ORGAN DONATION MANAGEMENT SYSTEM

SY COMP B(B1)

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Table creation commands

```
create table Receiver_Basic(ReceiverID varchar(50) Primary key,
ReceiverName varchar(100) not null, DOB date not null, Gender
varchar(10) not null, ContactNo dec(10), Address varchar(150),
BloodGroup varchar(10) not null);

create table Receiver_Kidney(ReceiverID varchar(100) primary key
, TissueType varchar(100), SugarLevel int, foreign key
(ReceiverID) references Receiver_Basic(ReceiverID));

create table Receiver_Pancreas(ReceiverID varchar(100) primary
key , BMI float,foreign key (ReceiverID) references
Receiver_Basic(ReceiverID));

create table Receiver_Cornea(ReceiverID varchar(100) primary
key, ActiveDiseases varchar(100),foreign key (ReceiverID)
references Receiver_Basic(ReceiverID));

create table Receiver_Liver(ReceiverID varchar(100) primary key,
SugarLevel int, TissueType varchar(100), BCF
varchar(100),foreign key (ReceiverID) references
Receiver_Basic(ReceiverID));

create table Expired_Organs(DonorID varchar(50), Category
varchar(20) check (Category
in('Kidney','Cornea','Liver','Pancreas')), ExpirationDate date
not null );
```

```
create table Successful_Transactions(Transaction_ID
varchar(100), Transaction_date date, Donor_ID varchar(50),
Reciever_ID varchar(100), Status varchar(50));

create table Donor_Basic(DonorID varchar(50) Primary key,
DonorName varchar(100) not null, DOB date not null, Gender
char(1) not null, ContactNo dec(10), Address varchar(150),
BloodGroup varchar(10) not null, MortalityStatus
varchar(4),DonationDate date );

create table Donor_Pancreas(DonorID varchar(50), BMI
decimal(5,2), foreign key (DonorID) references
Donor_Basic(DonorID) on delete cascade );

create table Donor_Liver(DonorID varchar(50),SugarLevel int,
TissueType varchar(50),BloodClottingFactor varchar(50), foreign
key(DonorID) references Donor_Basic(DonorID) on delete cascade
);

create table Donor_Cornea(DonorID varchar(50), ActiveDiseases
varchar(100),  foreign key (DonorID) references
Donor_Basic(DonorID) on delete cascade );

create table Donor_Kidney(DonorID varchar(50), TissueType
varchar(60), SugarLevel int,  foreign key (DonorID) references
Donor_Basic(DonorID) on delete cascade);

create table Login(Username varchar(50) Primary key, Passwrd
varchar(50) not null);
```

Testing queries

1. Display list of ids having same bg (general)

```
select distinct(donor_basic.donor_id) from donor_basic
inner join receiver_basic
on donor_basic.bg = receiver_basic.bg;
```

2. Display list of pancreas on basis of BMI and don_date is less than 10 years.

```
select donor_basic.donor_id, receiver_basic.receiver_id
from donor_basic
inner join receiver_basic
on donor_basic.bg=receiver_basic.bg
inner join donor_pancreas
on donor_basic.donor_id=donor_pancreas.donor_id
inner join rec_pancreas
on receiver_basic.receiver_id=rec_pancreas.receiver_id
where donor_pancreas.BMI>30 and rec_pancreas.BMI>30 and
datediff(curdate(),don_date)<3650;
```

3. Display list of cornea on basis of act_dis

```
select donor_basic.donor_id, receiver_basic.receiver_id
from donor_basic
inner join receiver_basic
on donor_basic.bg=receiver_basic.bg
inner join donor_cornea
on donor_basic.donor_id=donor_cornea.donor_id
inner join rec_cornea
on receiver_basic.receiver_id=rec_cornea.receiver_id
where donor_cornea.act_dis like "null" and rec_cornea.act_dis
like "hypertension";
```

```
Output :
 donor_id receiver_id
123  789
```

4. Display list of liver on sugar_levels, tissue_type,blood_clotting_factor

```
select donor_basic.donor_id, receiver_basic.receiver_id
from donor_basic
inner join receiver_basic
on donor_basic.bg=receiver_basic.bg
inner join donor_liver
on donor_basic.donor_id=donor_liver.donor_id
inner join rec_liver
on receiver_basic.receiver_id=rec_liver.receiver_id
```

```
where donor_liver.sugar_lev < 130 and rec_liver.tiss_type like
"HLA%" and donor_liver.bld_factor=rec_liver.bld_factor;
```

5. Display list of kidney on basis of sug_lev and tiss_type

```
select donor_basic.donor_id, receiver_basic.receiver_id
from donor_basic
inner join receiver_basic
on donor_basic.bg=receiver_basic.bg
inner join donor_kidn
on donor_basic.donor_id=donor_kidn.donor_id
inner join rec_kidn
on receiver_basic.receiver_id=rec_kidn.receiver_id
where donor_kidn.sugar_lev <130 and
donor_kidn.tiss_type=rec_kidn.tiss_type and
datediff(curdate(),don_date)<7220; ;
```

6. Donor_receiver table

```
create table donor_receiver (
transaction_id int primary key,
trasaction_date date,
status varchar(30),
donor_id int,
receiver_id int,
foreign key(donor_id) references donor_basic(donor_id) on delete
cascade,
foreign key(receiver_id) references receiver_basic(receiver_id)
on delete cascade );

insert into donor_receiver
values(1003,"2007-09-08","success",123,100);
insert into donor_receiver
values(1012,"2001-10-03","success",123,789);

select * from donor_receiver;
```

7. Create a trigger to insert expired organs into the discarded_organs table.

```
delimiter //
create trigger tg1 after delete
on donor_basic
for each row
begin
if datediff(curdate(),old.don_date) > 1000 then :
  insert into discarded_organs
values(old.donor_id,old.don_date);
end if;
end//
```

8. Create a view to display all success status transactions

```
create view view1 as
select transaction_id,transaction_date,donor_id,receiver_id
from donor_receiver
where status ="success";

select * from view1;
```

9. Create a function to display same blood group of donor_basic

```
delimiter //

create function f1(blood_group varchar(20))
returns int deterministic
begin
declare num int;
select count(donor_basic.bg) into num
from donor_basic
where donor_basic.bg=blood_group
group by donor_basic.bg;
return num;
end//
```

```
delimiter ;
select f1("A+");
```

10. Update name given the donor_id

```
delimiter //
create procedure p1(in donid int,in upd_name varchar(20))
begin
update donor_basic
set name=upd_name
where donor_id=donid;
end//

delimiter ;
call p1(123,"mname");
```

11. Create trigger to capitalize blood groups before inserting

```
delimiter //
create trigger capitalize before insert
on donor_basic
for each row
begin
set new.bg=upper(new.bg);
end//
```

12. Use of query profiling and create index

```
set session profiling =1;
select * from receiver_basic;
show profiles;

create index ind on receiver_basic(receiver_id);
select * from receiver_basic;
show profiles;
```

13. Display ascending order of donation_date

```
select donor_id,don_date
```

```
from donor_basic
order by(don_date);
```

14. Display subquery (used >any as multiple row subquery)

```
select receiver_id
from rec_liver
where rec_liver.sugar_lev > any (select donor_liver.sugar_lev
from donor_liver)
order by (sugar_lev) desc;
```

15. Display count of gender of donors

```
select gender,count(gender) as donor_num
from donor_basic
group by(gender)
```

16. Display the view donor_id of organs about to expire(i.e less than a year)

```
create view view2 as
select donor_id
from donor_basic
where datediff(curdate(),don_date) < 365;

select * from view2;
```

17. Display the most common bg and their num for donor_liver

```
select max(donor_basic.bg) as blood_group ,count(donor_basic.bg)
as num
from donor_basic
inner join donor_liver
group by(bg);
```

18. Display the BMI of rec_pancreas for female A+ blood group

```
select rec_pancreas.BMI
from rec_pancreas,receiver_basic
where receiver_basic.bg="A+" and gender="f";
```

19. Display unmatched organs

```
select donor_id,receiver_id
from donor_basic,receiver_basic
where donor_basic.bg != receiver_basic.bg;
```

20. Display the receiver_id whose application has been lying pending for more time than the average

```
select receiver_id
from receiver_basic
where datediff(curdate(),appli_date) > (select
avg(datediff(curdate(),appli_date))
                                        from receiver_basic);
```

21. Check status of required donor_id

```
delimiter //
create function f2(given_donor_id int)
returns varchar(20)
begin
declare ans varchar(20);
select status
from donor_receiver
where donor_id=given_donor_id;
end //

select f2(123);
```

22. Display the blood_clotting factor of all female donor_liver

```
select max(bld_factor),count(bld_factor)
from donor_liver
inner join donor_basic
on donor_basic.donor_id=donor_liver.donor_id
where gender="f"
group by(bld_factor);
```

23. Create trigger before inserting BMI values

```
create trigger tg3 before insert
on donor_pancreas
for each row
begin
if (new.BMI > 15 and new.BMI < 30) then
  insert into donor_pancreas values(new.donor_id,new.BMI);
  end if;
end//
```

24. Display the first 3 earliest applications

```
select appli_date
from receiver_basic
order by(appli_date) limit 3;
```

25. Display average age of donor_pancreas

```
select avg((datediff(curdate(),date_birth)/365))as avg_age
from donor_basic
inner join donor_pancreas
on donor_basic.donor_id=donor_pancreas.donor_id;
group by(date_birth);
```