

SQL SERVER FUNCTIONS:-

String Functions:-

ASCII() — Returns the ASCII value for a specific character.

CHAR() — Returns the character based on the ASCII code.

CHARINDEX() — Returns the position of a substring in a string.

Concat() — Adding two or more strings together.

Concat without — Add two or more strings together.

Concat wsc() — Add two or more strings together with separator.

Datalength — Returns the number of bytes used to represent an expression.

Difference() — Compare two soundex values, and returns an integer value.

Format() — Formats a value with a specified format.

LEFT() — Extracts a number of characters from string starting from LEFT()

LEN() — Returns the length of the string.

LOWER() — Converts a string to lowercase.

LTRIM() — Removes leading spaces from a string.

NCHAR() — Returns the unicode character based on the number code.

PATINDEX() — Returns the position of a string pattern in a string.

QUOTENAME() — Returns a unicode string with delimiters added to make the string a valid SQL server delimited identifier.

REPLACE(^{sub}C) : Replace all occurrences of a string with a string, with a new substring

REPLICATE() — Repeats a string a specified number of times

REVERSE() — Reverse a string and returns the result

RIGHT() — Extracts a number of characters from a string (starting from Right)

RTRIM() — Removes trailing spaces from a STRING

SOUNDEX() — Returns a four character code to evaluate the similarity of 2 strings.

SPACE() — Returns a string of the specified number of space characters.

STR() — Returns a number as string.

STUFF() — Deletes a part of string and then inserts another part into the string, starting at a specified position.

SUBSTRING() — Extracts some characters from a string

TRANSLATE() — Returns a string from first to the argument after specifying the characters in every coming argument

TRIM() — Removes leading and trailing spaces from a string

UNICODE() — Returns the unicode value for the first character of the input expression.

UPPER() — Converts a string to uppercase.

SQL SERVER DATE FUNCTIONS

CURRENT_TIMESTAMP - Returns the current date and time.

DATEADD() - Adding a date interval to a date and then return to the date.

DATEDIFF() - Returns the difference between two dates.

DATEFROMPARTS() - Returns a date from specified parts.

DATENAME() - Returns a specified part of a date.

DATEPART() - Returns a specified part of date.

DAY() - Returns the day of a month of a specified day.

GETDATE - Returns the current database system date & time.

GETUTCDATE - Returns the current database system UTC date & time.

ISDATE() - Checks an expression and returns a date '1' if it is valid otherwise returns '0'.

MONTH() - Returns the month part of the specified DATE.

SYSDATETIME - Returns the date and time of SQL SERVER.

YEAR - Returns the YEAR part of a specified DATE.

Different Functions in Python

`print()` — Outputs a specified message or value to o/p.

`len()` — Returns the length() of console of list

`type()` — Returns type of an object.

`range()` — generates a sequence of numbers with a specified range.

`input()` — Prompts the user to enter i/p from the console.

`int()` — Converts a value to an integer datatype.

`str()` — Converts a value to a string datatype.

`list()` — Converts iterable object into a list.

`max()` — Returns the largest item from collection of objects.

`min()` — Returns the smallest item from a collection of.

`sum()` — Returns the sum of all items in an iterable.

`abs()` — Returns absolute value of a number.

`round()` — Rounds a number of specified number of decimal.

`zip()` :- Combines multiple iterables into a single iterable of tuples.

`map()` :- Applies a given function to each item in an item and returns an iterator of the o/p.

`open()` : Open a file for reading, writing or both.

`filter()` : Returns an iteration containing only items from a iterable that satisfies a given condition

`open()`:

`enumerate()`: Returns iterator that generates tuples contains index and value of each item in an iterable

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Functions for Pandas API :-

1. Data Loading & Input

`read_csv()` — Read csv (comma separated) files into a data frame.

`read_excel()` — Read Excel files into a Dataframe

`read_sql()` — Read sql files query or database table into a data frame

`read_json()` — Read (JSON) files into a Dataframe

2. Data Exploration & Manipulation

`head()` : - Returns The first 'n' rows of a dataframe

`tail()` : - Returns The last 'n' rows of a Dataframe

`describe()` : Generate descriptive statistics of DF

`columns()` : Returns column labels of DF

`unique()` : Returns unique values in a column

3. Data Selecting & Filtering

`loc()` — Access rows & columns by labels

`iloc()` — Access rows & columns by index

`isin()` — filter row based on whether column value is in given list.

`query()` — filters row using a boolean expression.

`groupby()` — Groups data based on one or more columns

`agg()` — Applies aggregation functions to grouped data

`pivot_table()` — Create spread sheet-style pivot table based on grouped data.

`drop_duplicate()` — Remove duplicate rows from Dataframes

`replace()` — Replace values in DF with specified values

`apply()` — Applies a function to each element of row/column

DF in Numpy API:

array

numpy.array() :- Creates an array from python list or tuple

numpy.zeros() : Create an array filled with zeros

numpy.ones() : Create an array filled with ones

numpy.empty() :- Creates an uninitialised array

numpy.arange() :- Creates an array with evenly spaced values.

numpy.linspace() :- Creates an array with evenly spaced values.

numpy.random.rand() :- Creates an array of random number between 0 & 1

numpy.reshape() : Reshapes an array into a specified shape

numpy.split() :- splits an array into multiple sub arrays

numpy.transpose() :- Transposes an array.

numpy.sum() : Computes the sum of array's element

numpy.mean() : Computes the arithmetic mean of array elements

numpy.min() :- Finds the minimum value in an array

numpy.max() :- Finds the maximum value in an array

numpy.exp() :- Computes the exponential of all elements in arrays.

numpy.log() : Computes the natural logarithm of all elements in an array.

numpy.dot() : Computes the dot product of 2 arrays

`numpy.transpose()`: transposes an array

`numpy.sort()`: sort the elements of an array.

`numpy.unique()`: finds the unique elements in an array

`numpy.argmax()`: Returns the index of the maximum value along a specified axis.

Functions in RDD API:-

Transformation functions:-

`map()`: Applies a function to each element and returns a NEW RDD

`filter()`: filter the elements based on a condition

`flatMap()`: Applies a function to each element and returns a new RDD by flattening the results

`union()`: Returns the union of two RDD's.

`distinct()`: Removes duplicates and returns a new RDD

`sortBy()`: Sort the RDD elements based on keys.

`groupByKey()`: Group the elements based on key.

`join()`: Join the RDD's based on common key

`collect()`: Returns all the elements of the RDD as an array

`Count()`: Returns the number of elements in the RDD.

`first()`: Returns the first elements in the RDD.