

f. NULL values (IS NULL / IS NOT NULL) :

Used to select rows in which the specified column is NULL or not null.

e.g. ~~select name from employee where city is null;~~

~~select name from employee where name is not null;~~

(Above query will display the name of those employees whose city is NULL)

(Above query will display the name of those employees whose name is not null)

g. Order by !>

It is used to sorting the values.

~~Syntax~~

e.g. select name from employee order by salary asc;

e.g. select name from employee order by id desc;

3. SQL functions !>

In sql function is a special type of predefined command that performs some specific operation and returns a single value. Functions can be categorized in three types:

A) Numeric functions

B) String functions

C) Date & time functions

A) Numeric Functions !>

1. power() or pow() !> Returns the argument raised to the specified power.

e.g. $\text{pow}(2,4) \Rightarrow 2^4 \Rightarrow 16$

$\text{pow}(3,3) \Rightarrow 3^3 \Rightarrow 27$

2. Round () !> It is used to rounds the argument / value to its nearest integer, upto particular decimal places.

e.g. round (-1.23) => -1
 round (1.58) => 2
 round (1.298, 0) => 1

3. Truncate () !> It is used to truncates the argument to specified number of decimal places.

e.g. truncate (7.29, 1) = 7.2

4. Sign () !> It returns three outputs

+1 → if given number is positive

-1 → if given number is negative

0 → if given number is zero.

e.g. sign (0.75) => +1
 sign (-25) => -1
 sign (0) => 0

5. Sqrt () !> It is used to find out the square root of any given number.

e.g. sqrt (9) => 3

B. string functions !>

1. length () !> It is used to calculate the length of given string.

e.g. length ('computer') => 8

2. concat () !> It is used to combining of two strings.

e.g. concat ("ram", "sharma") => ramsharma

3. char() \Rightarrow returns the corresponding ASCII character for each integer passed.

e.g. $\text{char}(65) \Rightarrow A$
 $\text{char}(98) \Rightarrow b$

4. Instr() \Rightarrow It returns the index of first occurrence of substring.

e.g. $\text{Instr}('computer', 'put') \Rightarrow 4$

5. Lower() / Lcase() \Rightarrow Returns the argument after converting it in lowercase.

e.g. $\text{Lower}('COMPUTER') \Rightarrow \text{computer}$

6. Upper() / Ucase() \Rightarrow Returns the argument after converting it in uppercase.

e.g. $\text{Upper}('COMPUTER') \Rightarrow \text{COMPUTER}$

7. Left() \Rightarrow Returns the first n characters from the string.

e.g. $\text{Left}('Ram is great', 3) \Rightarrow \text{Ram}$

8. Right() \Rightarrow Returns the last n characters from the string.

e.g. $\text{Right}('Ram is great', 4) \Rightarrow \text{reat}$

9. Mid() \Rightarrow Returns a substring starting from the specified position in a given string.

e.g. $\text{mid}('Ram is great person', 3, 4)$

$\Rightarrow \text{m is}$

10. Ltrim() \Rightarrow Removing leading spaces.

e.g. $\text{Ltrim}(' \text{computer} ') \Rightarrow \text{computer}$

11. Rtrim() \rightarrow Removing trailing spaces.

e.g. `Rtrim('computer ')` \Rightarrow computer

12. Trim() \rightarrow Removes both leading and trailing spaces from the string.

e.g. `trim(' computer ')` \Rightarrow computer

13. ASCII() \rightarrow Returns the ASCII value of the first character of the string.

e.g. `ASCII('ram')` \Rightarrow 114

C. Date and Time functions \rightarrow

1. curdate() \rightarrow Returns the current date in YYYY-MM-DD format.

e.g. `curdate()`

2. Now() \rightarrow Returns the current date & time

e.g. `now()`

3. Sysdate() \rightarrow Returns the current system date and time.

e.g. `sysdate()`

4. Date() \rightarrow Returns the date part of a date-time expression.

e.g. `Date(sysdate());`

5. Month() \rightarrow returns the month from given date argument.

e.g. `month('2008-07-02');`

6. Year() \rightarrow Returns the year from given date argument.

e.g. `year('2008-07-07');`

7. Dayname() \rightarrow Returns the name of the weekday.
e.g. `dayname('13-10-2018')` \Rightarrow Saturday
8. Dayofmonth() \rightarrow Returns the day of month (1-31).
e.g. `dayofmonth('13-10-2018')` \Rightarrow 13
9. Dayofweek() \rightarrow Returns the day of week (1-7)
e.g. `dayofweek('13-10-2018')` \Rightarrow 6
10. Dayofyear() \rightarrow Returns the day of year (1-366)
e.g. `dayofyear('10-02-2018')` \Rightarrow 241

Aggregate functions \rightarrow

- \rightarrow Aggregate functions are those functions which work on multiple values of multiple rows.
- \rightarrow following functions are ~~used~~ ^{include} as aggregate functions!

S.No.	functionname	function description
1.	<code>sum()</code>	returns the sum of given column
2.	<code>min()</code>	returns the min. value in the given column
3.	<code>max()</code>	returns the max. value in the given column
4.	<code>avg()</code>	returns the average value of given column
5.	<code>count()</code>	returns the total number of values/records as per given column

e.g.

```

select sum (salary) from employee;
select min (salary) from employee;
select max (salary) from employee;
select avg (salary) from employee;
select count (salary) from employee;
    
```