1. nested query can be written in insert into statement also

```
INSERT INTO item (item_code, invoice_code, item_costprice)
 SELECT
  /* Literal number values with column aliases */
  1 AS item_code,
  2 AS invoice_code,
  item_costprice
 FROM qa_items
 WHERE item_code = 1;
```

Joins in SQL

1. when in the output you need to get data from multiple tables, then we use joins
2. there are 3 types of joins, out of these inner join and outer join are most commonly used

cross join	it combines every row of one table with every row in another table
inner join	inner joins will always give you matching rows. these are of 3 types. 1. equi join-→ if the join condition is based on = operator then it is called as euijoin 2. non equi join-→ if the join condition is based on oerator other than = operator then it is called as non euijoin. 3. self join--→ when you combine a table with itself then it is called as self join
outer join	outer join always gives you matching and non matching rows there are 3 type of outer join 1. left outer join-→ if you want to get non matching rows from left side table the it is left outer join 2. right outer join-→ if you want to get nonmatching rows from right side table the it is right outer join 3. full outer join-→ if you want to get nonmatching rows from both side table the it is full outer join, to take full outer join in mysql we need to take union, but in oracle we can use full join

1. display all employees empno,ename,deptno,dname

```
select empno,ename,deptno,dname
from emp e,dept d
        where e.deptno=d.deptno
```

```
select empno,ename,deptno,dname
from emp e inner join dept d
        on e.deptno=d.deptno
```

2. display all employees empno,ename,sal and grade

```
select
empno,ename,sal,grade,losal,hisal

from emp e, salgrade s

where sal between losal and hisal;
```

```
select
empno,ename,sal,grade,losal,hisal

from emp e inner join  salgrade s

on sal between losal and hisal;
```

3. display all employees empno,ename,deptno,dname who works in accounting department

select empno,ename,deptno,dname from emp e,dept d where e.deptno=d.deptno and d.dname=' accounting';	select empno,ename,deptno,dname from emp e inner join dept d on e.deptno=d.deptno where d.dname=' accounting';

4. to display all employees with department name for all employees who works as CLERK

select empno,ename,dname from emp e, dept d where e.deptno=d.deptno and job='CLERK'	select empno,ename,dname from emp e inner join dept d on e.deptno=d.deptno where job='CLERK'

5. to display all employees empno,ename,dname and also display employees for whom no dept is assigned

```
select empno,ename,e.deptno,dname
  -> from emp e left join dept d on e.deptno=d.deptno;
```

6. to display all employees empno,ename,dname and also display departments in which no employee is assigned

```
select empno,ename,e.deptno,dname
  -> from emp e right join dept d on e.deptno=d.deptno;
```

7. to display all employees empno,ename,dname and also display employees who are not assigned to any department, also display all department in which no employee exists

```
select empno,ename,e.deptno,dname
from emp e right join dept d on e.deptno=d.deptno
union
select empno,ename,e.deptno,dname
from emp e left  join dept d on e.deptno=d.deptno;
```

3. course (cid,cname, duration,roomid,fid)
   faculty(fid,fname,subject)
   room(rid,rname,rloc)

rid	rname	rloc
100	mogra	1 st floor
101	lotus	1 st floor
102	jasmin	2 nd floor

faculty

fid	fname	subject
1	Madhura	JAVA
2	Kishori	Database
3	Srujana	.net

course

cid	cname	duration	roomid	fid
1000	DAC	4	100	1
1001	DBDA	4	101	null
1002	DTISS	6	null	null

1. display all faculties who are not assigned to any course and also display rooms which are not assigned to any course

```
select cname,fid,fname, null rid, null rname
from course c right join faculty f on c.fid=f.fid
where cname is null
union
select cname,null ,null,rid,rname
from course c right join room r on c.roomid=r.rid
where cname is null
```

2. display cname, rname assigned to it, also display rooms which are available

```
select cname,rname
from course c right join room r on r.rid=c.roomid;
```

3. display cname, fname assigned to it, also display faculties who are available

```
select cname,fname
from course c right join faculty f on f.fid=c.fid
```

4. display all courses name, faculty name and rooname assigned to all courses

```
select cname,fname,rname
from courses c,faculty f, room r
where c.roomid=r.rid and c.fid=f.fid
```

```
select cname,fname,rname
from courses c inner join faculty f on
c.fid=f.fid inner join room r
on c.roomid=r.rid and
```

5. to display cname,rname assigned to each course

```
select cname,rname
from course c inner join room r on
c.roomid=r.rid
```

```
select cname,rname
from course c , room r where
c.roomid=r.rid
```

6. to display cname, fname, course duration for all courses

select cname,fname,duration from course c inner join faculty f on c.fid=f.fid	select cname,fname,duration from course c , faculty f where c.fid=f.fid