

What are Stored Procedures?

This lesson presents an introduction to stored procedures and reviews their advantages and drawbacks.

Stored Procedures

Procedures are a simple way to save queries for later access. A stored procedure can be defined as a set of SQL statements stored in the MySQL server. For example a **SELECT** statement that returns all the male actors can be turned into a stored procedure. A stored procedure can be invoked using **CALL** statement which executes the query and returns the result.

When the stored procedures are called, MySQL compiles the code of the procedure and stores it in the cache. Then the code is executed. Any subsequent calls to the same stored procedure result in execution of the previously compiled code.

Just like functions, we can pass parameters to stored procedures. Stored procedures have conditional statements and loops, and can call other stored procedures.

There are several advantages of using stored procedures. They reduce the traffic between applications and server because instead of sending queries, only the name of the stored procedure is sent to the server. Since a stored procedure can be called by other procedures, it reduces the duplication of code. Performance gains are also achieved by using stored procedures because the code can be pre-compiled instead of parsing the query every time. Stored procedures can be used for security by giving users access to certain procedures without giving access to the tables.

Despite the above mentioned advantages, stored procedures have certain limitations. Stored procedures are difficult to debug as they get automatically executed and it is not possible to apply checkpoints in the code. Stored

procedures incur a resource overhead and may result in overuse of memory and CPU. There is no way to rollback a change to a stored procedure, once it is made.