Create a servlet-based application that shows a form to enter a product ID. The product ID is then validated, and product details are retrieved from the database and displayed to the user. You need to create a product table in MySQL and prepopulate it with data. Use JDBC to do all database processing

Program:

<!DOCTYPE html>

<html>

<head>

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

<title>welcome</title>

</head>

<body>

<h1 align=*"center"*>LOGIN PAGE</h1>

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

]

<table width=*"20%"* bgcolor=*"0099CC"* align=*"center"*>

<tr>

<td colspan=*2*><center><font size=*4*><b>HTML Login Page</b></font></center></td>

</tr>

<tr>

<td>Username:</td>

<td><input type=*"text"* size=*25* name=*"Product\_id"*></td>

</tr>

<tr>

<td ><input type=*"Reset"*></td>

<td><input type=*"submit"* onclick="return check(this.form)" value=*"show details of the product"*></td>

</tr>

</table>

</form>

</body>

</html>

//ANNOTATIONS

**package** com.hema.training;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**import** javax.servlet.RequestDispatcher;

**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("/authenticate")

**public** **class** Authenticate **extends** HttpServlet {

**protected** **void** doPost(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

//set the content type

response.setContentType("test/html");

//get the print writer

PrintWriter out=response.getWriter();

out.println("hello");

// Get the parameter values from request

String ProName = request.getParameter("Product\_id");

//Validate the user

**if**(userName.trim().equals("PRODUCT\_ID") && userPassword.trim().equals("hello")) {

RequestDispatcher dispatcher = request.getRequestDispatcher("dashboard");

dispatcher.forward(request, response);

} **else** {

out.println("Invalid ID...");

RequestDispatcher dispatcher = request.getRequestDispatcher("product.html");

dispatcher.include(request, response);

}

}

}

//DashBoard.java

**package** com.hema.training;

**import** java.io.IOException;

**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("/dashboard")

**public** **class** Dashboard **extends** HttpServlet {

**protected** **void** doPost(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

//set the content type

response.setContentType("text/html");

// Get the username from request

String proName = request.getParameter("Product\_id");

// Print the Welcome message

response.getWriter().println("Welcome " + ProName + ". You are now logged in.");

}

}

//Duo class

**import** java.sql.Connection;

**import** java.sql.PreparedStatement;

**import** java.sql.ResultSet;

**import** java.sql.ResultSetMetaData;

**import** java.sql.SQLException;

**public** **class** DAOClass {

**private** Connection conn = **null**;

PreparedStatement pstmt = **null**;

**public** DAOClass() {

conn = DBUtil.getConnection();

}

**public** **boolean** insert(**int** rollno, String name, String grade, String dob, **int** fee) {

String sql = "INSERT INTO product VALUES(?, ?, ?, ?, ?)";

**try** {

pstmt = conn.prepareStatement(sql);

pstmt.setInt(1, product\_id);

pstmt.setString(2, name);

pstmt.setString(3,model);

pstmt.setString(4, type);

pstmt.setInt(5, price);

pstmt.executeUpdate();

**return** **true**;

} **catch** (SQLException e) {

**return** **false**;

}

}

**public** **boolean** delete(**int** rollno) {

String sql = "DELETE Product WHERE product\_id = ?";

**try** {

pstmt = conn.prepareStatement(sql);

pstmt.setInt(1, rollno);

pstmt.executeUpdate();

**return** **true**;

} **catch** (SQLException e) {

**return** **false**;

}

}

**public** **boolean** modify(**int** rollno, **int** fee) {

String sql = "UPDATE Product SET price = ? WHERE product\_id = ?";

**try** {

pstmt = conn.prepareStatement(sql);

pstmt.setInt(1, fee);

pstmt.setInt(2, rollno);

pstmt.executeUpdate();

**return** **true**;

} **catch** (SQLException e) {

**return** **false**;

}

}

**public** **boolean** display(**int** rollno) {

String sql = "SELECT \* FROM Product WHERE product\_id = ?";

**try** {

pstmt = conn.prepareStatement(sql);

pstmt.setInt(1, rollno);

ResultSet rs = pstmt.executeQuery();

ResultSetMetaData rsmd = rs.getMetaData();

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

StringBuilder sb = **new** StringBuilder();

**for** (**int** i = 1; i <= rsmd.getColumnCount(); i++) {

String colName = rsmd.getColumnName(i);

sb.append(rs.getObject(colName));

**if** (i != rsmd.getColumnCount()) sb.append(", ");

}

System.***out***.println(sb);

}

**return** **true**;

} **catch** (SQLException e) {

**return** **false**;

}

}

**public** **boolean** display() {

String sql = "SELECT \* FROM Product";

**try** {

pstmt = conn.prepareStatement(sql);

ResultSet rs = pstmt.executeQuery();

ResultSetMetaData rsmd = rs.getMetaData();

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

StringBuilder sb = **new** StringBuilder();

**for** (**int** i = 1; i <= rsmd.getColumnCount(); i++) {

String colName = rsmd.getColumnName(i);

sb.append(rs.getObject(colName));

**if** (i != rsmd.getColumnCount()) sb.append(", ");

}

System.***out***.println(sb);

}

**return** **true**;

} **catch** (SQLException e) {

**return** **false**;

}

}

}

//Dbconn

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.SQLException;

**public** **class** DBUtil {

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

Connection conn = **null**;

**try** {

Class.*forName*("ocom.mysql.cj.jdbc.Driver");

conn = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/Product\_details ", "root", "");

} **catch** (ClassNotFoundException e) {

e.printStackTrace();

} **catch** (SQLException e) {

e.printStackTrace();

}

**return** conn;

}

}