

# MySQL Fundamentals Part 2

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## STORED PROCEDURES AND STORED FUNCTIONS



**Pinal Dave**

@pinaldave | <http://blog.sqlauthority.com>



# Stored Programs



Stored Procedure

Stored Function

Trigger

Event

# Outline



**Stored Procedures**

**Stored Functions**



# Stored Procedures



A Stored Procedure is a subroutine available to applications that access a relational database system



A Stored Procedure contains one or more SQL statements stored in the database



Typical used for Data Validation as well Access Control Methods



A Stored Procedure is often called a *sproc* or *procedure*



Parameters are used to pass one or more values from calling program



# Advantages of Stored Procedures



**Overhead**

**Avoidance of Network Traffic**

**Encapsulation of Business Logic**

**Delegation of Access Rights**

**Protection from SQL Injection**



# Stored Functions

A Stored Function is an executable database object with SQL procedural code

A Stored Function is often called a User Defined Functions (UDF) or just a function

A function can't modify or change anything in the database by executing INSERT, UPDATE or DELETE statements

The code to call Stored Functions is similar to built-in functions

MySQL supports a scalar functions, which returns a single value



## Stored Procedure

Returns many values

Input and output parameters

Can't be used in SELECT

SP can call functions

May not return value

Read and Modify Data

INSERT/UPDATE/DELETE/SELECT

Transaction Management

## Stored Function

Returns only 1 value

Only input parameters

Can be used in SELECT

Function can't call SP

Must return a value

Reads only Data

Allows only SELECT

No Transaction Management



# Summary



There are four different types of the stored programs

- Stored Procedure
- Stored Function
- Trigger
- Event

The major advantage of Stored Procedure is Transaction Management and Performance

The major advantage of Stored Function is that it can be used in different clauses of the **SELECT** statement

