Aggregate functions

Step-1 **create table employee(eno number(5), ename char(30) , dept char(30), salary number (10))**

Output:- Table created.

Step-2
```
insert into employee values (01 , 'SBarik' , 'CSE', 50000)
insert into employee values (02 , 'RDas' , 'ENTC', 90000)
insert into employee values (03 ,'RRout' , 'CSE', 60000)
insert into employee values (04 ,'JMehena' , 'ENTC', 80000)
insert into employee values (05 ,'SPrusty' , 'ENTC', 30000)
insert into employee values (06 ,'DBiswal' , 'MECH', 50000)
insert into employee values (07 ,'NPanda' , 'MECH', 40000)
```

Output:- 7 rows created.

Step-3 **select * from employee**

Output:-

ENO	ENAME	DEPT	SALARY
01	SBarik	CSE	50000
02	RDas	ENTC	90000
03	RRout	CSE	60000
04	JMehena	ENTC	80000
05	SPrusty	ENTC	30000
06	DBiswal	MECH	50000
07	NPanda	MECH	40000

Step-4

Example1:- **select min(salary) from employee** // it displays minimum salary

Output:-

MIN(SALARY)
30000

Example2:- **select max(salary) from employee** // it displays maximum salary

Output:-

MAX(SALARY)
90000

Example3:- **select avg(salary) from employee** // it displays average salary

Output:-

AVG(SALARY)
57142.85714

Example4:- **select sum(salary) from employee** // it displays total salary

Output:-

SUM(SALARY)
400000

Example5:- **select count(salary) from employee** // it displays number of salary

group by clause

Attribute(s) having same value is grouped to a single unit

Step-5

Syntax**:- select columnname(s),aggregatefunction(columnname) from tablename [where condition]**

group by columnname(s) ← equal

Example1:- **select dept,max(salary) from employee group by dept**

// It displays maximum salary of each department (department wise)

Output:-

DEPT	MAX (SALARY)
MECH	50000
CSE	60000
ENTC	90000

Example2:- **select dept,min (salary) from employee group by dept**

// It displays minimum salary of each department

Output:-

DEPT	MIN (SALARY)
MECH	40000
CSE	50000
ENTC	30000

Example3:- **select dept,avg(salary) from employee group by dept**

// It displays average salary of each department

Output:-

DEPT	AVG (SALARY)
MECH	45000
CSE	55000
ENTC	66666.66

Example4:- **select dept,sum(salary) from employee group by dept**

// It displays total salary of each department

Output:-

DEPT	SUM(SALARY)
MECH	90000
CSE	110000
ENTC	200000

group by – having clause

Example1:- **select dept, sum(salary) from employee group by dept having sum(salary)>100000**

equal

Output:-

DEPT	SUM(SALARY)
CSE	110000
ENTC	200000

In group by

- We can display the column on which group by is applied. Example: dept
- We can't display other columns. i.e. eno,ename,salary. Because the query execution starts from group by clause. after grouping according to department the resulting table has 3 rows i.e. CSE,ENTC,MECH.
  [if you display ename. the query is unable to find ename from the resulting table]
  But a column (if any) which fit according to group can be displayed Example: deptno.
- The condition in having clause can contain grouping-column and aggregate function only. Example: dept, sum( )