



MySQL Stored Procedures

In this section, you will learn how to develop stored programs including stored procedures and stored functions in MySQL.

Section 1. Stored procedure basics

- [Introduction to Stored Procedures in MySQL](https://www.mysqltutorial.org/introduction-to-sql-stored-procedures.aspx) (<https://www.mysqltutorial.org/introduction-to-sql-stored-procedures.aspx>) – introduce you to stored procedures, their advantages, and disadvantages.
- [Changing the default delimiter](https://www.mysqltutorial.org/mysql-stored-procedure/mysql-delimiter/) (<https://www.mysqltutorial.org/mysql-stored-procedure/mysql-delimiter/>) – learn how to change the default delimiter in MySQL.
- [Creating new stored procedures](https://www.mysqltutorial.org/getting-started-with-mysql-stored-procedures.aspx) (<https://www.mysqltutorial.org/getting-started-with-mysql-stored-procedures.aspx>) – show you how to create use the `CREATE PROCEDURE` statement to create a new stored procedure in the database.
- [Removing stored procedures](https://www.mysqltutorial.org/mysql-stored-procedure/mysql-drop-procedure/) (<https://www.mysqltutorial.org/mysql-stored-procedure/mysql-drop-procedure/>) – show you how to use the `DROP PROCEDURE` statement to drop an existing stored procedure.
- [Variables](https://www.mysqltutorial.org/variables-in-stored-procedures.aspx) (<https://www.mysqltutorial.org/variables-in-stored-procedures.aspx>) – guide on you how to use variables to hold immediate results inside stored procedures.
- [Parameters](https://www.mysqltutorial.org/stored-procedures-parameters.aspx) (<https://www.mysqltutorial.org/stored-procedures-parameters.aspx>) – introduce you to various types of parameters used in stored procedures including `IN` , `OUT` , and `INOUT` parameter.
- [Altering stored procedure](https://www.mysqltutorial.org/mysql-stored-procedure/alter-stored-procedure/) (<https://www.mysqltutorial.org/mysql-stored-procedure/alter-stored-procedure/>) – show you step by step how to alter a stored procedure using a sequence of `DROP PROCEDURE` and `CREATE PROCEDURE` statements in MySQL Workbench.
- [Listing stored procedures](https://www.mysqltutorial.org/listing-stored-procedures-in-mysql-database.aspx) (<https://www.mysqltutorial.org/listing-stored-procedures-in-mysql-database.aspx>) – provide you with some useful commands to list stored procedures from databases.

Section 2. Conditional Statements

- [IF statement](https://www.mysqltutorial.org/mysql-if-statement/) (https://www.mysqltutorial.org/mysql-if-statement/) – show you how to use the `IF THEN` statement in stored procedures.
- [CASE statement](https://www.mysqltutorial.org/mysql-case-statement/) (https://www.mysqltutorial.org/mysql-case-statement/) – introduce you to the `CASE` statements including simple `CASE` and searched `CASE` statements.

Section 3. Loops

- [LOOP](https://www.mysqltutorial.org/stored-procedures-loop.aspx) (https://www.mysqltutorial.org/stored-procedures-loop.aspx) – learn how to execute a list of statements repeatedly based on a condition.
- [WHILE Loop](https://www.mysqltutorial.org/mysql-stored-procedure/mysql-while-loop/) (https://www.mysqltutorial.org/mysql-stored-procedure/mysql-while-loop/) – show you how to execute a loop as long as a condition is true.
- [REPEAT Loop](https://www.mysqltutorial.org/mysql-stored-procedure/mysql-repeat-loop/) (https://www.mysqltutorial.org/mysql-stored-procedure/mysql-repeat-loop/) – show you how to execute a loop until a search condition is true.
- [LEAVE statement](https://www.mysqltutorial.org/mysql-stored-procedure/mysql-leave/) (https://www.mysqltutorial.org/mysql-stored-procedure/mysql-leave/) – guide you on how to exit a loop immediately.

Section 4. Error Handling

- [Handling exceptions](https://www.mysqltutorial.org/mysql-error-handling-in-stored-procedures/) (https://www.mysqltutorial.org/mysql-error-handling-in-stored-procedures/) – show you how to handle exception and errors in stored procedures.
- [Raising errors](https://www.mysqltutorial.org/mysql-signal-resignal/) (https://www.mysqltutorial.org/mysql-signal-resignal/) – learn how to use `SIGNAL` and `RESIGNAL` to raise errors in stored procedures.

Section 5. Cursors

- [Cursors](https://www.mysqltutorial.org/mysql-cursor/) (https://www.mysqltutorial.org/mysql-cursor/) – learn how to use cursors to process row by row in a result set.

Section 6. Stored Functions

- [Creating a stored function](https://www.mysqltutorial.org/mysql-stored-function/) (https://www.mysqltutorial.org/mysql-stored-function/) – show you how to use the create stored functions in the database.
- [Removing a stored function](https://www.mysqltutorial.org/mysql-stored-procedure/mysql-drop-function/) (https://www.mysqltutorial.org/mysql-stored-procedure/mysql-drop-function/) – use the `DROP FUNCTION` statement to remove a stored function.
- [Listing stored functions](https://www.mysqltutorial.org/mysql-stored-procedure/mysql-show-function/) (https://www.mysqltutorial.org/mysql-stored-procedure/mysql-show-function/) – learn how to list all stored functions in the database by using the `SHOW FUNCTION STATUS` or querying from the data dictionary.

Section 7. Stored Program Security

- [Stored object access control](https://www.mysqltutorial.org/mysql-stored-procedure/mysql-stored-object-access-control/) (https://www.mysqltutorial.org/mysql-stored-procedure/mysql-stored-object-access-control/) – learn how to control the security of the stored objects.