create table emp (

eno number,

ename varchar(20),

designation varchar(20),

sal number,

mgr int,

deptno number,

primary key(eno)

);

create table dept (

deptname varchar(20),

loc varchar(20),

deptno number primary key

);

insert into dept values ('sales','mumbai',10);

insert into dept values ('hr','delhi',20);

insert into dept values ('accounts','chennai',30);

insert into dept values ('production','bangalore',40);

insert into emp values (1,'aaa','salesman',7000,2,10);

insert into emp values (2,'bbb','mgr',17000,3,10);

insert into emp values (3,'ccc','president',40000,null,30);

insert into emp values (4,'ddd','clerk',5000,5,20);

insert into emp values (5,'eee','mgr',20000,3,20);

**Join**

\***In which location employee aaa work**

select loc from dept where deptno=(select deptno from emp where ename='aaa');

\***cartesian product**

select eno,ename,loc,emp.deptno,dept.deptno from emp,dept

\***List employee along with their location**

select ename,loc from emp,dept where emp.deptno=dept.deptno;

\***List name,salary and dept name of all employees**

select ename,sal,deptname from emp,dept where dept.deptno=emp.deptno

\***we can use alias name also like below**

select ename,sal,deptname from emp e,dept d where d.deptno=e.deptno

\***List name and location of highest salaried employees**

select ename,loc from emp e,dept d where e.deptno=d.deptno and sal=(select max(sal) from emp)

\***per job how many employees are from mumbai**

select designation,count(\*) from emp,dept where emp.deptno=dept.deptno and loc='mumbai' group by designation

\***per location how many employees are present**

select loc,count(\*) from emp,dept where emp.deptno=dept.deptno group by loc

**InnerJoin(only returns match tables from each table)**

\***List employee along with their location**

select ename,loc from emp inner join dept on emp.deptno = dept.deptno

**OuterJoin(only returns match colmns and unmatched coloumns from each table)**

insert into emp values (6,'fff','clerk',8000,5,null );

**1.left outer join** - returns matched records only with unmatched records from left table

select ename,deptname from emp left outer join dept on emp.deptno=dept.deptno

**2.right outer join** - returns matched records along with the unmatched records from right table

select ename,deptname from emp right outer join dept on emp.deptno=dept.deptno

**3.full outer join** - returns matched along with unmatched records from both table

select ename,deptname from emp full outer join dept on emp.deptno=dept.deptno

**4.self join**(it used when table is joined to itself)

select E.ename employee\_name, M.ename manager\_name from emp E, emp M where E.eno=M.mgr

In self join we should specify alias name(like emp M, emp E in this case )

**5.Natural join** - We didnot specify ant where clause,It automatically joins after identify the primary key and foreign key

\*select ename along with the dept name

naturally we write like below

select E.ename,D.deptname from emp E, dept D where E.deptno=D.deptno

By natural join we can write as,so we must specify priamry key and foreign key

select E.ename,D.deptname from emp E natural join dept D

**Co-related Subquery**

select eno,ename,sal from emp where sal >(select avg(sal) from emp where deptno=10)

\***Select details of employess of dept 10 who earn more than the avg salary of dept 10**

select eno,ename,sal,deptno from emp where sal >(select avg(sal) from emp where deptno=10)and deptno=10

\***select the employees who earn mopre than the avg salary within their dept**

select eno,ename,sal,deptno from emp E where sal >(select avg(sal) from emp where deptno=E.deptno)