**AMERICAN INTERNATIONAL**

**UNIVERSITY-BANGLADESH**

**Faculty of Engineering**

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| Assign./Case Title: | The Rotary Blood Bank Database Management System | | | |
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| Course Title: | Introduction to Data Base | | | |
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| Course Teacher: | RIFAT TASNIM ANANNYA | | | |

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The Rotary Blood Bank database management system

September 20, 2020

**Synopsis:  
Bangladesh** has seen the rise of road accidents and surgeries in recent years, the demand for blood has risen significantly. It becomes really difficult to find the required blood group and as a result patient’s life are put at stake at a regular basis. Furthermore, people willing to donate blood are difficult to come by. The only way to get rid of this major problem is to design a system which stores all the information regarding a blood group and their availability in one place. In order to solve this issue the Government of Bangladesh has assigned the task of designing a database management system to me and my friends. Basically this database management system will connect some blood banks in Bangladesh, store all the details of blood and their availability. The Government of Bangladesh was willing to pay a hefty sum of money in return. Considering our trip to Dubai in few months and the expenses of travel, we all agreed.

The requirements for the database management system is given below:

**Requirements**:

* The blood donors are uniquely identified by DID. Furthermore, they have a name, phone number, address, age and sex.
* Each blood has a unique code. The blood type and cost must be recorded too.
* Every Blood Bank has many blood collectors. The name, address and phone number of the blood collectorsmust be recorded. A counter number must be included with the details of the blood collectors while appointing.
* The record of each hospital that orders blood from the Blood Bank must be kept which includes name, location and telephone number.
* Every Blood Bankhas a manager and the details of the manager includes name, salary,email id and manager id.
* The Blood Banksare identified by a unique BNO and blood type. Moreover, a record of total number of orders must be kept.
* Several patients apply medication to every hospital where the information of patients are recorded. The information includes name, age, blood type and a unique SSID.
* Each donor donates a certain type of blood.Hundreds of donors donates blood to every Blood Bank every month.
* Different types of blood are stored in aBlood Bank.
* While donating blood, every donor is registered by ablood collector.Each blood collector registers several donors.
* Many hospitals orders blood from a single Blood Bank.
* EveryBlood Bank is completely under the supervision of a manager.

**ER-Diagram:**



**Normalization**

* **Donate-** (DID, D\_age, D\_address, D\_name, sex, D\_phone, Code, Blood\_type, cost, Quantity)

**1NF:**

D\_Phone is a multivalued attribute

**2NF:**

DID, D\_age, D\_address, D\_name, sex, D\_phone

Code, Blood\_type, cost, Quantity

**3NF:**

DID, D\_age, D\_address, D\_name, sex, D\_phone

Code, Blood\_type

BID, cost, Quantity

**Table list for Donate:**

1. DID, D\_age, D\_address, D\_name, sex, Code
2. Code, Blood\_type, BID
3. BID, cost, Quantity
4. D\_no, DID,Code
5. DID,D\_phone

* **Stored:** (Code, Blood\_type, Cost, Quantity, BNO, Orders)

**1NF:**

There is no multivalued attribute

**2NF:**

Code, Blood\_type, Cost, Quantity

BNO, Orders

**3NF:**

Code, Blood\_type  
BID, cost, Quantity  
 BNO, Orders

**Table list for Stored:**

1. Code, Blood\_type, BID, BNO
2. BID, cost, Quantity
3. BNO, Orders

* **Registers-** (DID, D\_age, D\_address, D\_name, Sex, D\_Phone, Counter\_no, Rec\_name, Rec\_address, Rec\_phone)

**1NF:**

D\_Phone is a multivalued attribute

**2NF:**

DID, D\_age, D\_address, D\_name, Sex, D\_Phone

Counter\_no, Rec\_name, Rec\_address, Rec\_phone

**3NF:**

DID, D\_age, D\_address, D\_name, Sex, D\_Phone

Counter\_no, Rec\_name, Rec\_address, Rec\_phone

**Table list for registers:**

9. DID, D\_age, D\_address, D\_name, Sex,Counter\_no

10.Counter\_no, Rec\_name, Rec\_address, Rec\_phone

11. DID, D\_Phone

* **Works-**(Counter\_no, Rec\_name, Rec\_address, Rec\_phone, BNO, Orders)

**1NF:**

There is no multivalued attribute

**2NF:**

Counter\_no, Rec\_name, Rec\_address, Rec\_phone

BNO, Orders

**3NF:**

Counter\_no, Rec\_name, Rec\_address, Rec\_phone

BNO, Orders

**Table list for works:**

12.Counter\_no, Rec\_name, Rec\_address, Rec\_phone, BNO

13. BNO, Orders

* **Orders**-(H\_Name, location, telephone, BNO, Orders)

**1NF:**

Telephone is a multivalued attribute

**2NF:**

H\_Name, location, telephone

BNO, Orders

**3NF:**

H\_Name, location, telephone

BNO, Orders

**Table list for orders:**

14.H\_Name, location, BNO

15. BNO, Orders

16. H\_Name, telephone

* **Apply medication to**-(Patients\_SSID, Patients\_name,Blood\_group, Patients\_age, H\_Name, location, telephone)

**1NF:**

Telephone is a multivalued attribute

**2NF:**

Patients\_SSID, Patients\_name,Blood\_group, Patients\_age

H\_Name, location, telephone

**3NF:**

Patients\_SSID, Patients\_name, Blood\_group, Patients\_age

H\_Name, location, telephone

**Table list for Apply medication to:**

17. Patients\_SSID, Patients\_name,Blood\_group, Patients\_age, H\_Name

18.H\_Name, location

19.H\_Name, telephone

* **Manages**-(BNO, Orders, Mgr\_ID, Email\_ID, Mgr\_name, Salary)

**1NF:**

There is no multivalued attribute

**2NF:**

BNO, Orders

Mgr\_ID, Mgr\_name, Email\_ID, Salary

**3NF:**

BNO, Orders

Mgr\_ID, Mgr\_name, Email\_ID, Salary

**Table list for Manages:**

20. BNO, Orders, Mgr\_ID

21. Mgr\_ID, Mgr\_name, Email\_ID, Salary

**Selected Table List:**

1. DID, D\_age, D\_address, D\_name, sex, Code, Counter\_no
2. BID, cost, Quantity
3. D\_no, DID, Code
4. DID,D\_phone
5. Code, Blood\_type, BID, BNO
6. Counter\_no, Rec\_name, Rec\_address, Rec\_phone, BNO
7. H\_Name, location, BNO
8. H\_Name, telephone
9. Patients\_SSID,Patients\_name,Blood\_group, Patients\_age, H\_Name
10. BNO, Orders, Mgr\_ID
11. Mgr\_ID, Mgr\_name, Email\_ID, Salary

**Table Names:**

**1.**Donor

**2.**Blood\_Price

**3.**DonorBlood\_info

**4.**Donor\_Phonebook

**5.**Blood

**6.**Blood\_Collector

**7.**Hospital

**8.**Hospital\_Phonebook

**9.**Patients

**10.**Blood\_Bank

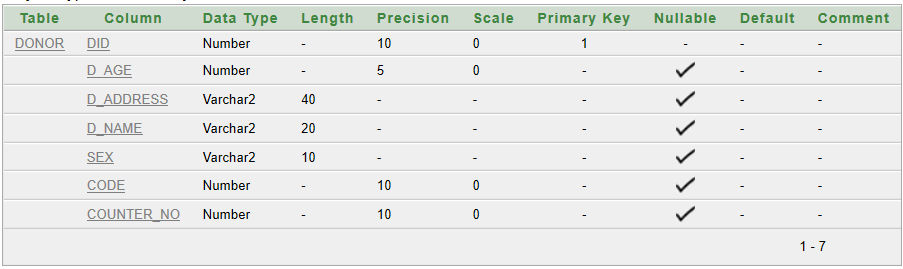
**11.**Manager

**Table Creation & Insertion:**

**1.Donor:**

**Creation:**

Create sequence Donor\_test **Table:**Donor (Description)

Start with 3

Increment by 1

Maxvalue 999999

Nocycle

Nocache

Create table Donor (

DID number(10),

D\_age number(5),

D\_address varchar2(40),

D\_name varchar2(20),

Sex varchar2(10),

Code number(10),

Counter\_no number(10))

Alter table Donor add constraint p14 primary key (DID)

Alter table Donor add constraint p15 foreign key (Code) references Blood (Code)

Alter table Donor add constraint p16 foreign key (Counter\_no) references Blood\_Collector (Counter\_no)

DescDonor

**Insertion:**

Insert into Donor (DID, D\_age, D\_address, D\_name, Sex, Code, Counter\_no)

Values (Donor\_test.nextval, 21, 'Winterfell', 'Ned Stark', 'M', 20, 501)

Insert into Donor (DID, D\_age, D\_address, D\_name, Sex, Code, Counter\_no)

Values (Donor\_test.nextval, 50, 'Casterly Rock', 'TywinLanniseter', 'M', 21, 502)

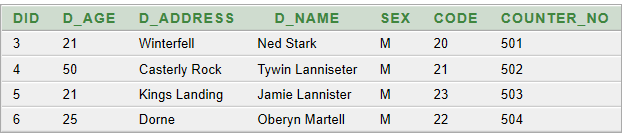
Insert into Donor (DID, D\_age, D\_address, D\_name, Sex, Code, Counter\_no)

Values (Donor\_test.nextval, 21, 'Kings Landing', 'Jamie Lannister', 'M', 23, 503)

Insert into Donor (DID, D\_age, D\_address, D\_name, Sex, Code, Counter\_no)

Values (Donor\_test.nextval, 25, 'Dorne', 'Oberyn Martell', 'M', 22, 504)

Select \* from Donor **Table:**Donor



**2.Blood\_Price:**

**Creation:**

Create sequence Blood\_Price\_test

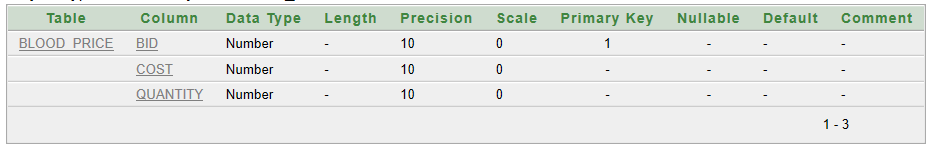
Start with 5

Increment by 2

Maxvalue 999999

Nocycle

Nocache **Table:**Blood\_Price (Description)

****

Create table Blood\_Price (

BID number(10),

Cost number(10),

Quantity number(10)

)

Alter table Blood\_Price add constraint p18 primary key (BID)

Alter table Blood\_Price modify (Cost NOT NULL)

Alter table Blood\_Price modify (Quantity NOT NULL)

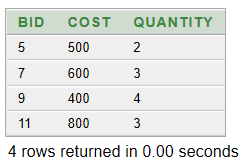
DescBlood\_Price

**Insertion:**

Insert into Blood\_Price (BID,cost,Quantity)

Values (Blood\_Price\_test.nextval, 500, 2)

Insert into Blood\_Price (BID,cost,Quantity)**Table:**Blood\_Price

Values (Blood\_Price\_test.nextval, 600, 3)

Insert into Blood\_Price (BID,cost,Quantity)

Values (Blood\_Price\_test.nextval, 400, 4)

Insert into Blood\_Price (BID,cost,Quantity)

Values (Blood\_Price\_test.nextval, 800, 3)

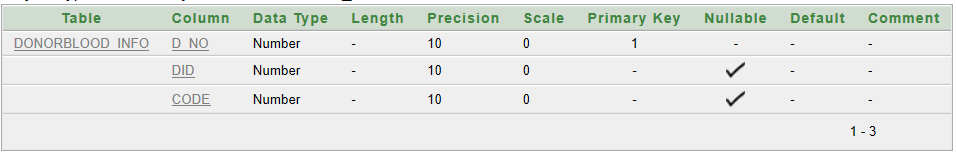
Select \* from Blood\_Price

**3.DonorBlood\_info:**

**Creation:**

Create sequence DonorBlood\_info\_test

Start with 100 **Table:**DonorBlood\_info(Description)

Increment by 2

Maxvalue 999999

Nocycle

Nocache

Create table DonorBlood\_info (

D\_no number(10),

DID number(10),

Code number(10)

)

Alter table DonorBlood\_info add constraint p19 primary key (D\_no)

Alter table DonorBlood\_info add constraint p20 foreign key (DID) references Donor (DID)

Alter table DonorBlood\_info add constraint p21 foreign key (Code) references Blood (Code)

DescDonorBlood\_info

**Insertion:**

Insert into DonorBlood\_info(D\_no, DID, Code)

Values (DonorBlood\_info\_test.nextval, 3, 20)

Insert into DonorBlood\_info (D\_no, DID, Code)

Values (DonorBlood\_info\_test.nextval, 4, 21)

Insert into DonorBlood\_info (D\_no, DID, Code)

Values (DonorBlood\_info\_test.nextval, 5, 23)

Insert into DonorBlood\_info (D\_no, DID, Code)

Values (DonorBlood\_info\_test.nextval, 6, 22)

Select \* from DonorBlood\_info

 **Table:**DonorBlood\_info

**4.Donor\_Phonebook:**

**Creation:**

Create table Donor\_Phonebook (

DID number(10),

D\_phone number(20)

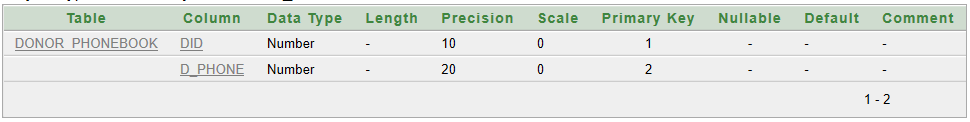
)

Alter table Donor\_Phonebook add constraint p22 primary key (DID, D\_phone)

Alter table Donor\_Phonebook add constraint p23 unique (D\_phone)

Alter table Donor\_Phonebook modify (D\_phone NOT NULL)

DescDonor\_Phonebook

**Table:**Donor\_Phonebook(Description)

**Insertion:**

Insert into Donor\_PhonebookValues (3,118882)

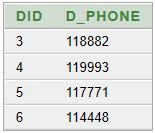
Insert into Donor\_PhonebookValues (4,119993)

Insert into Donor\_PhonebookValues (5,117771)

Insert into Donor\_PhonebookValues (6,114448)

Select \* from Donor\_Phonebook

**Table:**Donor\_Phonebook



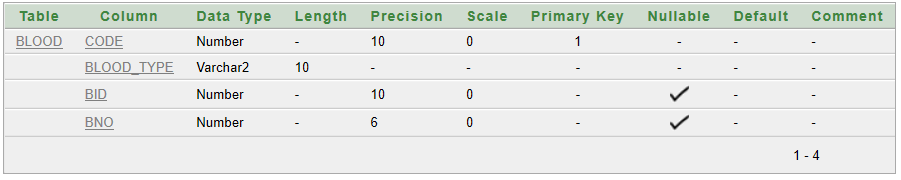
**5.Blood:**

**Creation:**

Create sequence Blood\_test

Start with 20

Increment by 1 **Table:**Blood(Description)

Maxvalue 999999

Nocycle

Nocache

Create table Blood (

Code number(10),

Blood\_type varchar2(10),

BID number (10),

BNO number (6)

)

Alter table Blood add constraint p17 primary key (Code)

Alter table Blood modify (Blood\_type NOT NULL)

DescBlood

**Insertion:**

Insert into Blood (Code, Blood\_type, BID, BNO)

Values (Blood\_test.nextval, 'A+', 5, 1001)

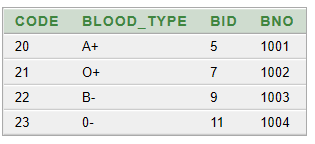
Insert into Blood (Code, Blood\_type, BID, BNO)

Values (Blood\_test.nextval, 'O+', 7, 1002)

Insert into Blood (Code, Blood\_type, BID, BNO)

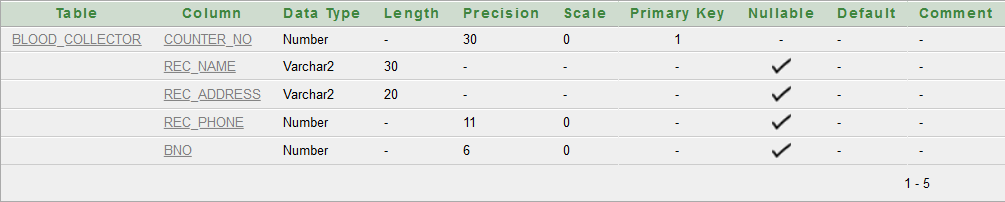
Values (Blood\_test.nextval, 'B-', 9, 1003)

Insert into Blood (Code, Blood\_type, BID, BNO) **Table:**Blood

Values (Blood\_test.nextval, '0-', 11, 1004)

Select \* from Blood

**6.Blood\_Collector:**

**Creation:**Create sequence collector\_test  
Start with 501 **Table:**Blood\_Collector (Description)  
Increment by 1  
Maxvalue 510   
Nocycle  
Nocache

Create table Blood\_Collector (  
Counter\_no number (30),  
Rec\_name varchar2 (30),  
Rec\_address varchar2 (5),  
Rec\_Phone number (11),  
BNO Number (6))

Alter table Blood\_Collector add constraint p11 primary key (Counter\_no)  
Alter table Blood\_Collector add constraint p12 foreign key (BNO) references Blood\_Bank (BNO)   
Alter table Blood\_Collector add constraint p13 unique (Rec\_phone)

DescBlood\_Collector

**Insertion:**

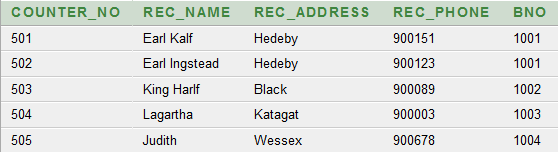
Insert into Blood\_Collector (Counter\_no, Rec\_name, Rec\_address, Rec\_Phone, BNO)   
Values (Collector\_test.nextval, 'Earl Kalf', 'Hedeby', 900151, 1001)

Insert into Blood\_Collector (Counter\_no, Rec\_name, Rec\_address, Rec\_Phone, BNO)   
Values (Collector\_test.nextval, 'Earl Ingstead','Hedeby', 900123, 1001)

Insert into Blood\_Collector (Counter\_no, Rec\_name, Rec\_address, Rec\_Phone, BNO)   
Values (Collector\_test.nextval, 'King Harlf', 'Black', 900089, 1002)

Insert into Blood\_Collector (Counter\_no, Rec\_name, Rec\_address, Rec\_Phone, BNO)   
Values (Collector\_test.nextval, 'Lagartha', 'Katagat', 900003, 1003)

Insert into Blood\_Collector (Counter\_no, Rec\_name, Rec\_address, Rec\_Phone, BNO)   
Values (Collector\_test.nextval, 'Judith', 'Wessex', 900678, 1004)

Select\*  
From Blood\_Collector**Table:**Blood\_Collector

**7. Hospital:**

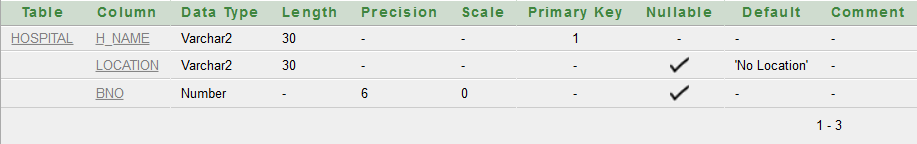
**Creation:**

Create table Hospital (  
H\_name varchar2 (30),  
Location varchar2 (30),  
BNO number (6))

Alter table Hospital add constraint p5 primary key (H\_name)

Alter table Hospital add constraint p6 foreign key (BNO) references Blood\_Bank (BNO)

Alter table Hospital modify Location default 'No Location'

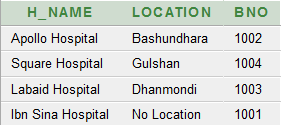
DescBlood\_Bank**Table:**Hospital (Description)

**Insertion:**

Insert into Hospital (H\_name, Location, BNO)

Values('Apollo Hospital', 'Bashundhara', 1002)

Insert into Hospital (H\_name, Location, BNO)

Values('Square Hospital', 'Gulshan', 1004)  
**Table:** Hospital

Insert into Hospital (H\_name, Location, BNO)

Values('Labaid Hospital', 'Dhanmondi', 1003)

Insert into Hospital (H\_name, BNO)

Values ('IbnSina Hospital', 1001)

Select\*  
From Hospital

**8.Hospital\_Phonebook:**

**Creation:**

Create table Hospital\_Phonebook(

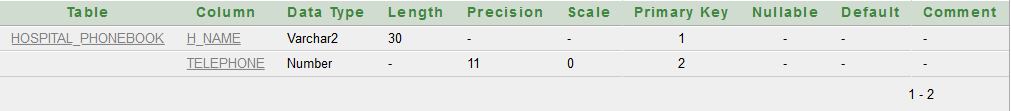
H\_name varchar2(30),

Telephone number (11)

)

Alter table Hospital\_Phonebook add constraint p7 primary key(H\_name, Telephone)

Alter table Hospital\_Phonebook add constraint p8 unique(Telephone)

DescHospital\_Phonebook  
**Table:**Hospital\_Phonebook (Description)

**Insertion:**

Insert into Hospital\_Phonebook (H\_name, Telephone)

Values ('Apollo Hospital', 01700201201)

Insert into Hospital\_Phonebook (H\_name, Telephone)

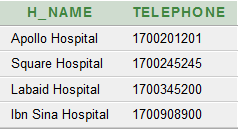
Values ('Square Hospital', 01700245245)

Insert into Hospital\_Phonebook (H\_name, Telephone)

Values ('Labaid Hospital', 01700345200)

Insert into Hospital\_Phonebook (H\_name, Telephone)

Values ('IbnSina Hospital', 01700908900)

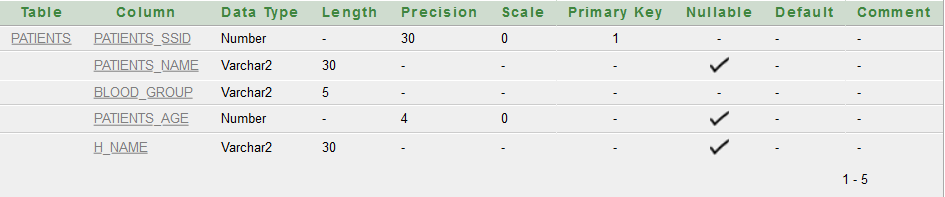
**Table:**Hospital\_Phonebook

Select\*

From Hospital\_Phonebook

**9. Patients:**

**Creation:**

Create sequence Patients\_test  
Start with 21001  
Increment by 1  
Maxvalue 21010 **Table:** Patients (Description)  
Nocycle  
Nocache

Create table Patients (  
Patients\_SSID number (30),  
Patients\_name varchar2 (30),  
Blood\_group varchar2 (5),  
Patients\_age number (4),  
H\_name varchar2 (30))

Alter table Patients add constraint p9 primary key(Patients\_SSID)  
Alter table Patients add constraint p10 Foreign key (H\_NAME) references Hospital (H\_name)   
Alter table Patients modify (BLOOD\_GROUP NOT NULL)

Desc Patients

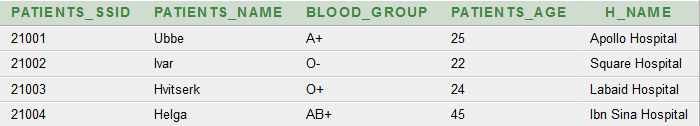
**Insertion:**

Insert into Patients(Patients\_SSID, Patients\_name, Blood\_group, Patients\_age, H\_name)   
Values(Patients\_test.nextval, 'Ubbe', 'A+', 25, 'Apollo Hospital')

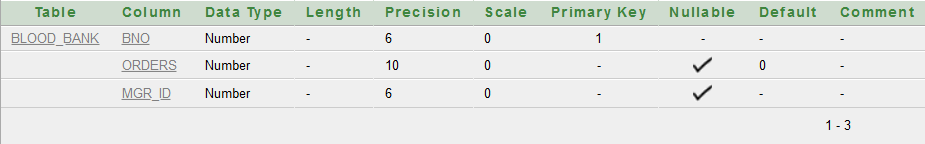
Insert into Patients(Patients\_SSID, Patients\_name, Blood\_group, Patients\_age, H\_name)   
Values(Patients\_test.nextval, 'Ivar', 'O-', 22, 'Square Hospital')

Insert into Patients(Patients\_SSID, Patients\_name, Blood\_group, Patients\_age, H\_name)   
Values(Patients\_test.nextval, 'Hvitserk', 'O+', 24,'Labaid Hospital')

Insert into Patients(Patients\_SSID, Patients\_name, Blood\_group, Patients\_age, H\_name)   
Values(Patients\_test.nextval, 'Helga', 'AB+', 45, 'IbnSina Hospital')

Select\*  
From Patients  
**Table:** Patients

**10.Blood\_Bank:**

**Creation:**Create sequence Blood\_bank\_testStart with 1001**Table:**Blood\_Bank (Description)Increment by 1Maxvalue 1010NocycleNocache

Create table Blood\_Bank (  
BNO number (6),  
Orders number (10),  
Mgr\_ID number(6))

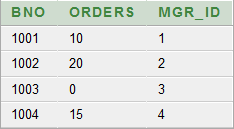
Alter table Blood\_Bank add constraint p3 primary key (BNO)  
Alter table Blood\_Bank add constraint p4 Foreign key (Mgr\_ID)references Manager (Mgr\_ID)  
Alter table Blood\_Bank modify Orders default 0

DescBlood\_Bank

**Insertion:**

Insert into Blood\_Bank (BNO, Orders, Mgr\_ID)   
Values(Blood\_Bank\_test.nextval,10, 1)

Insert into Blood\_Bank (BNO, Orders, Mgr\_ID)   
Values(Blood\_Bank\_test.nextval,20, 2)

Insert into Blood\_Bank (BNO,Mgr\_ID) **Table:**Blood\_Bank  
Values(Blood\_Bank\_test.nextval, 3)

Insert into Blood\_Bank (BNO, Orders,Mgr\_ID)   
Values(Blood\_Bank\_test.nextval,15, 4)

Select\*  
From Blood\_Bank

**11.Manager:**

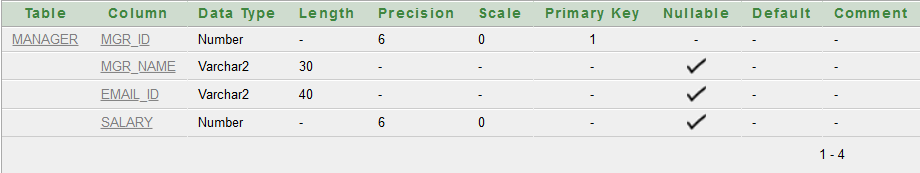
**Creation:**

Create sequence Manager\_test

Start with 1

Increment by 1

Maxvalue 10**Table:** Manager (Description)

nocycle

nocache

Create table Manager (

Mgr\_ID number (6),

Mgr\_name varchar2 (30),

Email\_ID varchar2 (40),

Salary number (6)

)

Alter table Manager add constraint p1 primary key (Mgr\_ID)

Alter table Manager add constraint p2 unique (Email\_ID)

Desc Manager

**Insertion:**

Insert into Manager(Mgr\_ID, Mgr\_name, Email\_ID, Salary)

Values(Manager\_test.nextval,'Rangner','rangner@gmail.com',145000)

Insert into Manager(Mgr\_ID, Mgr\_name, Email\_ID, Salary)

Values(Manager\_test.nextval,'Rollo','rollo@gmail.com',165000)

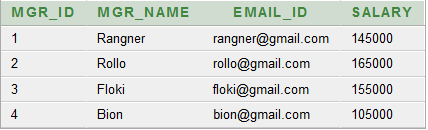
Insert into Manager(Mgr\_ID, Mgr\_name, Email\_ID, Salary)

Values(Manager\_test.nextval,'Floki','floki@gmail.com',155000)

Insert into Manager(Mgr\_ID, Mgr\_name, Email\_ID, Salary)

Values(Manager\_test.nextval,'Bion','bion@gmail.com',105000)

Select\***Table:** Manager

From Manager

**Queries:**1. Find the Counter No, Receptionist Name and Address from blood collector who have same Address as king kalf. Excludes Earl Kalf.   
  
Answer:

*Select counter\_no,rec\_name,rec\_address*

*From blood\_collectorWhererec\_address = (select rec\_address  
from blood\_collector  
where rec\_name='Earl Kalf') and rec\_name<> 'Earl Kalf’*

2. Find the Patient name, location, hospital name from patients and Hospital. Where patient name starts with ‘H’ and ends with ‘k’.  
  
Answer:  
  
*Select patients\_name,location,Patients.H\_name  
 From Patients,Hospital  
 Where patients.H\_name=hospital.H\_name  
 And Patients\_name like 'H%k'*

3. Find the Manager name from Blood Bank and Manager, where orders greater than 10 and BNO=1004.  
  
Answer:  
  
*Select Mgr\_name  
 from Blood\_bank, Manager  
 Where Blood\_bank.mgr\_id = Manager.mgr\_id  
 and orders>10 and BNO = 1004*

4. Create a view named Blood sample with code and Blood type from Blood  
  
Answer:  
  
*create view Blood\_sample as  
 Select code,blood\_type  
 From blood  
 With check option constraint c90*

5. Show all the Manager name, Email id, Annual salary “Yearly salary”, from Manager.

Answer:  
  
*Select Mgr\_name,Email\_id,Salary\*12 "Annual Salary"  
 From Manager*

6. Show minimum age of patients from every Blood\_Group and order by Blood\_Group.  
  
Answer:  
  
*Select min (patients\_age)  
 from patients  
 group by blood\_group  
 order by blood\_group*

7.Display the names of donors who have A+ blood and are at least 20 years old.

Answer:

*Select D\_Name  
from Donor  
where code= (Select code  
from blood  
where blood\_type='A+')  
and D\_age>=20*

8.Display the blood group and quantity available which has the second least price.

Answer:

*Select Blood\_Type  
from Blood  
where Bid = (Select Bid  
from Blood\_Price  
where cost = (Select min (cost)   
from Blood\_Price  
where cost > (Select min (cost)   
FromBlood\_Price)))*

9.Display the name of blood collector who registered Ned Stark. Also display the counter number in which he was registered.

Answer:

*Select Rec\_Name  
from Blood\_Collector  
where counter\_no = (Select counter\_no  
from donor where D\_Name='Ned Stark')*

10.Display the name, age, DID and Address of the youngest blood donor.

Answer:

*Select D\_Name,D\_Age,D\_Address  
from donor  
where D\_Age = (Select min(D\_age)  
from Donor)*

11.Display all the blood types along with their price and quantity available at the blood bank with BNO=1003

Answer:

*Select b.Blood\_Type, bp.cost, bp.quantity  
FromBlood\_Pricebp,Blood b  
where bp.BID = b.BID*

12.Display the name and address of the donors who have the most expensive blood type.

Answer:

*Select D\_Name, D\_Address  
from Donor  
Where code= (Select code   
from Blood  
Where BID= (Select BID  
from Blood\_Price  
where cost = (Select max (cost)   
from Blood\_Price)))*

**Relational Algebra**:

1. Find Out all details of Manager whose Salary = 145000.

Answer:

*σSalary =145000 (Manager)*

2. Find out patients name whose Hospital is Square Hospital.

Answer:

*ΠPATIENTS\_NAME [σH\_name=”Square Hospital” (Patients)]*

3. Find out patients name, Hospital name, Hospital Location whose name is Ubbe.

Answer:

*ΠPATIENTS\_NAME, H\_NAME, LOCATION [σPATIENTS\_NAME =”Ubbe”(PATIENTS⟗HOSPITAL)]*

4.Find out donor name, did and age of donors who are registered to counter number 501.

Answer:

*ΠD\_NAME, D\_AGE, D\_ADDRESS[σCOUNTER\_NO =501 (DONOR)]*

5. Find the Receptionist Name from blood collector whose Address is Hedeby and counter no greater than 503.

Answer:

*ΠREC\_NAME [σREC\_ADDRESS =”Hedeby” and COUNTER\_NO>503(BLOOD\_COLLECTOR)]*

**Conclusion:**

This database management system will surely solve the unavailability of blood and save many lives. Moreover, this system will save a lot of time, money and efforts. The people of Bangladesh will surely be benefited from this system as this innovative medium brings not one but several blood banks into one place and the details of blood can be kept safe in an ordered way.