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SE COMPS

SQL FUNCTIONS

1. Aggragate functions:

a) Avg(): to find average of all values in column.

```
1 create table students(ID number,Name varchar2(20),Marks number);
2
3 insert into students values(1,'A',75);
4 insert into students values(2,'B',78);
5 insert into students values(3,'C',87);
6 insert into students values(4,'D',72);
7
8 select *from students;
9
10 select avg(marks) from students;

AVG(MARKS)
78
```

b) Count(): to find number of values in the column.

c) Sum():to find the addition of values in column.

```
1 create table students(ID number,Name varchar2(20),Marks number);
2
3 insert into students values(1,'A',75);
4 insert into students values(2,'B',78);
5 insert into students values(3,'C',87);
6 insert into students values(4,'D',72);
7
8 select *from students;
9
10 select sum(marks) from students;
11

SUM(MARKS)
312
Download CSV
```

d) Min():to fing smallest element in the column.

```
1 create table students(ID number,Name varchar2(20),Marks number);
2
3 insert into students values(1,'A',75);
4 insert into students values(2,'B',78);
5 insert into students values(3,'C',87);
6 insert into students values(4,'D',72);
7
8 select *from students;
9
10 select min(marks) from students;
11

MIN(MARKS)
72
```

e) Max(): to find maximum element from the column

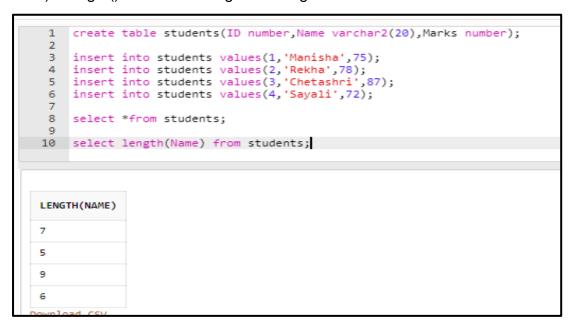
```
1 create table students(ID number,Name varchar2(20),Marks number);
2 insert into students values(1,'A',75);
4 insert into students values(2,'B',78);
5 insert into students values(3,'C',87);
6 insert into students values(4,'D',72);
7 8 select *from students;
9 10 select max(marks) from students;
11

MAX(MARKS)
87

Download CSV
```

2. String function

a) Length(): to find the length of string.

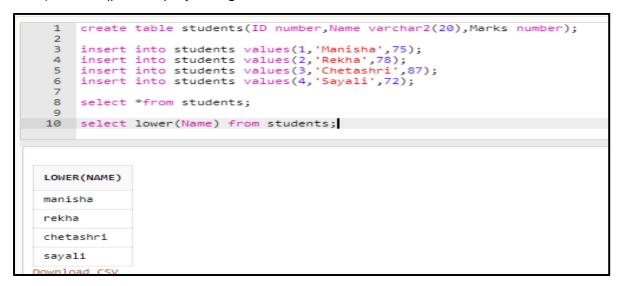


b) Ascii(): returns ascii value of the leftmost character in the string.

```
1 create table students(ID number,Name varchar2(20),Marks number);
2
3 insert into students values(1, 'Manisha',75);
4 insert into students values(2, 'Rekha',78);
5 insert into students values(3, 'Chetashri',87);
6 insert into students values(4, 'Sayali',72);
7
8 select *from students;
9
10 select ascii(Name) from students;

ASCII(NAME)
77
82
67
83
```

c) Lower()" to display string in lowercase



d) Reverse(): to display string in reverse form.

```
1     create table students(ID number,Name varchar2(20),Marks number);
2     insert into students values(1,'Manisha',75);
4     insert into students values(2,'Rekha',78);
5     insert into students values(3,'Chetashri',87);
6     insert into students values(4,'Sayali',72);
7     select *from students;
9     select reverse(Name) from students;

REVERSE(NAME)
ahsinaM
ahkeR
irhsatehC
ilayaS

Develord CCU
```

e) Concat(): to join to strings.

f) Locate()

g) Repeat(): to display one string n times

h) Strcmp(): to compare 2 strings

```
mysql> select strcmp('Hello', 'Hello') from dual;

| strcmp('Hello', 'Hello') |

| 0 |

| 1 row in set (0.00 sec)

mysql> select strcmp('Hello', 'World') from dual;

| strcmp('Hello', 'World') |

| -1 |

| row in set (0.00 sec)

mysql> select strcmp('World', 'Hello') from dual;

| strcmp('World', 'Hello') |

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```

3. Mathematical functions

a) Abs():returns positive value

```
1 create table students(ID number,Name varchar2(20),Marks number);
2
3 insert into students values(1,'Manisha',75);
4 insert into students values(2,'Rekha',78);
5 insert into students values(3,'Chetashri',87);
6 insert into students values(4,'Sayali',72);
7
8 select *from students;
9
10 select abs(marks) from students;

ABS(MARKS)
75
78
87
72
```

b) cos(): return cosine of element

```
create table students(ID number, Name varchar2(20), Marks number);
 1
 3
     insert into students values(1, 'Manisha',75);
    insert into students values(2, 'Rekha',78);
insert into students values(3, 'Chetashri',87);
insert into students values(4, 'Sayali',72);
 5
 6
 8
     select *from students;
 9
10 select cos(marks) from students;
                  COS(MARKS)
.9217512697247493163922968452141412772275
-.85780309324498785540835312342449474155
.5697503342653119200085066899612793402052
-.96725058827388248729171408622415018811
ownload CSV
```

c) sqrt(): return square root of values.

```
create table students(ID number, Name varchar2(20), Marks number);
 1
 2
      insert into students values(1,'Manisha',75);
insert into students values(2,'Rekha',78);
insert into students values(3,'Chetashri',87);
insert into students values(4,'Sayali',72);
 3
 4
 5
  6
 8
      select *from students;
10 select sqrt(Marks) from students;
                   SQRT(MARKS)
8.66025403784438646763723170752936183471
8.83176086632784685476404272695925396417
9.32737905308881504555447554232055698328
8.48528137423857029281013234525818847142
```

d) sign(): returns 1 if positive value

e) degrees():converts radian to degree.

f) log(): returns log value

g) hex():returns hexadecimal value of decimal number or string

```
mysql> select hex(10) from dual;

+-----+

| hex(10) |

+-----+

| A |

+-----+

1 row in set (0.00 sec)
```

4. Date Function

a) Curdate(): display current date of system.

```
mysql> select curdate();

+-----+

| curdate() |

+-----+

| 2020-08-26 |

+-----+

1 row in set (0.00 sec)
```

b) Curtime():displays current system time

c) Dayname():returns day of week

```
mysql> select dayname('2001-09-07');

+-----+

| dayname('2001-09-07') |

+-----+

| Friday |

+----+

1 row in set (0.00 sec)
```

d) Month():returns month

e) Year(): returns year.

f) Minute(): return minute from time

g) Hour(): returns hour

h) Date(): returns date from both date and time

Conclusion:

By using aggragate functions we can perform various operations like minimum, maximum, addition ,etc. String functions can be use for finding string with help of substring, join , compare 2 strings, etc. Numerical functions are to calculate mathematical values and date functions are use to display current date or time, etc.