

JDBC - PREPAREDSTATEMENT OBJECT EXAMPLE

Following is the example, which makes use of the PreparedStatement along with opening and closing statements –

This sample code has been written based on the environment and database setup done in the previous chapters.

Copy and past the following example in JDBCExample.java, compile and run as follows –

```
//STEP 1. Import required packages
import java.sql.*;

public class JDBCExample {
    // JDBC driver name and database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/EMP";

    // Database credentials
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        PreparedStatement stmt = null;
        try{
            //STEP 2: Register JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //STEP 3: Open a connection
            System.out.println("Connecting to database..."); 
            conn = DriverManager.getConnection(DB_URL,USER,PASS);

            //STEP 4: Execute a query
            System.out.println("Creating statement..."); 
            String sql = "UPDATE Employees set age=? WHERE id=?";
            stmt = conn.prepareStatement(sql);

            //Bind values into the parameters.
            stmt.setInt(1, 35); // This would set age
            stmt.setInt(2, 102); // This would set ID

            // Let us update age of the record with ID = 102;
            int rows = stmt.executeUpdate();
            System.out.println("Rows impacted : " + rows );

            // Let us select all the records and display them.
            sql = "SELECT id, first, last, age FROM Employees";
            ResultSet rs = stmt.executeQuery(sql);

            //STEP 5: Extract data from result set
            while(rs.next()){
                //Retrieve by column name
                int id   = rs.getInt("id");
                int age  = rs.getInt("age");
                String first = rs.getString("first");
                String last = rs.getString("last");

                //Display values
                System.out.print("ID: " + id);
                System.out.print(", Age: " + age);
                System.out.print(", First: " + first);
                System.out.println(", Last: " + last);
            }
            //STEP 6: Clean-up environment
        }
```

```

        rs.close();
        stmt.close();
        conn.close();
    }catch(SQLException se){
        //Handle errors for JDBC
        se.printStackTrace();
    }catch(Exception e){
        //Handle errors for Class.forName
        e.printStackTrace();
    }finally{
        //finally block used to close resources
        try{
            if(stmt!=null)
                stmt.close();
        }catch(SQLException se2){
            //nothing we can do
        }try{
            if(conn!=null)
                conn.close();
        }catch(SQLException se){
            se.printStackTrace();
        } //end finally try
    } //end try
    System.out.println("Goodbye!");
} //end main
} //end JDBCExample

```

Now let us compile the above example as follows –

```
C:\>javac JDBCExample.java
C:\>
```

When you run **JDBCExample**, it produces the following result –

```
C:\>java JDBCExample
Connecting to database...
Creating statement...
Rows impacted : 1
ID: 100, Age: 18, First: Zara, Last: Ali
ID: 101, Age: 25, First: Mahnaz, Last: Fatma
ID: 102, Age: 35, First: Zaid, Last: Khan
ID: 103, Age: 30, First: Sumit, Last: Mittal
Goodbye!
C:\>
```