

Phase – 2 Practice Project: Assisted Practice

14. Demonstrate stored procedures and exception handling in JDBC.

- Code

✓ Database Code

```
create database ecommerce;

use ecommerce;

CREATE TABLE eproduct (
ID bigint primary key auto_increment,
name varchar(100),
price decimal(10,2),
date_added timestamp default now()
)

INSERT INTO eproduct(name, price) VALUES ('HP Laptop ABC', 12000);
INSERT INTO eproduct(name, price) VALUES ('Acer Laptop ABC', 14000);
INSERT INTO eproduct(name, price) VALUES ('Lenovo Laptop ABC', 12000);
select * from eproduct;

-----

DELIMITER $$

CREATE PROCEDURE add_product(IN pname varchar(100), IN pprice decimal(10,2))
INSERT INTO eproduct (name, price) VALUES (pname, pprice)
$$

DELIMITER ;
```

index.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>JDBC Stored Procedures</title>
</head>
<body>
<a href="list">Product Info</a><br>
</body>
</html>
```

DBConnection.java

```
package com;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
public class DBConnection {
    private Connection connection;
    public DBConnection(String dbURL, String user, String pwd)
throws ClassNotFoundException, SQLException{
        Class.forName("com.mysql.cj.jdbc.Driver");
        this.connection =
DriverManager.getConnection(dbURL,
user, pwd);
    }

    public Connection getConnection(){
        return this.connection;
    }
    public void closeConnection() throws SQLException {
        if (this.connection != null)
            this.connection.close();
    }
}
```

config.properties

```
url=jdbc:mysql://localhost:3306/ecommerce
userid=root
password=master
```

ProductDetails.java

```
package com;
import java.io.IOException;
import java.io.InputStream;
import java.io.PrintWriter;
import java.math.BigDecimal;
import java.sql.CallableStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.Properties;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import com.DBConnection;

/**
 * Servlet implementation class ProductDetails
 */
public class ProductDetails extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
 * @see HttpServlet#HttpServlet()
 */
    public ProductDetails() {
        super();
    }
}
```

```

        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request,
     * HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response) throws ServletException, IOException {
        // TODO Auto-generated method stub

        try {
            PrintWriter out = response.getWriter();
            out.println("<html><body>");

            InputStream in =
getServletContext().getResourceAsStream("/WEB-INF/config.properties");
            Properties props = new Properties();
            props.load(in);

            DBConnection conn = new
DBConnection(props.getProperty("url"), props.getProperty("userid"),
props.getProperty("password"));
            CallableStatement stmt =
conn.getConnection().prepareCall("{call add_product(?, ?)}");
            stmt.setString(1, "new product");
            stmt.setBigDecimal(2, new BigDecimal(1900.50));
            stmt.executeUpdate();

            out.println("Stored procedure has been
executed.<br>");

            stmt.close();

            out.println("</body></html>");
            conn.closeConnection();

        } catch (ClassNotFoundException e) {
            e.printStackTrace();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request,
     * HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response) throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }
}

```

web.xml

```

<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://java.sun.com/xml/ns/javaee"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee

```

```

http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd" id="WebApp_ID"
version="2.5">
  <display-name>Assisted-Practice-Project 2.14 (JDBCSetup)</display
name>
  <welcome-file-list>
    <welcome-file>index.html</welcome-file>
    <welcome-file>index.jsp</welcome-file>
    <welcome-file>index.htm</welcome-file>
    <welcome-file>default.html</welcome-file>
    <welcome-file>default.jsp</welcome-file>
    <welcome-file>default.htm</welcome-file>
  </welcome-file-list>
  <servlet>
    <description></description>
    <display-name>ProductDetails</display-name>
    <servlet-name>ProductDetails</servlet-name>
    <servlet-class>com.ProductDetails</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>ProductDetails</servlet-name>
    <url-pattern>/list</url-pattern>
  </servlet-mapping>
</web-app>

```

Output:

