13. Demonstrate Connection, Statement, and ResultSet in JDBC.

• Code

Database Code

create database ecomerce;

use ecomerce;

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);

index.html

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

DBConnection.java

```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(){
```

```java
                                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

```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);
```

```java
            DBConnection conn = new
DBConnection(props.getProperty("url"), props.getProperty("userid"),
props.getProperty("password"));
            Statement stmt =
conn.getConnection().createStatement(ResultSet.TYPE_SCROLL_INSENSITIVE,
ResultSet.CONCUR_READ_ONLY);
            stmt.executeUpdate("insert into eproduct (name,
price, date_added) values ('New Product', 17800.00, now())");
            ResultSet rst = stmt.executeQuery("select * from
eproduct");

            while (rst.next()) {
             out.println(rst.getInt("ID") + ", " +
rst.getString("name") + "<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
<?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 2.13 (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