**Phase 2:Practice Project: Assissted Practice: 2**

**6. Demonstrate Insertion, Updation, and Deletion of Database Records using JDBC**

**Source Code:**

**Index5.html:**

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<div style="text-align:*center*;width:*100%*">

<H1>CRUD OPERATION OF PRODUCTS</H1>

<button>

<a href=*"list"*>List Products</a>

</button>

<br>

<br>

<button>

<a href=*"Add.html"*>Add a Product</a>

</button>

<br>

<br>

<button>

<a href=*"delete.html"*>Delete a Product</a>

</button>

<br>

<br>

<button>

<a href=*"update.html"*>Update a Product</a>

</button>

<br>

<br>

</div>

</body>

</html>

**Add.html:**

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>ADD</title>

</head>

<body>

<h1>Product Registration Form</h1>

<form action=*"save"* method=*"post"*>

Product Name: <input type=*"text"* name=*"pname"*

placeholder=*"Enter Product Name"*><br>

<br> Product Price: <input type=*"text"* name=*"pprice"*

placeholder=*"Enter Product price"*><br>

<br> <input type=*"submit"* value=*"Add Prodcut"*>

</form>

</body>

</html>

**Delete.html:**

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Delete</title>

</head>

<body>

<h1>DELETE RECORD</h1>

<form action=*"delete"* method=*"post"*>

Product id: <input type=*"text"* name=*"id"*

placeholder=*"Enter Product id"*><br>

<br> <input type=*"submit"* value=*"DELETE Prodcut"*>

</form>

</body>

</html>

**Update.html:**

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Update</title>

</head>

<body>

<h1>UPDATE RECORD</h1>

<form action=*"update"* method=*"post"*>

Product id: <input type=*"text"* name=*"id"*

placeholder=*"Enter Product id"*><br>

<br> Product Name: <input type=*"text"* name=*"pname"*

placeholder=*"Enter Product Name to be updated"*><br>

<br> Product Price: <input type=*"text"* name=*"pprice"*

placeholder=*"Enter Product price to be updated"*><br>

<br> <input type=*"submit"* value=*"UPDATE Prodcut"*>

</form>

</body>

</html>

**DBConfig:**

**package** com.curd;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.SQLException;

**import** java.util.Properties;

**public** **class** DBConfig {

**public** **static** Connection getConnection(Properties props) {

Connection conn=**null**;

**try** {

Class.*forName*(props.getProperty("driver"));

conn= DriverManager.*getConnection*(

props.getProperty("url"),

props.getProperty("username"),

props.getProperty("password"));

} **catch** (ClassNotFoundException e) {

e.printStackTrace();

}**catch** (SQLException e) {

e.printStackTrace();

}

**return** conn;

}

}

**DeleteServlet:**

**package** com.curd;

**import** java.io.IOException;

**import** java.io.InputStream;

**import** java.io.PrintWriter;

**import** java.sql.Connection;

**import** java.sql.PreparedStatement;

**import** java.sql.SQLException;

**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;

@WebServlet("/delete")

**public** **class** DeleteServlet **extends** HttpServlet{

@Override

**protected** **void** doGet(HttpServletRequest req, HttpServletResponse resp) **throws** ServletException, IOException {

PrintWriter out=resp.getWriter();

resp.setContentType("text/html");

String param=req.getParameter("id");

//converting string to int

**int** id= Integer.*parseInt*(param);

Properties props= **new** Properties();

InputStream in= getServletContext().getResourceAsStream("/WEB-INF/application.properties");

props.load(in);

Connection conn=DBConfig.*getConnection*(props);

**if**(conn!=**null**) {

**try**{

PreparedStatement stmt=conn.prepareStatement("delete from eproduct where ID=?");

stmt.setInt(1, id);

**int** rs=stmt.executeUpdate();

**if**(rs>0) {

System.***out***.println(rs+" deleted from database");

resp.sendRedirect("list");

}

**else** {

System.***out***.println("Error while deleting a data");

resp.sendRedirect("list");

}

} **catch** (SQLException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

}

**else** {

out.println("Error while Connecting");

}

}

@Override

**protected** **void** doPost(HttpServletRequest req, HttpServletResponse resp) **throws** ServletException, IOException {

doGet(req, resp);

}

}

**FetchDBServlet:**

**package** com.curd;

**import** java.io.IOException;

**import** java.io.InputStream;

**import** java.io.PrintWriter;

**import** java.sql.Connection;

**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;

@WebServlet("/list")

**public** **class** FetchDBServlet **extends** HttpServlet{

@Override

**protected** **void** doGet(HttpServletRequest req, HttpServletResponse resp) **throws** ServletException, IOException {

PrintWriter out= resp.getWriter();

resp.setContentType("text/html");

Properties props= **new** Properties();

InputStream in=getServletContext().getResourceAsStream("/WEB-INF/application.properties");

props.load(in);

Connection conn= DBConfig.*getConnection*(props);

**if**(conn!=**null**) {

Statement stmt;

**try** {

stmt = conn.createStatement();

ResultSet rs=stmt.executeQuery("select \* from eproduct");

out.print("<table border=1 cellpadding=10 cellspacing=0> <thead><tr>");

out.print("<th>ID</th><th>NAME</th><th>PRICE</th><th>DATE</th>");

out.print("<tr></thead>");

out.print("<tbody>");

**while**(rs.next()) {

out.print("<tr>");

out.print("<td>'"+rs.getInt(1)+"'</td><td>'"+rs.getString(2)+"'</td><td>'"+rs.getBigDecimal(3)+"'</td><td>'"+rs.getTimestamp(4)+"'</td>");

out.print("</tr>");

}

out.print("</tbody></table>");

} **catch** (SQLException e) {

e.printStackTrace();

}

}

**else** {

out.print("Error While Connecting Connections");

}

}

@Override

**protected** **void** doPost(HttpServletRequest req, HttpServletResponse resp) **throws** ServletException, IOException {

doGet(req, resp);

}

}

**SaveServlet:**

**package** com.curd;

**import** java.io.IOException;

**import** java.io.InputStream;

**import** java.io.PrintWriter;

**import** java.math.BigDecimal;

**import** java.sql.Connection;

**import** java.sql.PreparedStatement;

**import** java.sql.SQLException;

**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;

@WebServlet("/save")

**public** **class** SaveServlet **extends** HttpServlet{

@Override

**protected** **void** doGet(HttpServletRequest req, HttpServletResponse resp) **throws** ServletException, IOException {

PrintWriter out=resp.getWriter();

resp.setContentType("text/html");

String name=req.getParameter("pname");

BigDecimal price=**new** BigDecimal(req.getParameter("pprice"));

InputStream in=getServletContext().getResourceAsStream("/WEB-INF/application.properties");

Properties props= **new** Properties();

props.load(in);

Connection con=DBConfig.*getConnection*(props);

**try** {

PreparedStatement stmt= con.prepareStatement("insert into eproduct (name,price) values (?,?)");

stmt.setString(1, name);

stmt.setBigDecimal(2, price);

**int** x=stmt.executeUpdate();

**if**(x>0) {

resp.sendRedirect("list");

}

**else** {

out.print("Error While Inserting a Data");

}

} **catch** (SQLException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

}

@Override

**protected** **void** doPost(HttpServletRequest req, HttpServletResponse resp) **throws** ServletException, IOException {

doGet(req, resp);

}

}

**UpdateServlet:**

**package** com.curd;

**import** java.io.IOException;

**import** java.io.InputStream;

**import** java.io.PrintWriter;

**import** java.math.BigDecimal;

**import** java.sql.Connection;

**import** java.sql.PreparedStatement;

**import** java.sql.SQLException;

**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;

@WebServlet("/update")

**public** **class** UpdateServlet **extends** HttpServlet{

@Override

**protected** **void** doGet(HttpServletRequest req, HttpServletResponse resp) **throws** ServletException, IOException {

PrintWriter out=resp.getWriter();

resp.setContentType("text/html");

String param=req.getParameter("id");

**int** id= Integer.*parseInt*(param);

String name=req.getParameter("pname");

BigDecimal price=**new** BigDecimal(req.getParameter("pprice"));

Properties props= **new** Properties();

InputStream in= getServletContext().getResourceAsStream("/WEB-INF/application.properties");

props.load(in);

Connection conn=DBConfig.*getConnection*(props);

**if**(conn!=**null**) {

**try** {

PreparedStatement stmt= conn.prepareStatement("update eproduct set name=?,price=? where ID=?");

stmt.setString(1, name);

stmt.setBigDecimal(2, price);

stmt.setInt(3, id);

**int** rs=stmt.executeUpdate();

**if**(rs>0) {

System.***out***.println(rs+ "Row updated successfully");

resp.sendRedirect("list");

}**else** {

System.***out***.println("Error while updating data");

resp.sendRedirect("index.html");

}

} **catch** (SQLException e) {

e.printStackTrace();

}

}

}

@Override

**protected** **void** doPost(HttpServletRequest req, HttpServletResponse resp) **throws** ServletException, IOException {

doGet(req, resp);

}

}

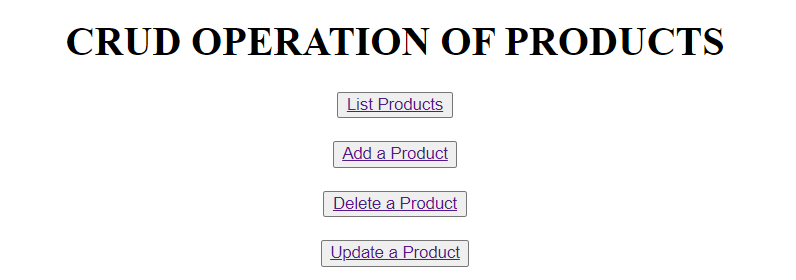
**application.properties:**

driver=com.mysql.cj.jdbc.Driver

url=jdbc:mysql://localhost:3306/ecommerce

username=root

password=Ajitdk@26042000

**Output:**

