**Single Row Function in SQL**

Single row function in SQL are the ones who work on a single row and return one output per row. Single row function in SQL can be character, numeric, date, and conversion functions. These functions are used to modify data items. These functions need one or more input and operate on each row, thereby returning one output value for each row.

Types of Single row function In SQL

* **Character Function**
* **General Function**
* **Case conversion Function**
* **Date Function**
* **Number Function**

### General functions

It usually contains NULL handling functions.

#### The types of General functions are:- NVL, NVL2, NULLIF, COALESCE, CASE, DECODE

### **Case Conversion functions**

Accepts character data and returns a character value.

#### **Types of Case Conversion function**

* UPPER
* LOWER
* INITCAP
* The UPPER function converts a string to upper case.
* LOWER function converts a string to lower case.
* INITCAP function converts only the initial letters of a string to upper case.

**Character functions** – Accepts string input and return number or [string](https://www.fireblazeaischool.in/blogs/python-strings/) value.

### Types of character functions

* CONCAT
* LENGTH
* SUBSTR
* INSTR
* LPAD
* RPAD
* TRIM
* REPLACE.
* CONCAT function is used to concatenates two string values.
* LENGTH function returns the length of the input character.
* SUBSTR function returns a part of a string from a given start point to an endpoint.
* INSTR function returns the numeric position of a character or a string in a given order.
* LPAD and RPAD functions pad the given string up to a specific length with a given type.
* TRIM function trims the data input from the start or end.
* REPLACE function replaces characters from the input character.

**Date functions** – Date arithmetic operations return date or numeric values in SQL.

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**Single Row Functions in SQL**

Single row functions can be character functions, numeric functions, date functions, and conversion functions. Note that these functions are used to manipulate data items. These functions require one or more input arguments and operate on each row, thereby returning one output value for each row. Argument can be a column, literal or an expression. Single row functions can be used in SELECT statement, WHERE and ORDER BY clause. Single row functions can be -

* **General functions** - Usually contains NULL handling functions. The functions under the category are NVL, NVL2, NULLIF, COALESCE, CASE, DECODE.
* **Case Conversion functions** - Accepts character input and returns a character value. Functions under the category are UPPER, LOWER and INITCAP.
  + UPPER function converts a string to upper case.
  + LOWER function converts a string to lower case.
  + INITCAP function converts only the initial alphabets of a string to upper case.
* **Character functions** - Accepts character input and returns number or character value. Functions under the category are CONCAT, LENGTH, SUBSTR, INSTR, LPAD, RPAD, TRIM and REPLACE.
  + CONCAT function concatenates two string values.
  + LENGTH function returns the length of the input string.
  + SUBSTR function returns a portion of a string from a given start point to an end point.
  + INSTR function returns numeric position of a character or a string in a given string.
  + LPAD and RPAD functions pad the given string upto a specific length with a given character.
  + TRIM function trims the string input from the start or end.
  + REPLACE function replaces characters from the input string with a given character.
* **Date functions** - Date arithmetic operations return date or numeric values. Functions under the category are MONTHS\_BETWEEN, ADD\_MONTHS, NEXT\_DAY, LAST\_DAY, ROUND and TRUNC.
  + MONTHS\_BETWEEN function returns the count of months between the two dates.
  + ADD\_MONTHS function add 'n' number of months to an input date.
  + NEXT\_DAY function returns the next day of the date specified.
  + LAST\_DAY function returns last day of the month of the input date.
  + ROUND and TRUNC functions are used to round and truncates the date value.
* **Number functions** - Accepts numeric input and returns numeric values. Functions under the category are ROUND, TRUNC, and MOD.
  + ROUND and TRUNC functions are used to round and truncate the number value.
  + MOD is used to return the remainder of the division operation between two numbers.