_Donor
VALUES (
    150011,
    'Steven',
    25,
    'M',
    'O+',
    '2015-07-19',
    101412,
    1100
),
(
    150012,
    'Tony',

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35,  
  'M',  
  'A-',  
  '2015-12-24',  
  101412,  
  1100  
,  
(  
  150013,  
  'Bruce',  
  22,  
  'M',  
  'AB+',  
  '2015-08-28',  
  101212,  
  1200  
,  
(  
  150014,  
  'Natasha',  
  29,  
  'M',  
  'B+',  
  '2015-12-17',  
  101212,  
  1300  
,  
(  
  150015,  
  'Hermoine',  
  42,  
  'M',  
  'A+',  
  '2016-11-22',  
  101212,  
  1300  
,  
(  
  150016,  
  'Harry',  
  44,  
  'F',  
  'AB-',  
  '2016-02-06',  
  101212,  
  1200  
,  
(
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        150017,
        'Sherlock',
        33,
        'M',
        'B-',
        '2016-10-15',
        101312,
        1400
    ),
    (
        150018,
        'Logan',
        31,
        'F',
        'O+',
        '2016-01-04',
        101312,
        1200
    ),
    (
        150019,
        'Peter',
        24,
        'F',
        'AB+',
        '2016-09-10',
        101312,
        1500
    ),
    (
        150020,
        'Odinson',
        29,
        'M',
        'O-',
        '2016-12-17',
        101212,
        1200
    );
-- Display table
select *
from Blood_Donor;
-- Creation of 'DiseaseFinder' table
CREATE TABLE DiseaseFinder (
    dfind_ID int NOT NULL PRIMARY KEY,
    dfind_name varchar(100) NOT NULL,
    dfind_PhNo bigint
);

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-- Value insertion
INSERT into DiseaseFinder
VALUES (11, 'Indiana', 9693959681),
      (12, 'Stephen', 9693959682),
      (13, 'Christine', 9693959683),
      (14, 'Gwen', 9693959672),
      (15, 'Viktor', 9693959679),
      (16, 'Skywalker', 9693959684),
      (17, 'Julius', 9693959685),
      (18, 'Kratos', 9693959686),
      (19, 'Brutus', 9693959687),
      (20, 'Murdock', 9693959688);

-- Display table
select *
from DiseaseFinder;

-- Creation of 'BloodSpecimen' table
CREATE TABLE BloodSpecimen (
    specimen_number int NOT NULL,
    b_group varchar(10) NOT NULL,
    status int,
    dfind_ID int NOT NULL,
    M_id int NOT NULL,
    primary key (specimen_number, b_group),
    FOREIGN KEY(M_id) REFERENCES BB_Manager(M_id),
    FOREIGN KEY(dfind_ID) REFERENCES DiseaseFinder(dfind_ID)
);

-- Value insertion
INSERT into BloodSpecimen
VALUES (1001, 'B+', 1, 11, 101),
      (1002, 'O+', 1, 12, 102),
      (1003, 'AB+', 1, 11, 102),
      (1004, 'O-', 1, 13, 103),
      (1005, 'A+', 0, 14, 101),
      (1006, 'A-', 1, 13, 104),
      (1007, 'AB-', 1, 15, 104),
      (1008, 'AB-', 0, 11, 105),
      (1009, 'B+', 1, 13, 105),
      (1010, 'O+', 0, 12, 105),
      (1011, 'O+', 1, 13, 103),
      (1012, 'O-', 1, 14, 102),
      (1013, 'B-', 1, 14, 102),
      (1014, 'AB+', 0, 15, 101);

-- Display table
Select *
from BloodSpecimen;

-- Creation of 'Hospital_Info_1' table
CREATE TABLE Hospital_Info_1 (
    hosp_ID int NOT NULL,

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    hosp_name varchar(100) NOT NULL,
    City_ID int NOT NULL,
    M_id int NOT NULL,
    primary key(hosp_ID),
    FOREIGN KEY(M_id) REFERENCES BB_Manager(M_id),
    FOREIGN KEY(City_ID) REFERENCES City(City_ID)
);
-- Value insertion
INSERT into Hospital_Info_1
VALUES (1, 'Springfield', 1100, 101),
       (2, 'Hampshire', 1200, 103),
       (3, 'Winterfell', 1300, 103),
       (4, 'Riverrun', 1400, 104),
       (5, 'Hogsmeade', 1800, 103),
       (6, 'Greenoaks', 1300, 106),
       (7, 'Forestpark', 1300, 102),
       (8, 'Parkland', 1200, 106),
       (9, 'Pinecreek', 1500, 109),
       (10, 'Alphaville', 1700, 105);
-- Display table
select *
from Hospital_Info_1;
-- Creation of 'Hospital_Info_2' table
CREATE TABLE Hospital_Info_2 (
    hosp_ID int NOT NULL,
    hosp_name varchar(100) NOT NULL,
    hosp_needed_Bgrp varchar(10),
    hosp_needed_qnty int,
    primary key(hosp_ID, hosp_needed_Bgrp)
);
-- Value insertion
INSERT into Hospital_Info_2
VALUES (1, 'Springfield', 'A+', 20),
       (1, 'Springfield', 'A-', 0),
       (1, 'Springfield', 'AB+', 40),
       (1, 'Springfield', 'AB-', 10),
       (1, 'Springfield', 'B-', 20),
       (2, 'Hampshire', 'A+', 40),
       (2, 'Hampshire', 'AB+', 20),
       (2, 'Hampshire', 'A-', 10),
       (2, 'Hampshire', 'B-', 30),
       (2, 'Hampshire', 'B+', 0),
       (2, 'Hampshire', 'AB-', 10),
       (3, 'Winterfell', 'A+', 0),
       (3, 'Winterfell', 'AB+', 0),
       (3, 'Winterfell', 'A-', 0),
       (3, 'Winterfell', 'B-', 20),
       (3, 'Winterfell', 'B+', 10),

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(3, 'Winterfell', 'AB-', 0),
(4, 'Riverrun', 'A+', 10),
(4, 'Riverrun', 'A-', 40),
(7, 'Forestpark', 'B-', 40),
(8, 'Parkland', 'B+', 10),
(9, 'Pinecreek', 'AB-', 20);

-- Display table
select *
from Hospital_Info_2;

-- Creation of 'Recipient' table
CREATE TABLE Recipient (
    reci_ID int NOT NULL PRIMARY KEY,
    reci_name varchar(100) NOT NULL,
    reci_age varchar(10),
    reci_Brgp varchar(100),
    reci_Bqnty float,
    reco_ID int NOT NULL,
    City_ID int NOT NULL,
    M_id int NOT NULL,
    FOREIGN KEY(M_id) REFERENCES BB_Manager(M_id),
    FOREIGN KEY(City_ID) REFERENCES City(City_ID)
);

Alter table Recipient
ADD reci_sex varchar(100);

Alter table Recipient
ADD reci_reg_date date;

-- Value insertion
INSERT into Recipient
VALUES (
    10001,
    'Indiana',
    25,
    'B+',
    1.5,
    101212,
    1100,
    101,
    'F',
    '2015-12-17'
),
(
    10002,
    'Bruce',
    60,
    'A+',
    1,
    101312,
    1100,

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102,  
  'M',  
  '2015-12-16'  
)  
(  
  10003,  
  'Goku',  
  35,  
  'AB+',  
  0.5,  
  101312,  
  1200,  
  102,  
  'M',  
  '2015-10-17'  
)  
(  
  10004,  
  'Stephen',  
  66,  
  'B+',  
  1,  
  101212,  
  1300,  
  104,  
  'M',  
  '2016-11-17'  
)  
(  
  10005,  
  'Itachi',  
  53,  
  'B-',  
  1,  
  101412,  
  1400,  
  105,  
  'M',  
  '2015-04-17'  
)  
(  
  10006,  
  'Erwin',  
  45,  
  'O+',  
  1.5,  
  101512,  
  1500,
```



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105,  
  'M',  
  '2015-12-17'  
)  
(  
  10007,  
  'Natasha',  
  22,  
  'AB-',  
  1,  
  101212,  
  1500,  
  101,  
  'M',  
  '2015-05-17'  
)  
(  
  10008,  
  'Julius',  
  25,  
  'B+',  
  2,  
  101412,  
  1300,  
  103,  
  'F',  
  '2015-12-14'  
)  
(  
  10009,  
  'Hemsworth',  
  30,  
  'A+',  
  1.5,  
  101312,  
  1100,  
  104,  
  'M',  
  '2015-02-16'  
)  
(  
  10010,  
  'Langford',  
  25,  
  'AB+',  
  3.5,  
  101212,  
  1200,
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        107,
        'F',
        '2016-10-17'
    );
-- Display table
select *
from Recipient;
-- SAMPLE SQL QUERIES
-- Query 1
CREATE VIEW Blood_Recipient_SameBGrp AS
select Blood_Donor.bd_name,
       Recipient.reci_name,
       reco_Name
from Recording_Staff
   inner join Blood_Donor on Recording_Staff.reco_ID = Blood_Donor.reco_ID
   inner join Recipient on Recording_Staff.reco_ID = Recipient.reco_ID
where Blood_Donor.bd_Bgroup = Recipient.reci_Brgp
      and Blood_Donor.bd_reg_date = Recipient.reci_reg_date;
select *
from Blood_Recipient_SameBGrp;
-- Query 2
Select specimen_number,
       b_group
from BloodSpecimen,
     DiseaseFinder
WHERE BloodSpecimen.dfind_ID = DiseaseFinder.dfind_ID
      AND dfind_name = 'Gwen'
      AND status = 1;
-- Query 3
select BB_Manager.M_id,
       mName,
       Recipient.reci_name,
       Recipient.reci_Brgp,
       BloodSpecimen.b_group
from BB_Manager,
     Recipient,
     BloodSpecimen
where Recipient.M_id = BloodSpecimen.M_id
      and Recipient.reci_Brgp = BloodSpecimen.b_group
      and Recipient.M_id = BB_Manager.M_id
      and status = 1;
-- Query 4
Select bd_ID,
       bd_name,
       reci_ID,
       reci_name
FROM Blood_Donor,
     Recipient

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WHERE bd_Bgroup = reci_Brgp
      AND Blood_Donor.City_ID = Recipient.City_ID;
-- Query 5
Select hosp_ID,
       hosp_name,
       City_ID,
       HOspital_Info_1.M_id
from Hospital_Info_1,
     BB_Manager
where BB_Manager.M_id = Hospital_Info_1.M_id
      and BB_Manager.M_id = 103;
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