PRINCESS NORA BINT ABDULRAHMAN UNIVERSITY

College of Computer and Information Sciences

Department of Information Systems

Wateen Database System

All Phases

Serial#	Section #	NAME	ID
1	4C2	Noura Ali Alqasem	

Group#: 5
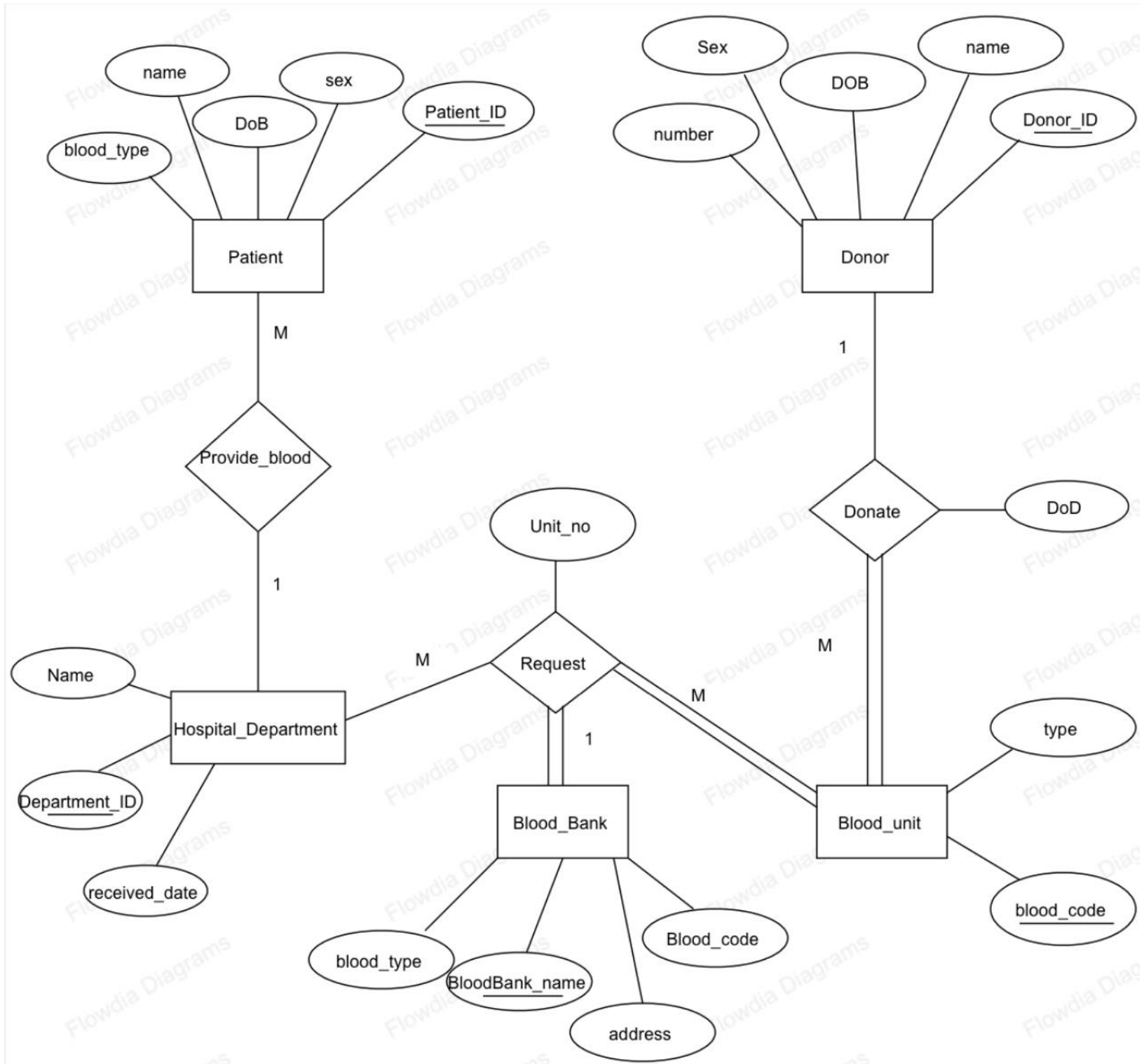
Supervised By: Shahad AlShehaah

Project Description:

Wateen is an initiative in cooperation with the Ministry of Health that seeks to reduce the communication gap between donors and blood banks so that the process of donating blood becomes easier.

And it is the official application for donating blood in Saudi Arabia, whether you are a blood donor or not eligible to donate or a representative of a blood bank, and it offers you many advantages:

• Request a blood donation from Wateen community.

• Share donation requests on social networks.

• List and websites of blood banks.

• Follow up on donation history.

• Reminders of donation dates and donation campaigns around you.

Entity Relationship Diagram (ERD):

Relational Schema:

Donor(<u>Donor_ID</u> ,name ,DOB ,Sex ,number)

Blood_unit(blood_type, <u>blood_code</u>,Donor_ID, DoD)

FK:Donor_ID references Donor(Donor_ID)

Hospital_Department(<u>Department_ID</u> , Name , received_date)

Patient(<u>Patient _ID</u> , Department_ID, sex , DoB , name , blood_type)

FK : Department_ID references Hospital_Department(Department_ID)

Blood_Bank(<u>BloodBank_name</u>,Blood_code,blood_type,address)

Request (<u>Department_ID, blood_code, BloodBank_name</u>,Unit_no)
FK1: Department_ID references Hospital_Department(Department_ID)

FK2: blood_code refernces Blood_unit(blood_code)

FK3: BloodBank_name refernces Blood_Bank(BloodBank_name)

DDL Commands:

```
SQL> drop table Donor cascade constraints;

Table dropped.

SQL>
SQL> create table Donor(
  2  Donor_ID varchar2(10) Primary key,
  3  name varchar2(30),
  4  DOB date ,
  5  sex char(6) Check (sex IN ('female','male')),
  6  phone_number varchar2(10)) ;

Table created.

SQL>
SQL> drop table Blood_unit cascade constraint;

Table dropped.

SQL>
SQL> create table Blood_unit(
  2  blood_type char (3) Not Null,
  3  blood_code varchar2(7) Primary key ,
  4  Donor_ID varchar2(10) UNIQUE,
  5  DoD date,
  6  constraint DID_fg foreign key (Donor_ID) references Donor (Donor_ID));

Table created.

SQL>
SQL> drop table Hospital_Department cascade constraints;

Table dropped.

SQL>
SQL> create table Hospital_Department(
  2  Department_ID varchar2(7) PRIMARY KEY,
  3  Name varchar2(50),
  4  receives_date DATE) ;

Table created.

SQL>
SQL> drop table patient cascade constraints;
Table dropped.
```

تنشيط Windows
انتقل إلى الإعدادت لتنشيط Windows.

```
SQL>
SQL> create table patient (
  2  patient_ID varchar2(10) PRIMARY KEY,
  3  Department_ID varchar2(7) ,
  4  sex char (6) Check (sex IN ('female','male')),
  5  DoB DATE,
  6  name varchar2 (30),
  7  blood_type char (3) Not Null,
  8  constraint Dep_fk foreign key (Department_ID) references Hospital_Department (Department_ID));

Table created.

SQL>
SQL> drop table blood_bank cascade constraints;

Table dropped.

SQL> create table blood_bank(
  2  bloodbank_name char(10) PRIMARY KEY,
  3  blood_code varchar2(7) NOT NULL UNIQUE ,
  4  blood_type char(3) NOT NULL,
  5  address varchar2(20));

Table created.

SQL>
SQL>
SQL>
SQL> drop table request cascade constraints;

Table dropped.

SQL>
SQL> create table request(
  2  department_ID varchar2(7)  ,
  3  blood_code varchar2(7)  ,
  4  bloodbank_name char(10)  ,
  5  unit_no varchar2(5) ,
  6  constraint req_PK PRIMARY KEY (department_ID ,blood_code ,bloodbank_name ),
  7  constraint depID_FK FOREIGN KEY (Department_ID) references Hospital_Department(Department_ID));

Table created.
```

Insert 3 rows *AT LEAST INTO EACH TABLE*

```
SQL> INSERT into Donor (Donor_ID ,name ,DOB ,sex ,phone_number)
  2 values ('1163875648','Asma','22-9-2000','female','0557436779');

1 row created.

SQL> INSERT into Donor (Donor_ID ,name ,DOB ,sex ,phone_number)
  2 values ('1026478347','Ahmad','05-12-1995','male','0505723625');

1 row created.

SQL> INSERT into Donor (Donor_ID ,name ,DOB ,sex ,phone_number)
  2 values ('1122334455','Nor','11-10-1990','female','0557436779');

1 row created.

SQL>
SQL>
SQL> INSERT into Blood_unit(blood_type,blood_code,Donor_ID,DoD)
  2 values ('O+','E563495','1163875648','01-1-2020');

1 row created.

SQL> INSERT into Blood_unit(blood_type ,blood_code,Donor_ID,DoD)
  2 values ('B+','E279546','1026478347','01-1-2021');

1 row created.

SQL> INSERT into Blood_unit(blood_type,blood_code,Donor_ID,DoD)
  2 values ('AB+','E978843','1122334455','01-1-2022');

1 row created.

SQL>
SQL>
SQL> INSERT into Hospital_Department(Department_ID,name,receives_date)
  2 values ('1234567','Emergency department','08-4-2022');

1 row created.

SQL> INSERT into Hospital_Department(Department_ID,name,receives_date)
  2 values ('2235567','Department of Obstetrics','16-10-2021');

1 row created.

SQL> INSERT into Hospital_Department(Department_ID,name,receives_date)
  2 values ('5678972','children department','16-10-2021');

1 row created.
```

```
SQL>
SQL> INSERT into patient(patient_ID,Department_ID,sex,DoB,name,blood_type)
  2 values ('1110011111','1234567','female','01-12-2001','sara','A-');

1 row created.

SQL> INSERT into patient(patient_ID,Department_ID,sex,DoB,name,blood_type)
  2 values ('111009865','2235567','female','22-4-2001','reem','O+');

1 row created.

SQL> INSERT into patient(patient_ID,Department_ID,sex,DoB,name,blood_type)
  2 values ('123345789','5678972','male','02-6-2018','nasser','AB+');

1 row created.

SQL>
SQL> INSERT into blood_bank(bloodbank_name,blood_code,blood_type,address)
  2 values ('wateen1','22356','A+','Riyadh');

1 row created.

SQL> INSERT into blood_bank(bloodbank_name,blood_code,blood_type,address)
  2 values ('wateen2','22453','B+','Jeddah');

1 row created.

SQL> INSERT into blood_bank(bloodbank_name,blood_code,blood_type,address)
  2 values ('wateen3','22513','O+','Dammam');

1 row created.
```

6

DML Commands:

```
SQL>
SQL> SELECT Donor_ID
  2  FROM Blood_unit
  3  WHERE blood_type = 'O+' ;

DONOR_ID
----------
1163875648

SQL>
SQL> SELECT *
  2  FROM Donor
  3  WHERE sex= 'female';

DONOR_ID   NAME                                DOB      SEX    PHONE_NUMB
---------- ----------------------------------- -------- ------ ----------
1163875648 Asma                                22/09/00 female 0557436779
1122334455 Nor                                 11/10/90 female 0557436779

SQL>
SQL> SELECT bloodbank_name
  2  FROM blood_bank
  3  WHERE address='Dammam';

BLOODBANK_
----------
wateen3
```

```
SQL>
SQL> SELECT blood_type ,count(*)
  2  FROM Blood_unit
  3  group by blood_type
  4  having count(*)>=1;

BLO   COUNT(*)
--- ----------
AB+          1
O+           1
B+           1

SQL>
SQL> SELECT Department_ID,count(patient_ID)
  2  FROM patient
  3  group by Department_ID;

DEPARTM COUNT(PATIENT_ID)
------- -----------------
1234567                 1
2235567                 1
5678972                 1

SQL>
SQL> select  count (blood_code)
  2  from blood_bank ;

COUNT(BLOOD_CODE)
-----------------
                3
```