**SUBQUERIES**

SQL> select \* from emp;

no rows selected

SQL> desc emp;

Name Null? Type

----------------------------------------- -------- ----------------------------

ID NUMBER(10)

NAME VARCHAR2(10)

AGE NUMBER(10)

ADDRESS VARCHAR2(10)

SALARY NUMBER(10)

SQL> insert into emp values(&id,'&name',&age,'&address',&salary);

Enter value for id: 10

Enter value for name: ram

Enter value for age: 33

Enter value for address: chennai

Enter value for salary: 50000

old 1: insert into emp values(&id,'&name',&age,'&address',&salary)

new 1: insert into emp values(10,'ram',33,'chennai',50000)

1 row created.

SQL> /

Enter value for id: 20

Enter value for name: raj

Enter value for age: 20

Enter value for address: chennai

Enter value for salary: 20000

old 1: insert into emp values(&id,'&name',&age,'&address',&salary)

new 1: insert into emp values(20,'raj',20,'chennai',20000)

1 row created.

SQL> /

Enter value for id: 30

Enter value for name: sai

Enter value for age: 26

Enter value for address: mumbai

Enter value for salary: 15000

old 1: insert into emp values(&id,'&name',&age,'&address',&salary)

new 1: insert into emp values(30,'sai',26,'mumbai',15000)

1 row created.

SQL> /

Enter value for id: 40

Enter value for name: sam

Enter value for age: 27

Enter value for address: hyderabad

Enter value for salary: 20000

old 1: insert into emp values(&id,'&name',&age,'&address',&salary)

new 1: insert into emp values(40,'sam',27,'hyderabad',20000)

1 row created.

SQL> /

Enter value for id: 50

Enter value for name: tom

Enter value for age: 29

Enter value for address: pune

Enter value for salary: 65000

old 1: insert into emp values(&id,'&name',&age,'&address',&salary)

new 1: insert into emp values(50,'tom',29,'pune',65000)

1 row created.

SQL> /

Enter value for id: 60

Enter value for name: jerry

Enter value for age: 30

Enter value for address: kochin

Enter value for salary: 85000

old 1: insert into emp values(&id,'&name',&age,'&address',&salary)

new 1: insert into emp values(60,'jerry',30,'kochin',85000)

1 row created.

SQL> select \* from emp;

ID NAME AGE ADDRESS SALARY

---------- ---------- ---------- ---------- ----------

10 ram 33 chennai 50000

20 raj 20 chennai 20000

30 sai 26 mumbai 15000

40 sam 27 hyderabad 20000

50 tom 29 pune 65000

60 jerry 30 kochin 85000

6 rows selected.

**SQL> select \* from emp;**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**10 ram 33 chennai 12500**

**20 raj 20 chennai 20000**

**30 sai 26 mumbai 15000**

**40 sam 27 hyderabad 20000**

**50 tom 29 pune 16250**

**60 jerry 30 hyderabad 25250**

**70 jack 33 bangalore 60000**

**80 jill 38 bangalore 65000**

**90 donald 23 chennai 10000**

**SQL> select max(salary) from emp;**

**MAX(SALARY)**

**-----------**

**65000**

**SQL> select id,name from emp where salary=65000;**

**ID NAME**

**---------- ----------**

**80 jill**

**SQL> select id,name from emp where salary=(select max(salary) from emp);**

**ID NAME**

**---------- ----------**

**80 jill**

**SQL> select \* from emp where salary>(select avg(salary) from emp);**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**70 jack 33 bangalore 60000**

**80 jill 38 bangalore 65000**

**SQL> select \* from emp where salary>(select avg(salary) from emp)order by age desc;**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**80 jill 38 bangalore 65000**

**70 jack 33 bangalore 60000**

**SQL> select \* from emp where salary<(select avg(salary) from emp)order by age desc;**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**10 ram 33 chennai 12500**

**60 jerry 30 hyderabad 25250**

**50 tom 29 pune 16250**

**40 sam 27 hyderabad 20000**

**30 sai 26 mumbai 15000**

**90 donald 23 chennai 10000**

**20 raj 20 chennai 20000**

**SQL> select \* from emp where salary<=(select avg(salary) from emp);**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**10 ram 33 chennai 12500**

**20 raj 20 chennai 20000**

**30 sai 26 mumbai 15000**

**40 sam 27 hyderabad 20000**

**50 tom 29 pune 16250**

**60 jerry 30 hyderabad 25250**

**90 donald 23 chennai 10000**

**7 rows selected.**

**SQL> select \* from emp where salary>=(select avg(salary) from emp);**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**70 jack 33 bangalore 60000**

**80 jill 38 bangalore 65000**

**SQL> insert into emp values(100,'gow',30,'chennai',27100);**

**1 row created.**

**SQL> select \* from emp where salary<=(select avg(salary) from emp);**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**10 ram 33 chennai 12500**

**20 raj 20 chennai 20000**

**30 sai 26 mumbai 15000**

**40 sam 27 hyderabad 20000**

**50 tom 29 pune 16250**

**60 jerry 30 hyderabad 25250**

**90 donald 23 chennai 10000**

**100 gow 30 chennai 27100**

**8 rows selected.**

**SQL> select \* from emp where salary>=(select avg(salary) from emp);**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**70 jack 33 bangalore 60000**

**80 jill 38 bangalore 65000**

SQL> select \* from emp where id in(select id from emp where salary>20000);

ID NAME AGE ADDRESS SALARY

---------- ---------- ---------- ---------- ----------

10 ram 33 chennai 50000

50 tom 29 pune 65000

60 jerry 30 kochin 85000

SQL> select \* from emp where id in(select id from emp where salary>=20000);

ID NAME AGE ADDRESS SALARY

---------- ---------- ---------- ---------- ----------

10 ram 33 chennai 50000

20 raj 20 chennai 20000

40 sam 27 hyderabad 20000

50 tom 29 pune 65000

60 jerry 30 kochin 85000

SQL> update emp set salary=salary\*0.25 where age in(select age from emp where age>=29);

3 rows updated.

SQL> select \* from emp;

ID NAME AGE ADDRESS SALARY

---------- ---------- ---------- ---------- ----------

10 ram 33 chennai 12500

20 raj 20 chennai 20000

30 sai 26 mumbai 15000

40 sam 27 hyderabad 20000

50 tom 29 pune 16250

60 jerry 30 kochin 21250

6 rows selected.

SQL> update emp set salary=salary\*10 where age not in(select age from emp where age>=30);

5 rows updated.

SQL> select \* from emp;

ID NAME AGE ADDRESS SALARY

---------- ---------- ---------- ---------- ----------

10 ram 33 chennai 12500

20 raj 20 chennai 200000

30 sai 26 mumbai 150000

40 sam 27 hyderabad 200000

50 tom 29 pune 162500

60 jerry 30 hyderabad 25250

70 jack 33 bangalore 60000

80 jill 38 bangalore 65000

90 donald 23 chennai 100000

100 gow 30 chennai 27100

**SQL> select \* from emp where salary<any(select max(salary) from emp);**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**10 ram 33 chennai 12500**

**30 sai 26 mumbai 150000**

**50 tom 29 pune 162500**

**60 jerry 30 hyderabad 25250**

**70 jack 33 bangalore 60000**

**80 jill 38 bangalore 65000**

**90 donald 23 chennai 100000**

**100 gow 30 chennai 27100**

**SQL> select \* from emp where salary=all(select salary from emp where salary<=20000);**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**10 ram 33 chennai 12500**

**SQL> select \* from emp where salary>all(select salary from emp where salary<=20000);**

**ID NAME AGE ADDRESS SALARY**

**---------- ---------- ---------- ---------- ----------**

**20 raj 20 chennai 200000**

**30 sai 26 mumbai 150000**

**40 sam 27 hyderabad 200000**

**50 tom 29 pune 162500**

**60 jerry 30 hyderabad 25250**

**70 jack 33 bangalore 60000**

**80 jill 38 bangalore 65000**

**90 donald 23 chennai 100000**

**100 gow 30 chennai 27100**

SQL> delete from emp where age in(select age from emp where age>=30);

2 rows deleted.

SQL> select \* from emp;

ID NAME AGE ADDRESS SALARY

---------- ---------- ---------- ---------- ----------

20 raj 20 chennai 20000

30 sai 26 mumbai 15000

40 sam 27 hyderabad 20000

50 tom 29 pune 16250

**ORDER BY**

SQL> select name,address from emp order by address;

NAME ADDRESS

---------- ----------

anjali chennai

raj chennai

sam hyderabad

sai mumbai

tom pune

SQL> select name,address from emp order by address asc;

NAME ADDRESS

---------- ----------

anjali chennai

raj chennai

sam hyderabad

sai mumbai

tom pune

SQL> select name,address from emp order by address desc;

NAME ADDRESS

---------- ----------

tom pune

sai mumbai

sam hyderabad

anjali chennai

raj Chennai

SQL> select name,address from emp order by 2 asc;

NAME ADDRESS

---------- ----------

anjali chennai

raj chennai

sam hyderabad

sai mumbai

tom pune

SQL> select name,address from emp order by 1 desc;

NAME ADDRESS

---------- ----------

tom pune

sam hyderabad

sai mumbai

raj chennai

anjali chennai

SQL> select \* from emp order by age desc,salary asc;

ID NAME AGE ADDRESS SALARY

---------- ---------- ---------- ---------- ----------

50 tom 29 pune 16250

40 sam 27 hyderabad 20000

30 sai 26 mumbai 15000

20 raj 20 chennai 20000

10 anjali 20 chennai 30000

**Distinct**

SQL> select address from emp;

ADDRESS

----------

chennai

chennai

mumbai

hyderabad

pune

SQL> select distinct address from emp;

ADDRESS

----------

chennai

mumbai

hyderabad

pune

SQL> select count(distinct address) from emp;

COUNT(DISTINCTADDRESS)

----------------------

4

SQL> select count(\*) as da from(select distinct address from emp);

DA

----------

4

SQL> select count(\*) from(select distinct address from emp);

COUNT(\*)

----------

4

Select as(alias)

SQL> select id as employeeid from emp;

EMPLOYEEID

----------

10

20

30

40

50

SQL> select id as employeeid ,age as empage from emp;

EMPLOYEEID EMPAGE

---------- ----------

10 20

20 20

30 26

40 27

50 29

**Group by**

SQL> select count(id),address from emp group by address;

COUNT(ID) ADDRESS

---------- ----------

2 chennai

1 mumbai

1 hyderabad

1 pune

SQL> select count(id),address from emp group by address order by count(id) desc;

COUNT(ID) ADDRESS

---------- ----------

2 chennai

1 hyderabad

1 pune

1 mumbai

SQL> select count(id),address from emp group by address order by count(id) asc;

COUNT(ID) ADDRESS

---------- ----------

1 mumbai

1 pune

1 hyderabad

2 chennai

SQL> select age,min(salary) as lowestsalary from emp group by age;

AGE LOWESTSALARY

---------- ------------

29 16250

20 20000

26 15000

27 20000

SQL> select age,max(salary) as highsalary from emp group by age;

AGE HIGHSALARY

---------- ----------

29 16250

20 30000

26 15000

27 20000

SQL> select age,max(salary) as highsalary from emp group by age order by age;

AGE HIGHSALARY

---------- ----------

20 30000

26 15000

27 20000

29 16250

SQL> select age,max(salary) as highsalary from emp group by age order by age desc;

AGE HIGHSALARY

---------- ----------

29 16250

27 20000

26 15000

20 30000

SQL> select age,avg(salary) as avgsalary from emp group by age;

AGE AVGSALARY

---------- ----------

29 16250

20 25000

26 15000

27 20000

**Having**

SQL> insert into emp values(60,'jerry',45,'bangalore',50000);

1 row created.

SQL> insert into emp values(70,'jack',33,'bangalore',60000);

1 row created.

SQL> insert into emp values(80,'jill',38,'hyderabad',65000);

1 row created.

SQL> insert into emp values(90,'donald',35,'bangalore',30000);

1 row created.

SQL> select address,count(\*) as noofemp from emp where salary>15000 group by address having count(\*)>=2;

ADDRESS NOOFEMP

---------- ----------

chennai 2

hyderabad 2

bangalore 3

SQL> select age,min(salary) as lowsal from emp group by age having min(salary)<20000;

AGE LOWSAL

---------- ----------

29 16250

26 15000

SQL> select age,max(salary) as maxsal from emp group by age having max(salary)>20000;

AGE MAXSAL

---------- ----------

20 30000

38 65000

35 30000

45 50000

33 60000