Project

On

Hospital Management System

Implementation

Prepaired By:

Name : Himanshu Dodrajka

Roll No : U18C0056

Tables created

```
create table Employee(
  Eid varchar(10) primary key,
  Ename varchar(30) NOT NULL,
  Eage number NOT NULL,
  Egender varchar(10) NOT NULL,
  Eaddress varchar(50) NOT NULL,
 Ejob varchar(20) NOT NULL
 );
create table Doctor(
 doctor id varchar(10) primary key,
 department varchar(30) NOT NULL
);
create table Nurse(
 nurse_id varchar(10) primary key,
 nurse_type varchar(20) NOT NULL
);
create table room (
  Rno number primary key,
  Rtype varchar(10) NOT NULL,
  nurse_id varchar(10) ,
 FOREIGN KEY (nurse id) REFERENCES Nurse(nurse id)
);
create table Patient(
patient_id varchar(10) primary key,
name varchar(30) NOT NULL,
age number NOT NULL,
gender varchar(10) NOT NULL,
doctor_id varchar(10),
room no number,
FOREIGN KEY (doctor id) REFERENCES Doctor(doctor id),
FOREIGN KEY (room no) REFERENCES room(Rno)
);
 create table MedRecord(
  record id varchar(10) primary key,
  disease varchar(50) NOT NULL,
  patient id varchar(10),
  FOREIGN KEY(patient_id) REFERENCES Patient(patient_id)
 );
create table Bill (
  bill_no number primary key,
  patient_id varchar(10),
  doctor_fee number NOT NULL,
  room_fee number NOT NULL ,
  no_of_days number NOT NULL,
  lab_fee number NOT NULL,
```

```
total number NOT NULL,
FOREIGN KEY(patient_id) REFERENCES Patient(patient_id)
);
```

Views:

• The view Room_status shows Room number along with the the number of patiends assigned to given room.

```
create or replace view Room_status as
  select room_no,count(*) as Patients
    from Patient
      group by room_no
      order by room_no;

select * from Room_status;
```

 The view doctor_status shows Doctor id, name of doctor, the number of patient which are currently under treatment by doctor and the department or speciallity of doctor.

```
create or replace view doctor_status as
    with ttable(ID,count) as
    (select doctor_id ,count(*)
        from Patient group by doctor_id)
        select distinct ttable.ID as ID , Ename as Name ,ttable.count as
Patients,department
        from ttable inner join Patient on Patient.doctor_id = ttable.ID
inner join Doctor on Patient.doctor_id = Doctor.doctor_id
        inner join Employee on Eid = Patient.doctor_id;
select * from doctor_status;
```

View created.

ROOM_NO	PATIENTS
101	2
102	1

Download CSV

2 rows selected.

View created.

ID	NAME	PATIENTS	DEPARTMENT
d1	Ashish	1	Surgeon
d2	Kavita	2	Surgeon

Download CSV

Triggers:

BEGIN

Creating and Implementing Triggers:

The below Triggers will print data after inserting data into a table or updating the data into table:

```
CREATE OR REPLACE TRIGGER display_changes_p
After insert or update ON Patient
FOR EACH ROW
WHEN (NEW.age > 0)
BEGIN
dbms_output.put_line('After Insertion Patient Data is following :');
dbms_output.put_line('ID: ' | :NEW.patient_id);
dbms_output.put_line('Name : ' | :NEW.name);
dbms_output.put_line('Age: ' || :NEW.age);dbms_output.put_line('gender: ' || :NEW.gender);
dbms_output.put_line('doctor_id : ' || :NEW.doctor_id);
END;
______
CREATE OR REPLACE TRIGGER display_changes_e
After insert or update ON Employee
FOR EACH ROW
WHEN (NEW.Eage > 0)
```

```
dbms_output.put_line('After Insertion Employee Data is following :');
dbms_output.put_line('ID: ' | :NEW.Eid);
dbms_output.put_line('Name : ' | :NEW.Ename);
dbms_output.put_line('Age : ' | :NEW.Eage);
dbms_output.put_line('gender : ' | :NEW.Egender);
dbms_output.put_line('Address: ' | :NEW.Eaddress);
END;
CREATE OR REPLACE TRIGGER display_changes_d
After insert ON Doctor
FOR EACH ROW
WHEN (NEW.department is not NULL)
BEGIN
dbms\_output.put\_line('Department: ' || :NEW.department);
END;
CREATE OR REPLACE TRIGGER display_changes_m
After insert or update ON MedRecord
FOR EACH ROW
WHEN (NEW.record_id is not NULL)
BEGIN
dbms_output.put_line('ID : ' || :NEW.record_id);
dbms_output.put_line('Disease : ' | :NEW.Disease);
END;
CREATE OR REPLACE TRIGGER display_changes_b
After insert or update ON Bill
FOR EACH ROW
WHEN (NEW.bill_no > 0)
BEGIN
dbms_output.put_line('After Insertion Bill Data is following:');
dbms_output.put_line('Patient ID : ' | :NEW.patient_id);
dbms_output.put_line('bill No : ' | :NEW.bill_no);
dbms_output.put_line('no_of_days : ' || :NEW.no_of_days);
dbms_output.put_line('doctor_charge : ' || :NEW.doctor_fee);
dbms_output.put_line('room_charge : ' || :NEW.room_fee);
dbms_output.put_line('lab_charge : ' || :NEW.lab_fee);
```

dbms_output.put_line('total: ' | :NEW.total);END;

```
S3
54
55
56
57
CREATE OR REPLACE TRIGGER display_changes_b
After insert or update ON Bill
59 FOR EACH ROW
60 WHEN (NEW.bill_no > 0)
61 BEGIN
62 dbms_output.put_line('After Insertion Bill Data is following:');
64 dbms_output.put_line('Patient ID : '| :NEW.patient_id);
65 dbms_output.put_line('bill No : '| :NEW.bill_no);
66 dbms_output.put_line('no_of_days : '| :NEW.boll_no);
67 dbms_output.put_line('doctor_change : '| :NEW.doctor_fee);
68 dbms_output.put_line('room_change : '| :NEW.coom_fee);
69 dbms_output.put_line('lab_change : '| :NEW.lab_fee);
69 dbms_output.put_line('total : '| :NEW.total);
70
71 END;
72
Trigger created.
Trigger created.
```

Below query also shows implementation of procedure, function, cursors, triggers in PLSQL.

creation:

Add New Patient :- This module is used to add a new patient.

Add New Bill: This module is used to add a new bill to patient.

Add New Doctor: This module is used to add a new Doctor.

Add New Nurse: - This module is used to add a new Nurse.

Snapshot of creating a new patient I.e. insertion of a new patient data into Patient and MedRecord table.

If data of patient or employee is already present then it will show a message that data is already present.

```
SQL Worksheet
  163
       procedure createPatient
  164
  165
        dbms_output.put_line('Enter id of patient : ');
  166
           -p_id := &p_id;
  168
        declare
          any_rows_found number;
  169
        select count(*)
into any_rows_found
from Patient
where patient_id = p_id;
  171
172
  173
174
  175
        if any_rows_found = 1 then
  176
  177
            dbms_output.put_line('Patient is already present');
  178 else
179 dbms_output.put_line('Enter name : ');
        else
  181 dbms_output.put_line('Enter age of patient : ');
Enter record 10 :
Enter desease of patient :
After Insertion Patient Data is following :
ID
Name
          : himanshu
Age : 20 gender : male
doctor_id : n5
ID : r1
Disease : Asthma
```

<u>Deletion of data:</u>

Delete:- This module deletes the entry of a patient or a Doctor details. Deleting a patient record so have to delete MedRecord and Bill record of Patient too.

If data of patient or Employee is not present then will show a message that the data is not present.

```
372
373 procedure delete_patient
374 is
375 begin
376 dbms_output.put_line('Enter id of patient : ');
377 -p_id := &p_id;
378 declare
379 any_rows_found number;
380 begin
381 select count(*)
382 into any_rows_found
383 from Patient
384 where patient_id = p_id;
385
386 if any_rows_found = 1 then
387 delete from Patient
388 where patient_id=p_id;
389 delete from MedRecord
390 where patient_id=p_id;
391 delete from Bill
392 where patient_id=p_id;
393 dbms_output.put_line('Deleted');
else

1. Delete details of Patient
2. Delete details of Nurse
Enter your choice:
Enter id of patient:

Deleted

Deleted
```

<u>Updation module:-</u>

This module used to store or produce the patient reports and Doctor Details .

Updating a Patient Record age or disease or doctor assigned to patient can be change as shown below.

If data is not present then it will show that entity is not present.

```
SQL Worksheet
            procedure updatePatient is
           dbms_output.put_line('Enter id of patient : ');
   --p_id := &p_id;
declare
                 any_rows_found number;
           begin

select count(*)

into any_rows_found

from Patient

where patient_id = p_id;
    41
   42
    44
   45
46
   46
47    if any_rows_found = 1 then
48        dbms_output.put_line('Enter age of patient : ');
49        --age:=&age;
50        dbms_output.put_line('Enter doctor id : ');
51        --d_id := &d_id;
52        dbms_output.put_line('Enter desease of patient : ');
After Insertion Patient Data is following :
ID
Name : himanshu
Age : 20
gender
                  : male
doctor_id : ns
```

Viewing or Searching Data

View Details :- This module is used to view the details of a admitted patient and Doctor appointed in hospital.

Search:- This module searches the record of desired patient using his ID and Doctor using doctor id.

Below snapshot contains searching bill details and geting bill details of Patient .

If data is not present then it will show that entity is not present.

```
A01
402
403
404
is
405
begin
406
dobms_output.put_line('Enter the id of Patient');
407
-p_id := &p_id;
408
declare
409
any_rows_found number;
410
begin
411
select count(*)
412
into any_rows_found
413
from Patient
414
415
if any_rows_found = 1 then
417
declare
418
p_name Patient.name%type;
419
p_doctor_fee Bill.doctor_fee%type;
420
p_room_fee Bill.lab_fee%type;
421
p_lab_fee Bill.lab_fee%type;
5. View Room details
Enter your choice:
Enter the id of Patient
name : himanshu
Doctor fee : 100
Room fee : 100
Total amount : 10200
```

Code:

```
-----variables Declaration ------
----x=1 y=1 create patient----x=1 y=2 create bill---
---x=1 y=3 create doctor----x=1 y=4 create nurse--
---x=2 y=1 delete patient ----- x=2 y=2 delete doctor --- x=2 y=3 delete nurse
---x=3 y=1 update patient ---- x=3 y=2 update doctor ---- x=3 y=3 update nurse
---x=4 y=1 view bill---- x=4 y=2 view patient ---- x=4 y=3 view doctor
---x=4 y=4 view nurse ---- x=5 y=5 view room-details
declare
x number:=4;
y number:=1;
r_no number:=101;
res varchar(20):='yo';
p_id varchar(20):='p1';
names varchar(20):='himanshu';
age number:=21;
gender varchar(20):='male';
address varchar(50):='kr';
d_id varchar(10):='n2';
r_id varchar(10):='r4';
disease varchar(50):='CORONA';
bill no number := 4;
roomfee number:=10000;
doctorfee number := 100;
no_of_days number:=1;
lab charge number:=100;
total number:=2000;
dep varchar(20):='general';
u age number := 23;
......
        ----Updates
-----
```

```
is
begin
dbms_output_line('Enter id of patient : ');
 --p_id := &p_id;
declare
  any_rows_found number;
begin
  select count(*)
  into
        any_rows_found
  from
         Patient
  where patient_id = p_id;
  if any rows found = 1 then
    dbms_output.put_line('Enter age of patient : ');
     --u_age:=&u_age;
   if(age > 0) then
    update Patient
    set age = u_age
    where patient_id=p_id;
    end if;
else
dbms_output.put_line('No such Patient Found');
end if;
end;
end;
procedure updateDoctor
is
dbms_output_line('Enter id of Doctor : ');
 --d id := &d id;
declare
  any_rows_found number;
begin
  select count(*)
  into
        any_rows_found
  from
         Doctor
  where doctor_id = d_id;
  if any_rows_found = 1 then
    dbms_output.put_line('Enter age of Doctor : ');
     --age:=&u_age;
```

```
if(age>0) then
    update Employee
     set Eage = u_age
    where Eid=d_id;
   end if;
else
dbms_output.put_line('No such Doctor Found');
end:
end;
-----
procedure updateNurse
is
dbms_output.put_line('Enter id of Nurse : ');
 --d_id := &d_id;
declare
 any_rows_found number;
begin
 select count(*)
 into
      any_rows_found
 from Nurse
 where nurse_id = d_id;
 if any_rows_found = 1 then
   dbms_output.put_line('Enter age of Nurse : ');
    --age:=&u_age;
   if(age>0) then
    update Employee
     set Eage = u_age
    where Eid=d_id;
   end if;
else
dbms_output_line('No such Nurse Found');
end if;
end;
end;
```

```
-----Creation
-----
procedure createPatient
is
begin
dbms_output_put_line('Enter id of patient : ');
 --p_id := &p_id;
declare
 any_rows_found number;
begin
 select count(*)
       any_rows_found
 into
 from
        Patient
 where patient_id = p_id;
 if any_rows_found = 1 then
   dbms_output.put_line('Patient is already present');
else
dbms_output_line('Enter name : ');
 --name := &name;
dbms_output.put_line('Enter age of patient : ');
 --age:=&age;
dbms_output.put_line('Enter gender of patient : ');
 --gender := &gender;
dbms_output_put_line('Enter doctor id : ');
  --d_id := &d_id;
dbms_output_line('Enter room no. : ');
  --r_no := &r_no;
dbms_output.put_line('Enter record id : ');
  --r_id := &r_id;
dbms_output_put_line('Enter desease of patient : ');
 --disease := &disease;
insert into Patient values(p_id,names,age,gender,d_id,r_no);
insert into MedRecord values(r_id, disease, p_id);
end if:
end;
end;
```

```
function createBill
return varchar2 is
msg varchar(20):='done';
begin
dbms_output_line('Enter id of patient : ');
 --p_id := &p_id;
declare
 any_rows_found number;
begin
 select count(*)
 into
       any_rows_found
 from
        Patient
 where patient_id = p_id;
 if any_rows_found = 1 then
dbms_output.put_line('Enter bill no. : ');
 --bill_no := &bill_no;
dbms_output_line('Enter doctor fee : ');
 --doctorfee:=&doctorfee;
dbms_output.put_line('Enter room fee : ');
 --roomfee := &roomfee;
dbms_output.put_line('Enter no_of_days : ');
 --no_of_days := &no_of_days;
dbms_output_line('Enter lab charge : ');
  --lab_charge:= &lab_charge;
total := lab_charge+roomfee+doctorfee;
insert into Bill values(bill_no,p_id,doctorfee,roomfee,no_of_days,lab_charge,total);
else
dbms_output.put_line('no such Patient exists');
end if:
end:
return msg;
end;
-----
```

```
function createDoctor
return varchar2 is
msg varchar(20):='done';
begin
dbms_output_line('Enter id of doctor : ');
 --d id := &d id;
declare
 any_rows_found number;
begin
 select count(*)
        any_rows_found
 from
         Doctor
 where doctor_id = d_id;
 if any_rows_found = 1 then
   dbms_output_line('Doctor is already present');
 else
dbms_output_line('Enter name of Doctor : ');
 --names := &names;
dbms_output_line('Enter age of doctor: ');
 --age:=&age;
dbms_output.put_line('Enter Gender : ');
 --gender := &gender;
dbms_output.put_line('Enter Address : ');
 --address := &address ;
dbms_output.put_line('Enter Department/speciality : ');
 --dep := &dep ;
insert into Employee values(d_id,names,age,gender,address,'Doctor');
insert into Doctor values(d_id,dep);
end if;
end;
return msg;
end:
------
function createNurse
return varchar2 is
msg varchar(20):='done';
dbms_output_line('Enter id of Nurse : ');
 --d_id := &d_id;
declare
 any_rows_found number;
begin
 select count(*)
       any_rows_found
 into
```

```
where nurse_id = d_id;
 if any_rows_found = 1 then
   dbms_output.put_line('Nurse is already present');
else
dbms_output_line('Enter name of Nurse : ');
 --names := &names:
dbms_output_line('Enter age of Nurse: ');
 --age:=&age;
dbms_output.put_line('Enter Gender : ');
 --gender := &gender;
dbms_output.put_line('Enter Address : ');
 --address := &address ;
dbms_output_put_line('Enter Type : ');
 --dep := &dep ;
insert into Employee values(d_id,names,age,gender,address,'Nurse');
insert into Nurse values(d id.dep);
end if;
end;
return msg;
end;
-----Deletion
procedure delete_doctor
begin
dbms_output_line('Enter id of doctor : ');
 --d id := &d id;
declare
 any_rows_found number;
begin
 select count(*)
 into
       any_rows_found
 from Doctor
```

from Nurse

```
where doctor_id = d_id;
 if any_rows_found = 1 then
delete from Doctor
where doctor id=d id;
delete from Employee
where Eid=d_id;
dbms_output.put_line('Deleted');
dbms_output.put_line('No such Doctor Found');
end if;
end;
end;
______
procedure delete_nurse
is
begin
dbms_output.put_line('Enter id of nurse : ');
 --d_id := &d_id;
declare
 any_rows_found number;
begin
 select count(*)
 into
       any_rows_found
 from Nurse
 where nurse_id = d_id;
 if any_rows_found = 1 then
delete from Nurse
where nurse_id=d_id;
delete from Employee
where Eid=d_id;
dbms_output.put_line('Deleted');
else
dbms_output_line('No such Nurse Found');
end if:
end;
end;
```

```
procedure delete_patient
is
begin
dbms_output_line('Enter id of patient : ');
 --p id := &p id;
declare
  any_rows_found number;
begin
  select count(*)
  into
        any_rows_found
  from
         Patient
  where patient_id = p_id;
  if any_rows_found = 1 then
delete from MedRecord
where patient_id=p_id;
delete from Bill
where patient_id=p_id;
delete from Patient
where patient_id=p_id;
dbms_output.put_line('Deleted');
else
dbms_output.put_line('No such Patient Found');
end if:
end;
end:
 ----View Data
```

```
procedure viewBill
is
begin
dbms_output.put_line('Enter the id of Patient');
--p_id := &p_id;
declare
  any_rows_found number;
begin
  select count(*)
  into
        any_rows_found
  from Patient
  where patient_id = p_id;
  if any_rows_found = 1 then
  declare
  cursor data is
  select Patient.patient_id,Patient.name,doctor_fee,room_fee,lab_fee,total from
  inner join Bill on Patient.patient_id = Bill.patient_id;
  begin
  for i in data
  loop
  if(i.patient_id=p_id) then
   dbms_output.put_line('name
                                  : '|| i.name);
   dbms_output.put_line('Doctor fee : '|| i.doctor_fee);
   dbms_output_put_line('Room fee : '|| i.room_fee);
                                     : '|| i.lab_fee);
   dbms_output.put_line('Lab fee
   dbms_output_put_line('Total amount : '|| i.total );
  end if;
  end loop;
  end;
  else
  dbms_output.put_line('No Such Patient is found');
  end if;
  end:
  end:
```

```
procedure viewPatient
is
dbms_output.put_line('Enter the id of Patient');
--p_id := &p_id;
declare
 any_rows_found number;
begin
  select count(*)
        any_rows_found
  into
  from Patient
  where patient_id = p_id;
  if any_rows_found = 1 then
  declare
  p_name Patient.name%type;
  p_age Patient.age%type;
  p_gender Patient.gender%type;
  p_room_no Patient.room_no%type;
  p_Disease MedRecord.disease%type;
  begin
  select name,age,gender,room_no into p_name,p_age,p_gender,p_room_no from
Patient where patient_id = p_id;
  select disease into p_Disease
   from MedRecord where MedRecord.patient_id = p_id;
  dbms_output.put_line('name
                                : '|| p_name);
                                 : '|| p_age);
   dbms_output.put_line('age
  dbms_output_line('Gender : '|| p_gender);
   dbms_output.put_line('Room No. : '|| p_room_no);
  dbms_output.put_line('Disease : '|| p_Disease );
  end:
  else
  dbms_output.put_line('No Such Patient is found');
  end if:
  end;
  end:
```

```
procedure viewDoctor
begin
dbms_output_line('Enter the id of Doctor');
--d_id := &d_id;
declare
 any_rows_found number;
begin
 select count(*)
 into
       any_rows_found
 from
        Doctor
 where doctor_id = d_id;
 if any_rows_found = 1 then
 declare
 d_name Employee.Ename%type;
 d_age Employee.Eage%type;
 d_gender Employee.Egender%type;
 d_dep Doctor.department%type;
 d_address Employee.Eaddress%type;
 begin
 select Ename, Eage, Egender, Eaddress into d_name, d_age, d_gender, d_address from
Employee where Eid = d_id;
 select department into d_dep
  from Doctor where doctor_id = d_id;
  dbms_output.put_line('name
                                  : '|| d_name);
  dbms_output.put_line('age
                                 : '|| d_age);
  dbms_output.put_line('Gender : '|| d_gender);
  dbms_output.put_line('address. : '|| d_address);
  dbms_output.put_line('Department : '|| d_dep );
 end;
 else
 dbms_output_line('No Such Doctor is found');
 end if:
 end:
 end;
_____
```

```
procedure viewNurse
is
begin
dbms_output.put_line('Enter the id of Nurse');
--d id := &d id;
declare
 any_rows_found number;
begin
 select count(*)
 into
       any_rows_found
 from Nurse
 where nurse id = d id;
 if any_rows_found = 1 then
 declare
 d_name Employee.Ename%type;
 d_age Employee.Eage%type;
 d_gender Employee.Egender%type;
 d_dep Nurse.nurse_type%type;
 d_address Employee.Eaddress%type;
 begin
 select Ename, Eage, Egender, Eaddress into d_name, d_age, d_gender, d_address from
Employee where Eid = d_id;
 select nurse_type into d_dep
  from Nurse where nurse_id = d_id;
  dbms_output.put_line('name
                                : '|| d_name);
  dbms_output.put_line('age
                               : '|| d_age);
                               : '|| d_gender);
  dbms_output.put_line('Gender
  dbms_output.put_line('address. : '|| d_address);
  dbms_output.put_line('Department : '|| d_dep );
 end:
 else
 dbms_output.put_line('No Such Nurse is found');
 end if;
 end;
 end:
---end of procedures---
______
```

```
begin
dbms output.put line('------
dbms_output_line('-----
----');
dbms_output.put_line('
                                                        Welcome
To Hospital Management System');
dbms_output.put_line('------
______
-----');
dbms output.put line('------
----');
dbms_output_line('Menu : ');
dbms_output_line('1. Insert Data');
dbms_output.put_line('2. Delete Data');
dbms_output_line('3. Update Data');
dbms_output.put_line('4. View Data');
dbms_output.put_line('Enter your choice : ');
--x := &x; ---input value of x from user
 if(x=1) then
  dbms_output.put_line('1. insert details of Patient');
  dbms_output.put_line('2. insert bill details of Patient');
  dbms_output_put_line('3. insert details of Doctor');
  dbms_output.put_line('4. insert details of Nurse');
  dbms_output_line('Enter your choice : ');
   --y := &y; ----input value of y from user
    if(y=1) then
      createPatient();
    elsif(y=2) then
      res := createBill();
      dbms_output.put_line(res);
    elsif(y=3) then
     res := createDoctor();
      dbms_output.put_line(res);
     elsif(y=4) then
     res := createNurse();
      dbms_output.put_line(res);
    else
     dbms_output.put_line('not valid input');
```

```
end if;
elsif(x=2) then
  dbms_output_put_line('1. Delete details of Patient');
  dbms_output.put_line('2. Delete details of Doctor');
  dbms_output.put_line('3. Delete details of Nurse');
  dbms_output_line('Enter your choice : ');
  --y := &y;----input value of y from user
   if(y=1) then
     delete_patient();
   elsif(y=2) then
    delete_doctor();
   elsif(y=3) then
    delete_nurse();
   else
     dbms_output.put_line('not valid input');
   end if;
 -----
elsif(x=3)then
  dbms_output.put_line('1. Update details of Patient');
  dbms_output.put_line('2. Update details of Doctor');
  dbms_output.put_line('2. Update details of Nurse');
  dbms_output_line('Enter your choice : ');
  --y := &y;----input value of y from user
  if(y=1) then
   updatePatient();
  elsif(y=2) then
   updateDoctor();
  elsif(y=3) then
   updateNurse();
  else
    dbms_output_line('not valid input');
   end if:
```

```
elsif(x=4)then
   dbms_output.put_line('1. View Bill detail of Patient');
   dbms_output.put_line('2. View personal detail of Patient');
   dbms_output_put_line('3. View details of Doctor');
   dbms_output.put_line('4. View details of Nurse');
   dbms_output_line('5. View Room details');
   dbms_output.put_line('Enter your choice : ');
   --y := &y;----input value of y from user
   if(y=1) then
    viewBill();
   elsif(y=2) then
    viewPatient();
   elsif(y=3) then
    viewDoctor();
   elsif(y=4) then
    viewNurse();
   else
    dbms_output_line('not a valid input');
    end if;
 else
   dbms_output.put_line('NOT A VALID INPUT INPUT AGAIN');
 end if;
end;
.....
-----END-----
```