What is a Function?

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- A function is a set of MySQL statements that perform a specific task.

- Basically, it is a set of MySQL statements that accept only input parameters, perform actions and return the result. Function can return an only single value or a table.

- We can't use a function to Insert, Update, Delete records in the database table(s).

- If you have to repeatedly write large MySQL scripts to perform the same task, you can create a function that performs that task.

- A function accepts inputs in the form of parameters and returns a value.

- Of course, you could create a stored procedure to group a set of MySQL statements and execute them, however, stored procedures cannot be called within MySQL statements. Functions, on the other hand, can be.

- These functions are created by the user in the system database or in a user-defined database.

Basic Syntax of Function

- DELIMITER $$

CREATE FUNCTION function_name(

   param1,

   param2,…

)

RETURNS datatype

[NOT] DETERMINISTIC

BEGIN

 -- statements

END $$

DELIMITER ;

Built-In Functions

- MySQL server adds some built-in functions to every database.

- Built-in functions are grouped into different types depending upon their functionality.

- **Comparison Functions.**

- **Aggregate Functions.**

- **Date and Time Functions.**

- **SRING Functions.**

- **MATH Functions.**

- **CONTROL FLOW Functions.**

Difference between Functions and Stored Procedures

- The function must return a value but in **Stored Procedure** it is optional. Even a procedure can return zero or n values.

- Functions can have only input parameters for it whereas Procedures can have input or output parameters.

- Functions can be called from Procedure whereas Procedures cannot be called from a Function.

- The procedure allows SELECT as well as DML(INSERT/UPDATE/DELETE) statement in it whereas Function allows only SELECT statement in it.

- Procedures cannot be utilized in a SELECT statement whereas Function can be embedded in a SELECT statement.

- Stored Procedures cannot be used in the SQL statements anywhere in the WHERE/HAVING/SELECT section whereas Function can be.