An SQL stored procedure is similar to a function in Java or Python in that it is a block of code that you have saved so that you can call it over and over again without having to re-write the code every time. Like a function you would create in either of those languages, the procedure is stored within SQL. Also like a function, you can pass parameters to a stored procedure to allow it to act on that parameter. These procedures can be created as either permanent or temporary, with or without output(s), and even with or without encryption.

There are several advantages to utilizing stored procedures. They are easy to modify, using them decreases network traffic, they are, of course, easily reusable, they reduce direct access to tables within the database, and their use increases performance of the database in response to queries. These procedures can be accessed any time from their creation forward, but they are created by the user, so they do not come pre-loaded into SQL.

Because these procedures usually contain flow statements like **IF, CASE,** and **LOOP,** they can be used to accomplish many different tasks within the database. By sending only the name and parameters of a stored procedure, there is much less network traffic. Creating procedures that work in multiple applications increases effectiveness and works to keep a database consistent. It is also possible for permission to use the procedure itself to be given to a user without changing any privileges on any existing tables.

References:

Babu, R. (2019, July 30). *SQL Server stored procedures for Beginners*. SQL Shack - articles about database auditing, server performance, data recovery, and more. Retrieved July 15, 2022, from https://www.sqlshack.com/sql-server-stored-procedures-for-beginners/

*Introduction to stored procedure in mysql*. MySQL Tutorial. (2020, April 11). Retrieved July 15, 2022, from https://www.mysqltutorial.org/introduction-to-sql-stored-procedures.aspx

Simplilearn. (2022, July 6). *Stored procedure in SQL: Benefits and how to create it*. Simplilearn.com. Retrieved July 15, 2022, from https://www.simplilearn.com/tutorials/sql-tutorial/stored-procedure-in-sql

*SQL stored procedures for SQL server*. SQL Stored Procedures. (n.d.). Retrieved July 15, 2022, from https://www.w3schools.com/sql/sql\_stored\_procedures.asp