SRI RAMACHANDRA

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Category - I Deemed to be University) Porur, Chennai

SRI RAMACHANDRA ENGINEERING AND TECHNOLOGY

CSE 280 ADVANCE JAVA

STUDENT WORK BOOK

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Questions:

Question 1:

Create a login form with the following details

1. User-name

2. Password.

Create a table called as "Users" storing all the details of the user login details.

Create two buttons in the webpage - login, new user.

Login button - should use a JSP to read the content of database and print user validation success (if username and password) are correct.

If username & password are wrong, then print "invalid".

new user - should navigate to another page where the user can enter his username and password. These info should be stored in the database.

Question 2:

Create an online product search tool. Insert few details in the dataset (min 10 values). The table products should have the following columns

1. ID

2. Name

3. Price

The user can enter the name of the product to search. Design a webpage which asks for product name, then design a JSP page which searches the product and display the information.

Program:

Question 1:

HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <style>
        body{
            padding-left: 5%;
            padding-top: 5%;
        }
        .forms{
            margin: 2%;
        }
        .inputs{
            margin:0.5% 0% 0.5% 0%;
        }
    </style>
</head>
<body>
    <p>Login:</p>
    <form action="signin" method="POST" class="forms">
        <input class = "inputs" type="text" name="username" placeholder="Username" />
        <br>
        <input class = "inputs" type="password" name="password" placeholder="Password" />
        <br>
        <button type="submit">Login</button>
    </form>

    <p>Create New User:</p>
```

```html
    <form action="signup" method="POST" class="forms">
        <input class = "inputs" type="text" name="username" placeholder="Username" />
        <br>
        <input class = "inputs" type="password" name="password" placeholder="Password" />
        <br>
        <button type="submit">Create New User</button>
    </form>
</body>
</html>
```

XML:

```xml
<?xml version="1.0" encoding="UTF-8"?>

<web-app>

<servlet>
<servlet-name>signin</servlet-name>
<servlet-class>signin</servlet-class>
</servlet>

<servlet-mapping>
<servlet-name>signin</servlet-name>
<url-pattern>/signin</url-pattern>
</servlet-mapping>

<servlet>
<servlet-name>signup</servlet-name>
<servlet-class>signup</servlet-class>
</servlet>

<servlet-mapping>
<servlet-name>signup</servlet-name>
<url-pattern>/signup</url-pattern>
</servlet-mapping>

</web-app>
```

SERVLETS:

```java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class signup extends HttpServlet {

    public void init() throws ServletException {
    }

    public void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
        doGet(request, response);
    }

    public void doGet(HttpServletRequest request, HttpServletResponse response) t
hrows ServletException, IOException {

        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String username = request.getParameter("username");
        String password = request.getParameter("password");
        try {
            out.println("<html><body>");
            out.println("<p>Trying to create new user...</p>");
            Connection con = null;
            Class.forName("com.mysql.cj.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost/advjava?use
Unicode=true&useJDBCCompliantTimezoneShift=true&useLegacyDatetimeCode=false&serve
rTimezone=UTC","root", "");
            try {

                java.sql.Statement stmt=con.createStatement();
                String u = "";
                String p = "";
                boolean flag = false;
                ResultSet rs=stmt.executeQuery("select * from users");
                while(rs.next()){
                    u = rs.getString(1);
                    p = rs.getString(2);
                    if(u.equals(username)){
                        out.println("<p>User already exists...</p>");
                        flag = true;
```

```java
                    break;
                }
            }
            if(!flag){
                int l = password.length();
                if(l >= 6){
                    int a=stmt.executeUpdate("insert into users values('"+use
rname+"','"+password+"');");
                    out.println("<p>New User: "+username+" is created...</p>"
);
                }
                else{
                    out.print("<p>The password should be greater than six cha
racters!");
                }
            }


        } catch (Exception e) {
            // TODO: handle exception
        }
        finally {
            out.println("</body></html>");
            con.close();
        }
    } catch (Exception e) {
        // TODO: handle exception
    }
}

public void destroy() {

}
}
```

```java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class signin extends HttpServlet {

    public void init() throws ServletException {
```

```java
    }

    public void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
        doGet(request, response);
    }

    public void doGet(HttpServletRequest request, HttpServletResponse response) t
hrows ServletException, IOException {

        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String username = request.getParameter("username");
        String password = request.getParameter("password");
        try {
            out.println("<html><body>");
            out.println("<p>Trying to login...</p>");
            Connection con = null;
            Class.forName("com.mysql.cj.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost/advjava?use
Unicode=true&useJDBCCompliantTimezoneShift=true&useLegacyDatetimeCode=false&serve
rTimezone=UTC","root", "");
            try {
                String u = "";
                String p = "";
                boolean flag = false;
                java.sql.Statement stmt=con.createStatement();
                ResultSet rs=stmt.executeQuery("select * from users");
                while(rs.next()){
                    u = rs.getString(1);
                    p = rs.getString(2);
                    if(u.equals(username) && p.equals(password)){
                        out.println("<p>Logged In as "+username+"</p>");
                        flag = true;
                        break;
                    }
                    else{
                        if(u.equals(username)){
                            if(!p.equals(password)){
                                out.println("<p>Incorrect Password</p>");
                                flag = true;
                                break;
                            }
                        }
                    }
```

```
                }
                if(!flag){
                        out.println("<p>User not available! Please check your details
!</p>");
                }

        } catch (Exception e) {
                // TODO: handle exception
        }
        finally {
                out.println("</body></html>");
                con.close();
        }
    } catch (Exception e) {
            // TODO: handle exception
    }
    }

    public void destroy() {

    }
}
```

Output:

Create New User:

```
e0119002
••••••
[ Create New User ]
```

Trying to create new user...

New User: e0119002 is created...

Login:

abcde

••••••••

Login

Trying to login...

Logged In as abcde

Question 2:

HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <style>
        body{
            padding-left: 5%;
            padding-top: 5%;
        }
        .options{
            padding: 2%;
        }
        .inputs{
            margin: 1% 0% 1% 0%;
        }
    </style>
</head>
<body>
    <form action="productSearch" method="post">

        <div class="options">
            <input type="radio" id="id" name="option" value="id">
```

```html
            <label for="id">Search by ID</label><br>
            <input type="radio" id="name" name="option" value="name">
            <label for="name">Search by Name</label><br>
            <input type="radio" id="price" name="option" value="price">
            <label for="price">Search by Price</label>
        </div>
        <br>
        <input class="inputs" type="text" placeholder="Search..." name="text"/>
        <br>
        <button type="submit">Search</button>
    </form>
</body>
</html>
```

XML:

```xml
<web-app>

<servlet>
<servlet-name>productSearch</servlet-name>
<servlet-class>productSearch</servlet-class>
</servlet>

<servlet-mapping>
<servlet-name>productSearch</servlet-name>
<url-pattern>/productSearch</url-pattern>
</servlet-mapping>

</web-app>
```

SERVLETS:

```java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class productSearch extends HttpServlet {

    public void init() throws ServletException {
    }
```

```java
    public void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
        doGet(request, response);
    }

    public void doGet(HttpServletRequest request, HttpServletResponse response) t
hrows ServletException, IOException {

        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String type = request.getParameter("option");
        try {
            out.println("<html><body>");
            out.println("Searching...");
            boolean flag = false;
            Connection con = null;
            Class.forName("com.mysql.cj.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost/advjava?use
Unicode=true&useJDBCCompliantTimezoneShift=true&useLegacyDatetimeCode=false&serve
rTimezone=UTC","root", "");
            try {
                java.sql.Statement stmt=con.createStatement();
                ResultSet rs=stmt.executeQuery("select * from products");
                switch (type){
                    case "id":
                        int id = Integer.parseInt(request.getParameter("text"));
                        while(rs.next()){
                            if(id == rs.getInt(1)){
                                out.println("<p>Item ID: "+rs.getInt(1)+"</p>");
                                out.println("<p>Item Name: "+rs.getString(2)+"</p
>");

                                out.println("<p>Item Price: "+rs.getInt(3)+"</p>"
);

                                flag = true;
                            }
                        }
                        break;

                        case "name":
                        String name = request.getParameter("text");
                        while(rs.next()){
                            if(name.equals(rs.getString(2))){
                                out.println("<p>Item ID: "+rs.getInt(1)+"</p>");
                                out.println("<p>Item Name: "+rs.getString(2)+"</p
>");
```

```java
                            out.println("<p>Item Price: "+rs.getInt(3)+"</p>"
);
                            flag = true;
                        }
                    }
                    break;

                    case "price":
                    int price = Integer.parseInt(request.getParameter("text")
);
                    while(rs.next()){
                        if(price == rs.getInt(3)){
                            out.println("<p>Item ID: "+rs.getInt(1)+"</p>");
                            out.println("<p>Item Name: "+rs.getString(2)+"</p
>");
                            out.println("<p>Item Price: "+rs.getInt(3)+"</p>"
);
                            flag = true;
                        }
                    }
                    break;
                }
                if(!flag){
                    out.println("<p>Item Not Available!</p>");
                }

            } catch (Exception e) {
                // TODO: handle exception
            }
            finally {
                out.print("<p>End of Search!</p>");
                out.println("</body></html>");
                con.close();
            }
        } catch (Exception e) {
            // TODO: handle exception
        }
    }

    public void destroy() {

    }
}
```

Output:

○ Search by ID
○ Search by Name
○ Search by Price

4

Search

Searching...

Item ID: 4

Item Name: marker

Item Price: 30

End of Search!

○ Search by ID
● Search by Name
○ Search by Price

pencil

Search

Searching...

Item ID: 2

Item Name: pencil

Item Price: 4

End of Search!

○ Search by ID
○ Search by Name
● Search by Price

100

Search

Searching...

Item Not Available!

End of Search!