lab 1

a create table student(regno number(5), name varchar(10),dob date,marks number(3));

b alter table student drop column marks;

c alter table student modify regno varchar2(5);

d alter table student add phno number(10);

e insert into student values('100','abhishek','01-Jan-2000',99999);
insert into student values('101','ramya','01-Jan-2000',88888);
insert into student values('102','kishor','01-Jan-2000',77777);
insert into student values('103','raju','01-Jan-2000',66666);
insert into student values('104','ramu','01-Jan-2000',555555);

f select * from student;

lab 2

a create table library(bid number(3)primary key,title varchar2(10),author varchar2(10),publisher varchar2(10),yearofpub number(4),price number(3));

b insert into library values(100,'c-prog','ramesh','skyward',2005,250);
insert into library values(101,'c++','raghav','himalaya',2007,350);
insert into library values(102,'data-str','balraj','skyward',2005,250);
insert into library values(103,'c-prog','srikanth','skyward',2005,250);
insert into library values(104,'c++','raghav','hamalaya',2007,350);
insert into library values(105,'dbms','manjunath','banglore',2010,425);

c select * from library;

d select distinct publisher from library;

e update library set price =(price+price /20);

f delete from library where author='raghav';

g select * from library order by title asc;

h select * from library where price between 100 and 300;

lab 3

a create table employee(empno number(3) primary key,empname varchar2(10),dept varchar2(10), salary number(5),doj date,branch varchar2(10));

b insert into employee values(100,'rajesh','sales',25000,'01-jan-2000','tumkur');
   insert into employee values(101,'abhinav','marketing',22000,'07-jan-2000','mysore');
   insert into employee values(102,'asha','sales',23000,'09-mar-2021','tumkur');
   insert into employee values(103,'kaushik','accounts',25000,'14-apr-2022','mandya');
   insert into employee values(104,'rajesh','sales',32000,'06-feb-2021','tumkur');
   insert into employee values(105,'kumar','sales',27000,'12-jan-2021','banglore');
   insert into employee values(106,'asha','accounts',24000,'15-oct-2022','tumkur');
   insert into employee values(107,'rajesh','marketing',22500,'16-dec-2022','banglore');

c select avg(salary) from employee;

d select count (*) from employee;

e select dept,count(*) from employee group by dept;

f select empname,sum(salary),count(*) from employee group by empname;

g select * from employee where salary >=25000;

h commit;

   insert into employee values(108,'ramu','sales',26000,'10-may-2022','tumkur');

   roll back;

   select * from employee;

lab 4

a create table items(itemcode number(5) primary key,name varchar2(10),price number(3));

create table purchase(itemcode number(5) references items,qty number(5));

b insert into items values(100,'soap',30);
insert into items values(101,'rice',50);
insert into items values(102,'paste',25);
insert into items values(103,'sugar',40);
insert into items values(104,'salt',20);
insert into items values(105,'oil',100);

insert into purchase values(100,10);
insert into purchase values(102,5);
insert into purchase values(104,5);
insert into purchase values(105,3);

c select * from items where itemcode in(select itemcode from purchase);

d select * from items where itemcode not in(select itemcode from purchase);

lab 5

create table department(dno number(3) primary key,dname varchar2(10),mgrid number(3),mgrjoindate date);

create table employee(empid number(5),ename varchar2(10),address varchar2(10),gender varchar2(10),salary number(5),dno number(3) references department);

insert into department values(100,'research',500,'01-jan-2000');
insert into department values(101,'technical',501,'01-feb-2000');

```
insert into department values(102,'testing',502,'01-mar-2000');
insert into department values(103,'coding',503,'01-apr-2000');


insert into employee values(600,'abhishek','tumkur','male',20000,100);
insert into employee values(601,'manasa','banglore','female',23000,101);
insert into employee values(602,'chandana','tumkur','female',28000,102);
insert into employee values(603,'mohan','banglore','male',35000,103);
insert into employee values(604,'sanvi','tumkur','female',29000,101);
insert into employee values(605,'rajeshwari','tumkur','female',30000,100);
insert into employee values(606,'vidya','banglore','female',20000,102);
insert into employee values(607,'vikram','mysore','male',23000,102);
```

a update employee set salary=salary+(salary/10) where dno=100;

b select ename from employee e where exists(select d.dno from department d where d.dno=100 and e.dno=100);

c select ename,dname from employee e natural join department d;

d select * from employee e, department d where e.dno=d.dno;

e select * from employee e,department d where e.dno!=d.dno;

f select * from employee e full outer join department d on e.dno=d.dno;

lab 7

```
set serveroutput on

create or replace function f(n number) return number is
  begin
    if n=0 or n=1 then
       return 1;
    else
      return n*f(n-1);
    end if;
    exception
```

```
      when others then
      return null;

     end f;
/



declare
   num number:=5;
   result number;

begin

   result:=f(num);

   dbms_output.put_line('factorial='||num||'is'||result);
end;
/
```

lab 8

```
create table employee(empno number(5), name varchar2(10), salary number(10));

insert into employee values(100, 'aaa', 20000);
insert into employee values(101, 'bbb', 21000);
insert into employee values(102,'ccc',22000);
insert into employee values(103, 'ddd',23000);
insert into employee values(104,'eee', 24000);
insert into employee values(105, 'fff', 25000);
insert into employee values(106, 'ggg', 26000);

declare
cursor emp is select name, salary from employee order by salary desc;
begin
for i in emp
loop
if emp% rowcount<=5 then
dbms_output.put_line(i.name||' '||i.salary);
end if;
```

```
end loop;
end;
/
```

lab 10

```
set serveroutput on

create table movie(mid number(3),mtitle varchar2(10),language varchar2(10));

insert into movie values (100, 'aaa', 'kannada');
insert into movie values(101, 'bbb', 'english');
insert into movie values(102,'ccc', 'hindi');
insert into movie values(103, 'ddd', 'telgu');
insert into movie values(104, 'eee', 'tamil');
insert into movie values(105,'fff', 'marati');
insert into movie values(106, 'ggg', 'bengali');

create or replace function total_movies return number is total number:=0;
begin
select count(*) into total from movie;
return total;
end;
/

declare
n number;
begin
n:=total_movies;
dbms_output.put_line('no of movies ='||n);
end;
/
```

lab 9

```
set serveroutput on

create table customer(cid number(3),cname varchar2(10),address varchar2(10));


insert into customer values(100,'rajesh','tumkur');
insert into customer values(101,'akshay','mysore');
insert into customer values(102,'komal','banglore');
insert into customer values(103,'roshan','manglore');
insert into customer values(104,'swathi','gubbi');
insert into customer values(105,'kumar','tumkur');


declare
  name varchar;
  c_id customer.cid%type:=0;
  c_name customer.name%type:=0;
  c_address customer.address%type:=0;

  begin
     cid:=&c_id;
     select name,address into c_name,c_address from customer where cid=c_id;

    dbms_output.put_line('name:'||c_name);
    dbms_output.put_line('address'||c_address);

  exception
```

```
    when no_data_found then
    dbms_output.puy_line('Invalid customer ID');
    End;
/
```

```
create table movie(mid number(3),title varchar2(10),language varchar2(10));


insert into movie values(100,'AAA','kannada');
insert into movie values(101,'BBB','hindi');
insert into movie values(102,'CCC','kannada');
insert into movie values(103,'DDD','telugu');
insert into movie values(104,'EEE','tamil');
insert into movie values(105,'FFF','kannada');


create or replace function movie return number is total number(2)=0;
```