28-11-2022
Monday

* Function :-
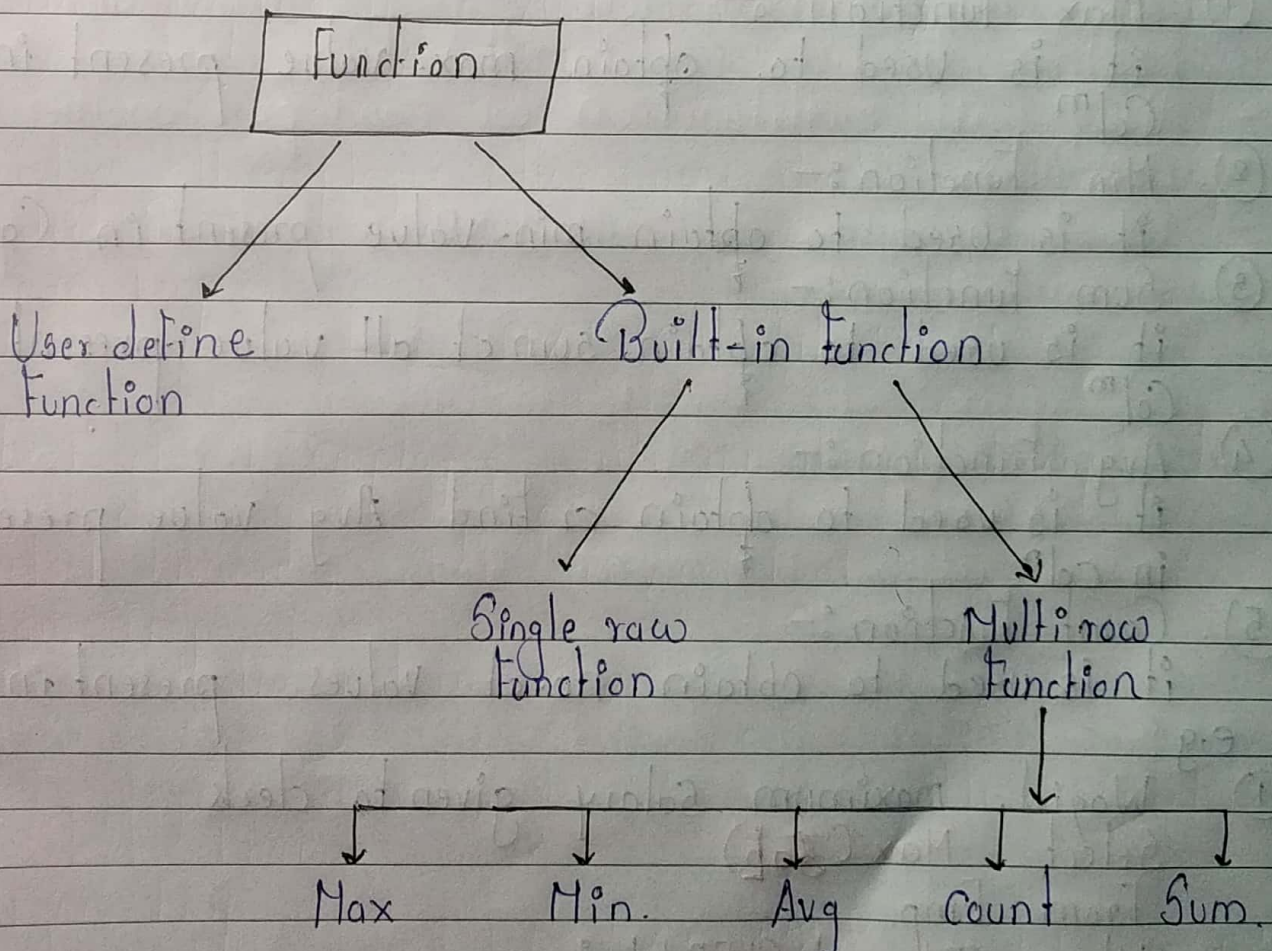
it is block of code or list of instruction which perform same specific task

There are three Component of function
① Function name
② Number of argument
③ Written type

Function is classified into two types.
① Single row Function [SRF]
② Multi row Function [MRF]

```
┌──────────┐
│ Function │
└──────────┘
```

User define Function   Built-in function

Single raw Function   Multi row Function

Max   Min.   Avg   Count   Sum

* **Single Raw Function :-**
   if we pass one input we get one output if we pass n input we get n output.

* **Multi Raw Function / Aggregate function / Ro Group Function :-**
   if we pass multiple input all get bound together and we get only one output.

   Multi Row Function have 5 types

① **Max function :-**
   it is used to. obtain max. value present in. Col^m

② **Min function :-**
   it is used to obtain min. value present in Col^m

③ **Sum function :-**
   it is used to obtain sum of all value present in Col^m

④ **Avg function :-**
   it is used to obtain or find Avg value present. in col^n

⑤ **Count function :-**
   it is used to obtain no. of values. present in col^m

e.g.

① Wagid. maximum Salary given to clerk
   Select Max (Sal)
   From Emp.
   Where Job = ' CLERK' ;

② Wagid max salary of employee
Select Max(sal)
From Emp;

③. Wagid min salary given to an analyst
Select Min(sal)
From Emp.
Where Job = 'ANALYST';

④. Wagid total salary given to manager
Select Sum(sal)
From Emp.
Where Job = 'MANAGER';

⑤. Wagid Average salary given to deptno 20.
Select Avg(sal)
From Emp.
Where deptno = 20;

⑥. Wagid no of employee whos working as salesman
Select Count(*)
From Emp.
Where Job = 'SALESMAN';

⑦. Wagid max sal, min sal, number of emp. as manager
in deptno 10.
Select Max(SAL), Min(SAL), Count(*)
From Emp.
Where Job = 'MANAGER' AND DEPTNO = 10;

(8). Waqid max Sal, min Sal, Sum of Sal avg Sal along with annual Sal of emp. who is working as Salesman in deptno 30

The program will not run

Select Max(Sal), Min(Sal), Sum(Sal), Avg(Sal)
, Sal×12 as annual Sal
From Emp
Where JOB = 'SALESMAN' AND DEPTNO = 30;

Note:-
- Multirow function only pass one argument that is Col^n name or expression
- Multirow function ignores null value
- Along with multifunction we can't pass another name Col^n name.
- Count is only multirow function which accept * as argument.

Assignment

① Wागid number of employee whos getting salary less than 2000 in deptno 10.
```
Select   Count (*)
From     Emp
Where    Sal < 2000  AND  Deptno = 10 ;
```

② Wागid total Salary needed to pay employee working as clerk.
```
Select   Sum (Sol)
From     emp
Where    Job = 'MANAGER' ;
```

③ Wागid avg sal needed to pay all employee
```
Select   Avg (Sol)
From     emp ;
```

④ Wागid ~~name~~ Number of employee having 'A' as their first Charater.
```
Select   Count (*)
From     emp
Where    Fname like 'A%' ;
```

⑤ Wागid number of employee who work as cleak or manager.
```
Select   Count (*)
From     emp
Where    Job in ( 'cleak', 'Manager') ;
```

(6). Wagid total Salary of employee whos are hird in Feb.
```sql
Select   Sum (Sal)
From   Emp.
Where   Hiredate like '% Feb%' ;
```

(7). Wagid number of employee reporting to 7839 (MGR)
```sql
Select   Count (*)
From   Emp
Where   MGR = 7839 ;
```

(8). Wagid number of employee whos getting commition in deptno 30
```sql
Select   Count (*)
From   Emp.
Where   Comm is not null  AND  deptno = 30 ;
```

(9). Wagid Avg Sal, total Sal, number of employee and max sal given to employee as presedent
```sql
Select   Avg (Sal), Sum (Sal), Count (*), max (Sal)
From   Emp.
Where   JOB = 'PRESIDENT' ;
```

(10). Wagid number of employee Having 'A' in their name
```sql
Select   Count (*)
From   Emp
Where   Ename like '%A%' ;
```

(11). Wagid number of emp. and total Salary needed to pay the emp who having 2 Consecutive L in thair name.
Select Count(*), Sum(Sal)
from Emp
where Ename like '%LL%' ;

(12). Wagid number of department present in Emp table.
Select Distinct Deptno.
From Emp ;

(13). Wagid number of employee having charater Z in their name.
Select Count(*)
From emp.
Where Ehame like '%z%' ;

(14). Wagid number of employee whos having 'S' in their name
Select Count(*).
From Emp
Where Ename like '%S%' ;

(15) Wagid total Sal given to employee working as clerk in deptno 30.
Select Sum(Sal).
From Emp.
Where Deptno = 30 ;

(16). Wagid max sal given to employee working as analyist

```sql
Select Max (Sal)
From Emp
Where Job = 'ANALYST';
```

(17). Wagid number of distinct salaries present in employee table

```sql
Select distinct Sal
From Emp;
```

(18). Wagid number of job present in emp table

```sql
Select Count(* Distinct Job
From Emp;
```

(19). Wagid avg sal given to clerk

```sql
Select Avg(sal)
From Emp
Where Job = 'clerk';
```

(20). Wagid Min salary given to the employee who work in dept no 10 as manager or clerk

```sql
Select Min(Sal)
From Emp
Where deptno = 10 AND (JOB = { 'MANAGER OR
                        JOB = ' CLERK')
```