

BLOOD BANK SYSTEM

Tables to be created:

- Donor
- Recipient
- Blood_Bank_Manager
- Staff
- Blood_Specimen
- Disease_finder
- Hospital_info
- City

Relational Schemas

Donor Table:

Attribute Name	Description	Data Type
bd_id	Blood Donor's id	Int/number
bd_name	Blood Donor's Name	Varchar
bd_age	Blood donor's Age	Int /number
bd_sex	Blood Donor's Sex	Char
bd_bgrp	Blood Donor's blood group	Varchar
bd_regdate	Registration Date of donor	Date
reco_id	Id of Staff	Int/number
city_id	City Id	Int/number

- The relationship between Staff and Donor is 1 to many. That's why **primary key of Staff** is used as a **foreign key in Donor**.
- The relationship with City and Donor is 1 to many. That's why **primary key of City** is used as a **foreign key in Donor**.

Recipient Table:

Attributes Name	Description	Data Type
reci_id	Recipient's Id	Int/number
reci_name	Recipient's Name	Varchar
reci_age	Recipient's Age	Int
reci_sex	Recipient's Sex	char
reci_bgrp	Recipient's Blood Group	Varchar
reci_bqnty	Recipient's Blood Quantity	Int
reci_reg_date	Recipient's Registration date	Date
reci_id	Recording Staff's Id	int
City_id	City's Unique id	Int
M_id	Blood Bank Manager's Id	int

- The **primary key of Staff** is used as **foreign key in Blood Recipient**.
- The **primary key of City** is used as a **foreign key in Blood Recipient**.
- The **primary key of Blood Specimen** is used as a **foreign key in Blood Recipient**.

City Table:

Attributes Name	Description	Data Type
city_id	City's Unique Id	Int
city_name	City's name	varchar

The **primary key of City** is used as a **foreign key in Recipients, Donor and Hospital info**.

Staff Table:

Attributes Name	Description	Data Type
reco_id	Recording Staff's id	int
reco_name	Recording Staff's Name	varchar
reco_PhNo	Recording Staff's Phone number	Int/number

The **primary key** of Recording staff is used as a **foreign key** in Donor and Recipient.

Blood Specimen Table:

Attributes Name	Description	Data Type
specimen_No	Blood Sample's unique id	Int
b_grp	Blood Group	Varchar
Status	Whether blood is pure or not?	Int
M_id	Blood Bank Manager's id	Int
Dfind_id	Disease Finder's unique id	int

- The **primary key** of Disease finder is used as a **foreign key** in Blood Specimen.
- The **primary key** of Blood Bank manager is used as a **foreign key** in Blood Specimen

Disease Finder Table:

Attributes	Description	Data Type
dfind_id	Disease Finder's unique id	Int
dfind_name	Disease Finder's name	Varchar
dfind_phNo	Disease Finder's phone number	Int/number

The **primary key** of Disease finder is used as a **foreign key** in Blood Specimen.

Blood Bank Manager Table:

Attributes	Description	Data Type
M_id	Blood Bank Manager's id	Int
m_name	Blood Bank Manager's name	Varchar
m_phNo	Blood Bank Manager's phone no	Int/number

The **primary key** of Blood Bank Manager is used as a **foreign key** in Blood Specimen, Recipient and Hospital info.

Hospital info Table:

Attributes	Description	Data Type
hosp_id	Hospital's unique id	Int
hosp_name	Hospital's name	Varchar
hosp_needed_Bgrp	Blood group needed by hospital	Varchar
hosp_needed_qnty	Quantity of blood group needed	Int
city_id	City's unique id	Int
M_id	Blood Bank Manger's id	int

- The **primary key** of City is used as a **foreign key** in Hospital info.
- The **primary key** of Blood Bank manager is used as a **foreign key** in Hospital info.

Creating a Table and Inserting the values and Select a table:

Donor Table:

```
SQL> CREATE table Donor (bd_id int , bd_Name varchar (15), bd_age int , bd_sex char (2), bd_bgrp var  
char (5), bd_regdate date , reco_id int , city_id int );
```

Table created.

```
SQL> insert into Donor values(&bd_id , '&bd_name',&bd_age,'&bd_sex','&bd_bgrp','&bd_regdate',&reco_  
id,&city_id);  
Enter value for bd_id: 24580  
Enter value for bd_name: Roman  
Enter value for bd_age: 26  
Enter value for bd_sex: M  
Enter value for bd_bgrp: 0+ve  
Enter value for bd_regdate: 12-MAR-2023  
Enter value for reco_id: 10225  
Enter value for city_id: 632012  
old 1: insert into Donor values(&bd_id , '&bd_name',&bd_age,'&bd_sex','&bd_bgrp','&bd_regdate',&  
new 1: insert into Donor values(24580 , 'Roman',26,'M','0+ve','12-MAR-2023',10225,632012)
```

1 row created.

```
SQL> select * from donor;
```

BD_ID	BD_NAME	BD AGE	BD	BD_BG	BD_REGDAT	RECO_ID	CITY_ID
24580	Roman	26	M	0+ve	12-MAR-23	10225	632012
34790	Shreya	23	F	A+ve	02-AUG-23	8790	602123
57415	Urindha	27	F	B+ve	17-APR-22	5587	630741

Recipient Table:

```
SQL> CREATE table Recipient (reci_id int , reci_name varchar(15),reci_age int , reci_sex char(2),rec  
i_bgrp varchar(5),reci_bqnty int , reci_reg_date date , reco_id int , city_id int , M_id int);
```

Table created.

```
SQL> insert into Recipient values(&reci_id , '&reci_name' , &reci_age , '&reci_sex','&reci_bgrp' ,  
&reci_bqnty , '&reci_reg_date' , &reco_id , &city_id , &M_id);  
Enter value for reci_id: 12389  
Enter value for reci_name: Murali  
Enter value for reci_age: 39  
Enter value for reci_sex: M  
Enter value for reci_bgrp: A+ve  
Enter value for reci_bqnty: 1  
Enter value for reci_reg_date: 25-OCT-2023  
Enter value for reco_id: 7410  
Enter value for city_id: 602123  
Enter value for m_id: 1502  
old 1: insert into Recipient values(&reci_id , '&reci_name' , &reci_age , '&reci_sex','&reci_bgrp'  
new 1: insert into Recipient values(12389 , 'Murali' , 39 , 'M','A+ve' , 1 , '25-OCT-2023' , 7410
```

1 row created.

```
SQL> select * from Recipient;
```

RECI_ID	RECI_NAME	RECI_AGE	RE	RECI_	RECI_BQNTY	RECI_REG_	RECO_ID	CITY_ID	M_ID
12389	Murali	39	M	A+ve	1	25-OCT-23	7410	602123	1502
64785	Jaya	42	F	B+ve	1	23-APR-24	6702	632012	1579
45021	Selvi	44	F	O+ve	1	11-OCT-22	1089	630741	1520

```
SQL> commit;
```

City Table:

```
SQL> create table city(city_id int , city_name varchar(15));
```

Table created.

```
SQL> insert into city values(&city_id , '&city_name');
```

Enter value for city_id: 632012

Enter value for city_name: Salem

old 1: insert into city values(&city_id , '&city_name')

new 1: insert into city values(632012 , 'Salem')

1 row created.

```
SQL> select * from city;
```

CITY_ID	CITY_NAME
632012	Salem
602123	Anna Nagar
630741	Coimbatore

```
SQL> commit;
```

Commit complete.

Staff Table:

```
SQL> create table staff(reco_id int , reco_name varchar(15) , reco_phno int);
```

Table created.

```
SQL> insert into staff values(&reco_id , '&reco_name', &reco_phno);
Enter value for reco_id: 10225
Enter value for reco_name: Nikhila
Enter value for reco_phno: 7895410236
old 1: insert into staff values(&reco_id , '&reco_name', &reco_phno)
new 1: insert into staff values(10225 , 'Nikhila', 7895410236)
```

1 row created.

```
SQL> select * from staff;
```

RECO_ID	RECO_NAME	RECO_PHNO
10225	Nikhila	7895410236
8790	Mathew	9410365278
5587	Reena	6410393287

```
SQL> commit;
```

Commit complete.

Blood Specimen Table:

```
SQL> create table Blood_specimen(Specimen_no int , B_grp varchar(5),Status int , M_id int , Dfind_id int);
```

Table created.

```
SQL> insert into Blood_specimen values(&Specimen_no , '&B_grp' , &Status , &M_id , &Dfind_id);
Enter value for specimen_no: 58947
Enter value for b_grp: 0+ve
Enter value for status: 1
Enter value for m_id: 1520
Enter value for dfind_id: 560
old 1: insert into Blood_specimen values(&Specimen_no , '&B_grp' , &Status , &M_id , &Dfind_id)
new 1: insert into Blood_specimen values(58947 , '0+ve' , 1 , 1520 , 560)
```

1 row created.

```
SQL> select * from Blood_Specimen;
```

SPECIMEN_NO	B_GRP	STATUS	M_ID	DFIND_ID
58947	0+ve	1	1520	560
12548	A+ve	0	1502	905
47896	B+ve	1	1579	905

```
SQL> commit;
```

Commit complete.

Disease finder:

```
SQL> create table Disease_finder(Dfind_id int , Dfind_name varchar(15) , Dfind_phno int);
```

Table created.

```
SQL> insert into Disease_finder values(&Dfind_id , '&Dfind_name' , &Dfind_phno);
```

Enter value for dfind_id: 560

Enter value for dfind_name: Kevin

Enter value for dfind_phno: 8403298741

```
old 1: insert into Disease_finder values(&Dfind_id , '&Dfind_name' , &Dfind_phno)
```

```
new 1: insert into Disease_finder values(560 , 'Kevin' , 8403298741)
```

1 row created.

```
SQL> select * from Disease_finder;
```

DFIND_ID	DFIND_NAME	DFIND_PHNO
560	Kevin	8403298741
905	Khan	8103697410
4520	Uetri	9034720156
1502	Shalini	6302147895

```
SQL> commit;
```

Commit complete.

Blood Bank Manager Table:

```
SQL> create table Blood_Bank_Manager(M_id int ,M_name varchar(15),M_phno int);
```

Table created.

```
SQL> insert into Blood_Bank_Manager values(&M_id , '&M_name',&M_phno);
```

Enter value for m_id: 1502

Enter value for m_name: Vishnu

Enter value for m_phno: 7896320154

```
old 1: insert into Blood_Bank_Manager values(&M_id , '&M_name',&M_phno)
```

```
new 1: insert into Blood_Bank_Manager values(1502 , 'Vishnu',7896320154)
```

1 row created.

```
SQL> select * from Blood_Bank_Manager;
```

M_ID	M_NAME	M_PHNO
1502	Vishnu	7896320154
1579	Kavya	630124587
1520	Moorthi	9874036987

```
SQL> commit;
```

Commit complete.

Hospital info Table:

```
SQL> create table Hospital_info(Hosp_id int , Hosp_name varchar(15) , Hosp_needed_Bgrp varchar(5),Hosp_needed_qnty int , city_id int , M_id int);
```

Table created.

```
SQL> insert into Hospital_info values(&Hosp_id , ' &Hosp_name' , '&Hosp_needed_bgrp' , &Hosp_needed_qnty, &City_id , &M_id);
Enter value for hosp_id: 21589
Enter value for hosp_name: Kavery
Enter value for hosp_needed_bgrp: 0+ve
Enter value for hosp_needed_qnty: 1
Enter value for city_id: 632012
Enter value for m_id: 1502
old 1: insert into Hospital_info values(&Hosp_id , ' &Hosp_name' , '&Hosp_needed_bgrp' , &Hosp_needed_qnty, &City_id , &M_id);
new 1: insert into Hospital_info values(21589 , ' Kavery' , '0+ve' , 1, 632012 , 1502)
```

1 row created.

```
SQL> select * from Hospital_info;
```

HOSP_ID	HOSP_NAME	HOSP_	HOSP_NEEDED_QNTY	CITY_ID	M_ID
21589	Kavery	0+ve	1	632012	1502
12385	Appolo	A+ve	1	602123	1579
32145	KMCH	B+ve	1	630741	1520

```
SQL> commit
2 ;
```

Commit complete.

Thus, the creation, insertion and selection of the table is done. In the Blood_Specimen table there will be column named Status there the data 1 and 0 will be placed i.e., 1- The Blood is pure and 0 – The Blood is not pure.

Queries:

Rename:

Renaming the old table name to new table name.

```
SQL> Rename Staff to Recording_Staff;
```

Table renamed.

```
SQL> |
```

```
SQL> select * from Recording_Staff;
```

RECO_ID	RECO_NAME	RECO_PHNO
10225	Nikhila	7895410236
8790	Mathew	9410365278
5587	Reena	6410393287

```
SQL>
```

Here the Table name Staff is renamed as Recording_Staff.

Alter:

This is used to add column in the table.

```
SQL> alter table Blood_Bank_Manager add age int;
```

Table altered.

```
SQL> |
```

```
SQL> select * from Blood_Bank_Manager;
```

M_ID	M_NAME	M_PHNO	AGE
1502	Vishnu	7896320154	
1579	Kavya	630124587	
1520	Moorthi	9874036987	

```
SQL> |
```

Here the column named as age is added to the table Blood_Bank_Manager.

To drop the column using alter:

```
SQL> alter table Blood_Bank_Manager drop Column age;
```

Table altered.

```
SQL> select * from Blood_Bank_Manager;
```

M_ID	M_NAME	M_PHNO
1502	Vishnu	7896320154
1579	Kavya	630124587
1520	Moorthi	9874036987

```
SQL> |
```

Renaming a column name using alter:

```
SQL> alter table Blood_Bank_Manager RENAME column M_phno to M_ph;
```

Table altered.

```
SQL> select * from Blood_Bank_Manager;
```

M_ID	M_NAME	M_PH
1502	Vishnu	7896320154
1579	Kavya	630124587
1520	Moorthi	9874036987

```
SQL>
```

Update:

```
SQL> update Blood_Bank_Manager set M_name = 'Khalid' where M_name = 'Moorthi';
```

1 row updated.

```
SQL> select * from Blood_bank_Manager;
```

M_ID	M_NAME	M_PH
1502	Vishnu	7896320154
1579	Kavya	630124587
1520	Khalid	9874036987

```
SQL>
```

Here in the above image the name Moorthi in the M_Name column is modified into Khalid.

Rollback:

```
SQL> rollback;
```

Rollback complete.

```
SQL>
```

Savepoint:

```
SQL> savepoint Donor;
```

Savepoint created.

```
SQL> savepoint Blood_Bank_Manager;
```

Savepoint created.

```
SQL> |
```

Copy the data and structure of the table:

```
SQL> create table donor_c as select * from donor;
```

Table created.

```
SQL> select * from donor_c;
```

BD_ID	BD_NAME	BD_AGE	BD	BD_BG	BD_REGDAT	RECO_ID	CITY_ID
24580	Roman	26	M	O+ve	12-MAR-23	10225	632012
34790	Shreya	23	F	A+ve	02-AUG-23	8790	602123
57415	Urindha	27	F	B+ve	17-APR-22	5587	630741

Delete:

```
SQL> delete from donor_c where city_id = 632012;
```

1 row deleted.

```
SQL> select * from donor_c;
```

BD_ID	BD_NAME	BD_AGE	BD	BD_BG	BD_REGDAT	RECO_ID	CITY_ID
34790	Shreya	23	F	A+ve	02-AUG-23	8790	602123
57415	Urindha	27	F	B+ve	17-APR-22	5587	630741

```
SQL> |
```

Truncate:

```
SQL> truncate table donor_c;
```

Table truncated.

```
SQL> select * from donor_c;
```

no rows selected

```
SQL> |
```

Drop:

```
SQL> drop table donor_c;
```

Table dropped.

```
SQL> select * from donor_c;
```

```
select * from donor_c
```

*

ERROR at line 1:

ORA-00942: table or view does not exist

```
SQL>
```

Flashback:

```
SQL> flashback table donor_c to before drop;
```

Flashback complete.

```
SQL> select * from donor_c;
```

BD_ID	BD_NAME	BD_AGE	BD	BD_BG	BD_REGDAT	RECO_ID	CITY_ID
24580	Roman	26	M	0+ve	12-MAR-23	10225	632012
34790	Shreya	23	F	A+ve	02-AUG-23	8790	602123
57415	Urindha	27	F	B+ve	17-APR-22	5587	630741

```
SQL>
```

To delete the table from bin folder:

```
SQL> drop table donor_c;
```

Table dropped.

```
SQL> purge table donor_c;
```

Table purged.

```
SQL> select * from donor_c;
```

```
select * from donor_c
```

*

ERROR at line 1:

ORA-00942: table or view does not exist

```
SQL> |
```
