'JDBC Callable Statement – Execute Store Procedure

WHAT IS CALLABLE STATEMENT IN JDBC?

The `CallableStatement` Interface is used in accessing and executing Store Procedure and Function. Store Procedure is a group of SQL Statement that encapsulates all the queries and gets compiled. Once store procedure gets compiled it can be executed so many times without compilation. This makes it robust, faster and high performing. It accepts parameter for sql queries that is hidden inside it and gets executed. The Callable Statement in JDBC is used to manipulating these store procedure.

HOW TO USE CALLABLE STATEMENT TO CALL STORE PROCEDURE?

Here, I am going to present a simple callable statement example. This example includes following steps.

1. First step is creating a store procedure. I will create a store procedure to insert data into ITEM table.
2. Second Step is Using CallableStatement, I will execute this store procedure and insert data to table.

PROGRAMMING EXAMPLE

1. Store Procedure: Creating Store Procedure
You need to execute this statement in your database server sql window. Here, I am using MySQL and used PHPMyAdmin page to create this store procedure.

```
DELIMITER //
CREATE PROCEDURE InsertProc(IN prd varchar(50), IN prc varchar(10))
BEGIN
  INSERT INTO ITEM(PRODUCT,PRICE) VALUES(prd,prc);
END //
DELIMITER ;
```
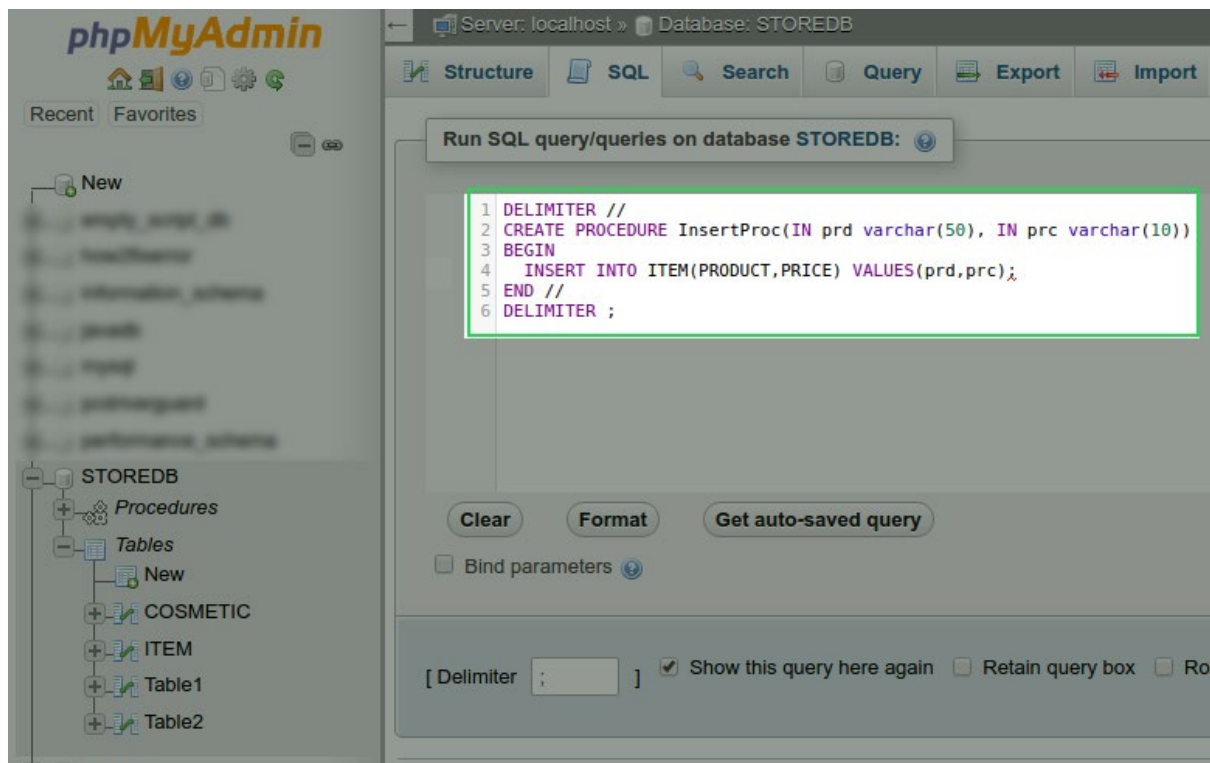
This statement will create `InsertProc` Store procedure which takes 2 parameter `prd` and `prc`.

2. Use CallableStatement in JDBC to call and execute this store procedure.

package AdvanceJDBC;

- import java.sql.*;

- import com.mysql.jdbc.CallableStatement;

- public class Callable_StoreProc
- {
      static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
      static final String dburl = "jdbc:mysql://localhost/STOREDB";
      static final String dbuser = "root";
      static final String dbpass = "root";

public static void main(String[] args)
{
        Connection con = null;
        CallableStatement csmt = null;

        try
        {
          //Step 1 : Connecting to server and database
          con = DriverManager.getConnection(dburl, dbuser, dbpass);
          //Step 2 : Initialize CallableStatement
          csmt=(CallableStatement)con.prepareCall("{call InsertProc(?,?)}");
          //Step 3 : Execute CallableStatement with Store Procedure
          csmt.setString(1, "Intel i7 Processor");
          csmt.setString(2, "27000");

```java
            csmt.execute();
            System.out.println("Record Inserted Successfully");
        }

        catch (SQLException e)
        {
            System.err.println("Cannot connect ! ");
            e.printStackTrace();
        }

        finally {
            System.out.println("Closing the connection.");
            if (con != null) try { con.close(); } catch (SQLException ignore) {}
        }

    }
}
```

Output

PRODUCT	PRICE	SavePic
MainJava Logo	900	[BLOB - 9.9 KiB]
Keyboard	770	NULL
WebCam	1150	NULL
HardDrive	3800	NULL
Printer	12000	NULL
Bluetooth	220	NULL
Intel i7 Processor	27000	NULL