```sql
create table Branch
(
  Branch_num number(10) not null,
  Address varchar2(20) ,
  B_name varchar2(10) not null,

  Primary key(Branch_num)
);

create table Employees(
    E_name varchar2(15) not null,
    E_id varchar(2) primary key,
    E_phone varchar(10) not null,
    E_type varchar2(15) not null check( E_type in('doctor','other_employee')),
    salary number(6) check(salary>1000),
    branch_num number(10),
    constraint fk_b foreign key (branch_num) references branch(Branch_num)
);

create table Doctor (
E_id varchar(2) primary key,
Specialty varchar2(20),
CONSTRAINT fk_e FOREIGN KEY (E_id) REFERENCES Employees(E_id));

create table other_employee(
E_id varchar(2) primary key,
position varchar2(20) not null
);

alter table other_employee
add constraint fk_ee foreign key(E_id) references employees(E_id);

create table Owner
(
    Phone_num number(10) not null,
    Name varchar2(20) not null,
    Email varchar2(40),
    primary key(Phone_num)
);

create table Pet
(
    Pet_id number(10) not null,
    Phone_num number(10) not null,
    Name varchar2(20) not null,
    DOB date,
    Type varchar2(20),
    sex varchar2(10),
    Fur_color varchar2(15),
     primary key(Pet_id),
     foreign key (Phone_num) references Owner(Phone_num)
);
create table Diganosis(
Pet_id number(10) not null,
E_id varchar (2) not null,
dignosis_id number (10) not null,
date_d date,
Illness varchar2(20),
Primary key(dignosis_id),
foreign key(Pet_id) references Pet(Pet_id),
foreign key(E_id) references Employees (E_id)
);

 create table Pet_treatment (
dignosis_id number (10) not null,
Name_diagnosis varchar2 (20) not null,
Dose varchar2(20),
Primary key(Name_diagnosis,dignosis_id),

foreign key (dignosis_id) references Diganosis(dignosis_id)
);

insert into Branch
values(10012,'1355 S Hines Blvd','Elite vet');
insert into Branch
values(20012,'15145 S.W. 17th St.','Elite vet');
insert into Branch
values(30012,'4132 Main Street','Elite vet');
insert into Branch
values(40012,'1764 S Bines Blvd','Elite vet');
insert into Branch
values(50012,'16156 H.E. 18th St.','Elite vet');


insert into employees values('Ahmed','01','0508977922','doctor', 150000, 10012);
insert into employees values('Hana','02','0508657788','doctor', 155000, 20012);
insert into employees values('Muhammed','03','0563447523','doctor', 17000, 20012);
```

```sql
insert into employees values('Osama','04','0504334677','doctor', 175000, 30012);
insert into employees values('Nora','05','0563310378','doctor', 18000, 30012);
insert into employees values('Sara','06','0569983012','other_employee',80000, 40012);
insert into employees values('Alaa','07','0531254608','other_employee', 90000, 40012);
insert into employees values('Adnan','08','0542378991','other_employee', 100000, 50012);
insert into employees values('Hind','09','0532275462','other_employee', 65000, 50012);
insert into employees values('Dala','10','0542563002','other_employee', 68000, 10012);


insert into doctor values('01','Opthalmology');
insert into doctor values('02','Emergency doctor');
insert into doctor values('03','Dentistry');
insert into doctor values('04','Internal medicine');
insert into doctor values('05','Surgery');

insert into other_employee values('06','receptionist');
insert into other_employee values('07','vet tech');
insert into other_employee values('08','manager');
insert into other_employee values('09','sales person');
insert into other_employee values('10','customer service');

insert into Owner values(0553933641,'Bylsan','bylsan@gmail.com');
insert into Owner values(0505492048,'Noura',null);
insert into Owner values(0555123456,'ahmed','ahmed@gmail.com');
insert into Owner values(0505468321,'joud','joud@hotmail.com');
insert into Owner values(0553932781,'mohammed','moe42@hotmail.com');

insert into Pet values(100,0553933641,'Leo',to_date('2020-3-10', 'yyyy-mm-dd'),'Cat','Male','White');
insert into Pet values(101,0505492048,'Elsa',to_date('2017-12-12', 'yyyy-mm-dd'),'Cat','Female','Black');
insert into Pet values(110,0555123456,'Ozzy',to_date('2019-10-26', 'yyyy-mm-dd'),'Dog','Male','Brown');
insert into Pet values(200,0505468321,'Phoenix',to_date('2021-11-13', 'yyyy-mm-dd'),'Cat','Female','Grey');
insert into Pet values(201,0553932781,'Charlie',to_date('2014-06-07', 'yyyy-mm-dd'),'Dog','Female','Black');

insert into Diganosis
 values(101,'02',12,to_date('2011-11-11', 'yyyy-mm-dd'),'dyreallergi');
 insert into Diganosis
 values(101,'02',13,to_date('2020-3-10', 'yyyy-mm-dd'),'dyreallergi');
 insert into Diganosis
 values(110,'03',14,to_date('2002-5-11', 'yyyy-mm-dd'),'Diazitrim');
 insert into Diganosis
 values(200,'04',15,to_date('2004-4-14', 'yyyy-mm-dd'),'dyreallergi');
 insert into Diganosis
 values(201,'05',16,to_date('2010-3-25', 'yyyy-mm-dd'),'Diazitrim');

 insert into Pet_treatment
 values(12,'Diazitrim2','16ml');
 insert into Pet_treatment
 values(13,'Ceftionel2','10ml');
 insert into Pet_treatment
 values(14,'SAUDI1','20ml');
 insert into Pet_treatment
 values(15,'Ceftionel1','8ml');
 insert into Pet_treatment
 values(16,'SAUDI2','5ml');


select E_name from Employees where Branch_num in(select Branch_num
                                        from Branch
                                        where Branch_num = '20012');

select pet_id from Diganosis where E_ID in (select E_id
                                    from employees
                                    where Branch_num ='20012');

select name as pet_name, e_name as doctor, illness from pet p, employees e, diganosis d where p.pet_id=d.pet_id and e.e_id=d.e_id ;

select illness, count(illness) from diganosis group by illness ;

select e_name, e_type, salary, branch_num from employees where salary in(select max(salary ) from employees group by branch_num) order by
salary;

select o.name, o.phone_num, pet.name, pet.sex, pet.fur_color type from owner o
join Pet on o.phone_num=pet.phone_num order by o.name;

select phone_num, Name from Owner where Phone_num in(select Phone_num from Pet where sex='Female');

select avg(salary) as Average_Salary from employees ;

select Name from owner where Phone_num =(select Phone_num from pet where Pet_id = '100' );

select  Name from pet where Fur_color = 'Black';

create or replace procedure INFO_BRANCH (P_BRANCH_NUMBER in Branch.Branch_num%type)
as
    v_BNAME   Branch.B_name%type;
    v_address Branch.Address%type;
```

```
begin
    select B_name,Address
    into v_BNAME,v_address
    from Branch
    where Branch_num = P_BRANCH_NUMBER ;
    dbms_output.put_line('Branch Name :'||v_BNAME);
    dbms_output.put_line('Branch Address :'||v_address);
END INFO_BRANCH;
EXEC INFO_BRANCH (10012);

create or replace procedure update_salary(id_num varchar,I number)
AS
old_salary number;
new_salary number;
Begin
select salary into old_salary
from employees
where E_id=id_num;
new_salary := old_salary + I;
Update employees
set salary=new_salary
where E_id=id_num;
End update_salary;
exec update_salary('01',200000);


create or replace procedure petDignosis(P_dignosisId  number )
as
cursor PET_DIGANOSIS is
select  dignosis_id,date_d,Illness
from Diganosis
where dignosis_id = P_dignosisId ;
begin
for v_cursrec in PET_DIGANOSIS loop
dbms_output.put_line(v_cursrec.dignosis_id||' '|| v_cursrec.date_d||' '||v_cursrec.Illness);
 end loop;
 end petDignosis;
 exec petDignosis(13);
/-------------------------
create or replace procedure INFODIDANOSIS_PET(P_dignosisId number)
as
v_date    Diganosis.date_d%TYPE;
v_Illness    Diganosis.Illness%TYPE;
begin
select  date_d,Illness
into v_date ,v_Illness
from Diganosis
where dignosis_id = P_dignosisId ;
 dbms_output.put_line('DIGOSIS ID : '|| P_dignosisId);
  dbms_output.put_line('DATE : '|| v_date);
 dbms_output.put_line('ILLNESS : '|| v_Illness);
END ;
exec INFODIDANOSIS_PET(13);
```