SQL Functions

SQL functions are built in APIs which is provided for developers to be used in SQL statements to perform specific logic/functionality.
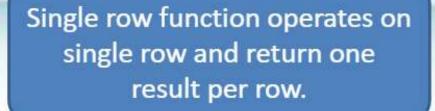
Few Examples:

Rounding a number.

Changing a string to upper case.

Below are some of the Math functions

Function	Example	Output
ROUND()	select round(fees,2) from student; //When fees=32.466	32.46
TRUNC()	select trunc(fees,2) from student; //When fees=32.456	32.45
MOD()	select Mod(fees,500) from student; //When fees=1700	200

Rounds a number to a specified number of decimal places.

Truncates value to specified number of decimals

Returns the remainder of a number divided by another

For more Math functions refer to the My SQL Reference document available in MYSQL website.

Single Row- String Functions

Function	Example	Result
UPPER	select UPPER(ENAME) from Student; //When ENAME='Roy'.	ROY
LOWER	select LOWER(ENAME) from Student; //Where ENAME='ROY'.	roy
CONCAT	Select CONCAT(FNAME,LNAME) from Student; //Where FNAME='Roy' and LNAME='Kunal'.	RoyKunal
SUBSTR	select SUBSTR(NAME,1,3) from Student; //Where NAME='RAMYA'.	RAM
TRIM	Select TRIM(NAME) from Student; //Where NAME=' ramya '	ramya

Converts to Upper Case

Converts to Lower Case

Return concatenated String

Returns the string from the character starting position and retrieve the next n characters.

Trims heading or trailing (or both) from a character string

Date/Time functions operates on date, timestamp data type.

Function Name	Example	Result	
SYSDATE(), NOW()	select sysdate() from dual	'2019-01-19 11:21:32'	Return the current date and time
DAYOFMONTH(), MONTH()	select dayofmonth(sysdate()) day, month(sysdate()) month from dual	Returns day as 19 and month as 1(On 19th Jan)	Returns the date and the month
ADDDATE()	SELECT ADDDATE('2019-01-02', INTERVAL 240 DAY);	'2019-08-30'	Adds the mentioned interval of days to the given date.
DATEDIFF	SELECT DATEDIFF('2010-11-30','2010-7-31') from dual	122	Finds the difference in days between the mentioned dates

Aggregate Function

- Aggregate functions operate on sets of rows and returns one value per group

- They are commonly used in the GROUP BY clause in a SELECT statement, and accepts single column as input .

Aggregate Function

The following are some of the Aggregate Functions,

Function	Example	Description
COUNT	Select COUNT(EMP_ID) FROM EMP;	Displays the total number of rows in the employee table.
SUM	Select SUM(SAL)FROM EMP;	Displays the sum of all the salaries of all the employees in the employee table.
MIN	Select MAX(SAL)FROM EMP;	Displays the maximum salary of the employee in the employee table.
MAX	Select MIN(SAL)FROM EMP;	Displays the minimum salary of the employee in the employee table.
AVG	Select AVG(SAL)FROM EMP;	Displays the average of all the salaries of all the employees in the employee table.