CSE 4226 — Network Programming Lab

Assignment 3

Name of the Application: Online Store)

Submitted by

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Section: B2

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1 Implementation summary

Requirements	Status
Number of Web Pages:	5
User Registration and Log in:	Implemented
Handling HTML form Data:	Implemented
Storing and Manipulating Data Using JDBC:	Partially Implemented
Form Validation:	Implemented
Use of HttpSession:	Not Implemented
Use of RequestDispatcher (forward and include):	Implemented

2 Implementation Challenges

While trying to implement this problem,there was various errors. However I managed to get past most of them by following forums on Youtube.com[1] and Stackoverflow[2]

3 Limitation and Future Scope of Improvements

The whole system is was not fully implemented.Session,cookies and a beautiful UI could be added later.

4 Discussion

This assignment helped me clear the concept of servlet and the relation between html,servlet and database.
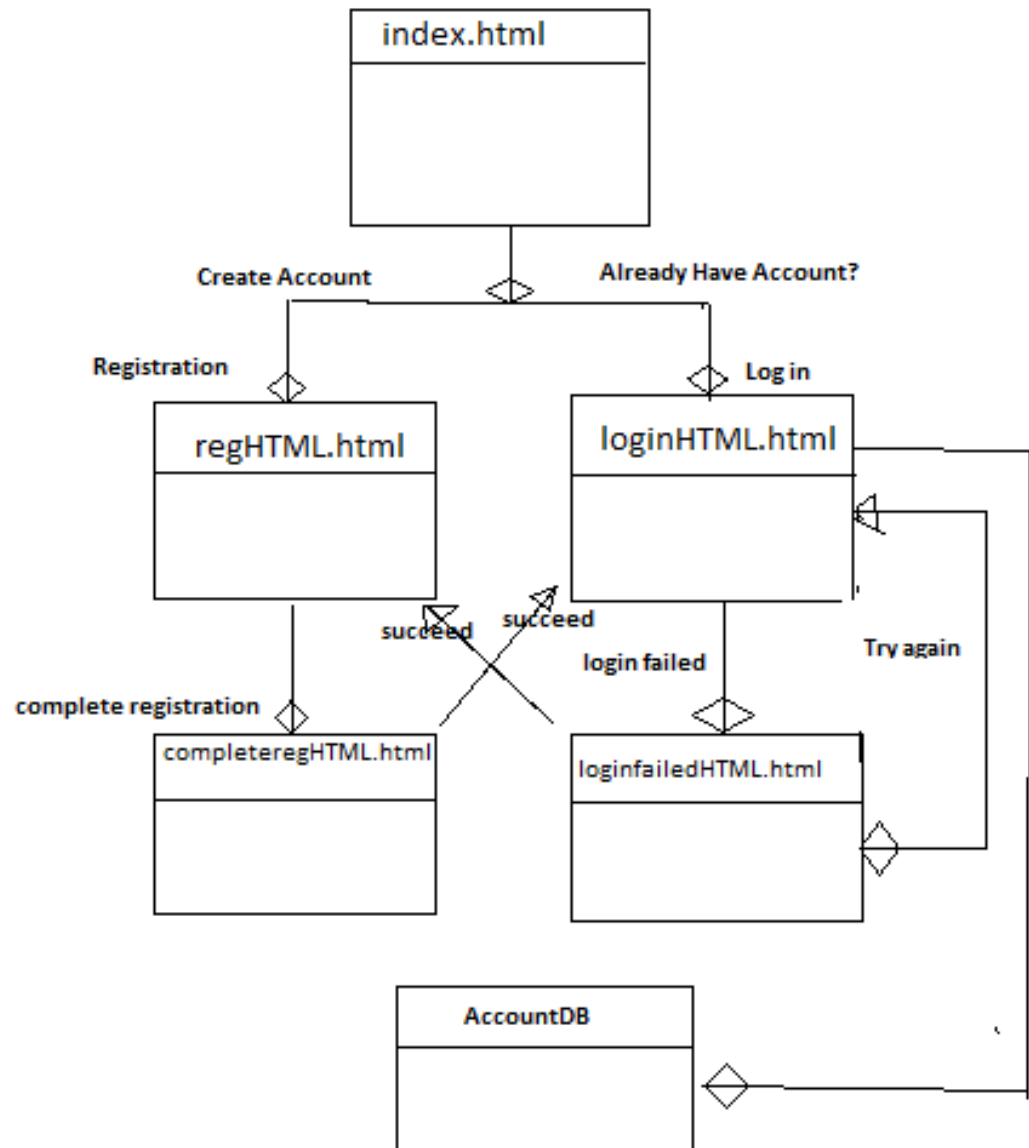
References

[1] Tutorialspoint,

https://www.tutorialspoint.com/

[2] Stack Overflow,

https://stackoverflow.com/

5 Site Diagram

Appendices

A CODE

```
1  package newPackage;
2
```

```java
import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.sql.Statement;

import java.util.logging.Level;

import java.util.logging.Logger;

import javax.swing.JOptionPane;


/**
 *
 */
public class MyDB {
    private Statement stmt = null;
    private Connection connection;
    //String name=null;
    //String username=null;
    //String email=null;
    //String password=null;

    public void getConnection() {

        try {

            Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver");
            String connectionUrl = "jdbc:sqlserver://localhost:1433;user=sa;password=1234;" +
            "databaseName=userdb;";
            connection = DriverManager.getConnection(connectionUrl);
            System.out.println("Database connected...");



        } catch (ClassNotFoundException | SQLException ex) {
            Logger.getLogger(MyDB.class.getName()).log(Level.SEVERE, null, ex);
        }

        //return connection;
```

```java
39    }

41    public void insertDataToDB(String query) {
42        try {
43            stmt = connection.createStatement();
44            stmt.executeUpdate(query);
45            //return true;
46        } catch (SQLException ex){
47            JOptionPane.showMessageDialog(null, "Unable to insert data");
48            //return false;
49        }


52    }

54    public ResultSet getFromDB(String query) {
55        ResultSet results = null;
56        String[] array = new String[4];
57        try {

59            stmt = connection.createStatement();
60            results = stmt.executeQuery(query);

62        } catch (SQLException ex) {
63            JOptionPane.showMessageDialog(null, "Unable to read data");
64        }
65        return results;
66    }

68    public void disconnectFromDB() {

70        try {
71            if (stmt != null) {
72                stmt.close();
73            }
74            if (connection != null) {
75                connection.close();
```

```
76            }
77        } catch (SQLException ex) {
78            JOptionPane.showMessageDialog(null, "Unable to close connection");
79        }
80    }
81 }
```

```
1 package newPackage;
2
3 import java.io.IOException;
4 import java.io.PrintWriter;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.util.logging.Level;
8 import java.util.logging.Logger;
9 import javax.servlet.ServletException;
10 import javax.servlet.http.HttpServlet;
11 import javax.servlet.http.HttpServletRequest;
12 import javax.servlet.http.HttpServletResponse;
13
14 /**
15  *
16  */
17 public class loginpage extends HttpServlet {
18
19     protected void processRequest(HttpServletRequest request, HttpServletResponse
    response)
20            throws ServletException, IOException {
21        response.setContentType("text/html;charset=UTF-8");
22        try (PrintWriter out = response.getWriter()) {
23            String name=null;
24            String username=null;
25            String email=null;
26            String password=null;
27            //String[] array = new String[4];
28            String usernameIn = request.getParameter("uname");
29            String passwordIn = request.getParameter("pass");
```

```
30
31            //out.print(usernameIn+" "+passwordIn);
32
33            MyDB db = new MyDB();
34            db.getConnection();
35
36            ResultSet results = db.getFromDB("SELECT * FROM users WHERE username =
      '"+usernameIn+"' AND password = '"+passwordIn+"'");
37
38            if(results != null) {
39                while (results.next()) {
40                    name = results.getString("name");
41                    username = results.getString("username");
42                    email = results.getString("email");
43                    password = results.getString("password");
44                }
45            }
46
47            if(name==null && email==null) {
48                request.getRequestDispatcher("loginFailedHTML.html").forward(
      request, response);
49            }
50
51            out.print(name+" "+username+" "+email+" "+password);
52
53            db.disconnectFromDB();
54
55        } catch (SQLException ex) {
56            Logger.getLogger(loginpage.class.getName()).log(Level.SEVERE, null, ex)
      ;
57        }
58    }
59
60    @Override
61    protected void doGet(HttpServletRequest request, HttpServletResponse response)
62            throws ServletException, IOException {
63        processRequest(request, response);
```

```
64        }
65
66        @Override
67        protected void doPost(HttpServletRequest request, HttpServletResponse response)
68                throws ServletException, IOException {
69            processRequest(request, response);
70        }
71
72        @Override
73        public String getServletInfo() {
74            return "Short description";
75        }// </editor-fold>
76
77 }
```

```
1
2 package newPackage;
3
4 import java.io.IOException;
5 import java.io.PrintWriter;
6 import javax.servlet.ServletException;
7 import javax.servlet.http.HttpServlet;
8 import javax.servlet.http.HttpServletRequest;
9 import javax.servlet.http.HttpServletResponse;
10
11 /**
12  *
13  */
14 public class registration extends HttpServlet {
15
16     protected void processRequest(HttpServletRequest request, HttpServletResponse
       response)
17                throws ServletException, IOException {
18            response.setContentType("text/html;charset=UTF-8");
19            try (PrintWriter out = response.getWriter()) {
20                /* TODO output your page here. You may use following sample code. */
21                String name = request.getParameter("name");
```

```java
22              String username = request.getParameter("uname");

23              String email = request.getParameter("email");

24              String password = request.getParameter("pass");

25              String confPassword = request.getParameter("confPass");

26

27              MyDB db = new MyDB();

28              db.getConnection();

29

30              db.insertDataToDB("INSERT INTO users(name, username, email, password)
       VALUES('"+name+"', '" + username + "','"+email+"' , '" + password + "')");

31              //System.out.println("[system] data insertion : " + dataSaved);

32              db.disconnectFromDB();

33              request.getRequestDispatcher("completeRegHTML.html").forward(request,
       response);

34          }

35      }

36

37

38      @Override

39      protected void doGet(HttpServletRequest request, HttpServletResponse response)

40              throws ServletException, IOException {

41          processRequest(request, response);

42      }

43

44

45      @Override

46      protected void doPost(HttpServletRequest request, HttpServletResponse response)

47              throws ServletException, IOException {

48          processRequest(request, response);

49      }

50

51

52      @Override

53      public String getServletInfo() {

54          return "Short description";

55      }// </editor-fold>

56
```

```
57 }
```

```
1  <!DOCTYPE html>
2
3  <html>
4      <head>
5          <title>Start Page</title>
6          <meta charset="UTF-8">
7          <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      </head>
9      <body background="C:\Users\ASUS\Desktop\ioc_intro_image.png">
10         <center>  <h2> Hello Guest!! Please Sign in or Login!! </h2>  </center>
    </br> </br>  </br>
11         <form action="regHTML.html" method="post">
12           <center> <input type="submit" name="regButton" value="Create account"/>
    </center> </br>
13         </form>
14
15         <form action="loginHTML.html" method="post">
16            <center> <input type="submit" name="regButton" value="Already have
    account?"/>  </center>
17         </form>
18     </body>
19 </html>
```

```
1  <!DOCTYPE html>
2
3  <html>
4      <head>
5          <title>Login Page</title>
6          <meta charset="UTF-8">
7          <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      </head>
9      <body>
10         <form action="loginpage" method="post">
11            <center>  <h2> Please enter username and password to login </h2>  </
    center>  </br> </br>  </br>
12            <center> <input type="text" name="uname" placeholder="username" required
```

```
        /><br>   </center>
13          <center> <input type="password" name="pass" placeholder="password"
    required/><br>  </br> </br>  </center>
14          <center> <input type="submit" name="loginButton" value="Login"/>  </br>
    </br> </center>
15          </form>
16      </body>
17  </html>
```

```
1   <!DOCTYPE html>
2
3   <html>
4       <head>
5           <title>Registration Page</title>
6           <meta charset="UTF-8">
7           <meta name="viewport" content="width=device-width, initial-scale=1.0">
8       </head>
9       <body>
10          <center>   <h2> Please Give Your details for Creating Account!! </h2>   </
    center>  </br> </br>  </br>
11          <form action="registration" action="index.html" method="post">
12           <center>   <input type="text" name="name" placeholder="name" required/></
    br>    </center>
13          <center>   <input type="text" name="uname" placeholder="username" required
    /></br>   </center>
14          <center>   <input type="email" name="email" placeholder="email" required
    /></br>      </center>
15          <center>   <input type="password" name="pass" placeholder="password"
    required/><br>     </center>
16          <center>   <input type="password" name="confPass" placeholder="confirm
    password" required/></br></br>  </br>   </center>
17          <center>   <input type="submit" name="submitButton" value="Submit"/>   </
    center>
18          </form>
19      </body>
20  </html>
```

```
1   <!DOCTYPE html>
```

```html
<!--
To change this license header, choose License Headers in Project Properties.
To change this template file, choose Tools | Templates
and open the template in the editor.
-->
<html>
    <head>
        <title>Error</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
    </head>
    <body>
    <center>   <h1>Oops!!!!</h1>   </center>
        <center>   <h2> You have put invalid username or password!!! </h2>   </center>   </br> </br>  </br>
        <form action="loginHTML.html">
           <center>   <input type="submit" name="tryAgianButton" value="Try Again"/>  </center>   </br> </br>
           </form>
        <form action="regHTML.html">
           <center>   <input type="submit" name="regButton" value="Create Account"/>  </center>   </br>
           </form>
    </body>
</html>
```

```html
<!DOCTYPE html>

<html>
    <head>
        <title>TODO supply a title</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
    </head>
    <body>

        <center>   <h2> Hello Guest!! Please Sign in or Login!! </h2>   </center>
```

```html
        </br> </br>  </br>
12      <center>   <h2>Registration completed!</h2> </center>  </br>
13      <center>  <h2>You can login now!</h2>      </center>          </br> </br>
14       <form action="loginHTML.html" method="post">
15        <center>  <input type="submit" name="submitButton" value="Goto Login Page
    "/>   </center>
16       </form>
17       <form action="regHTML.html" method="post">
18        <center>   <input type="submit" name="submitButton" value="Create another
    account"/>    </center>
19       </form>
20     </body>
21 </html>
```