
WEB ARCHITECTURE LAB 02 TASKS

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Note: Plagiarism will be severely penalized.

Task 1

- Create a web application project under IntelliJ/Eclipse. Your web application should have the following directory structure:

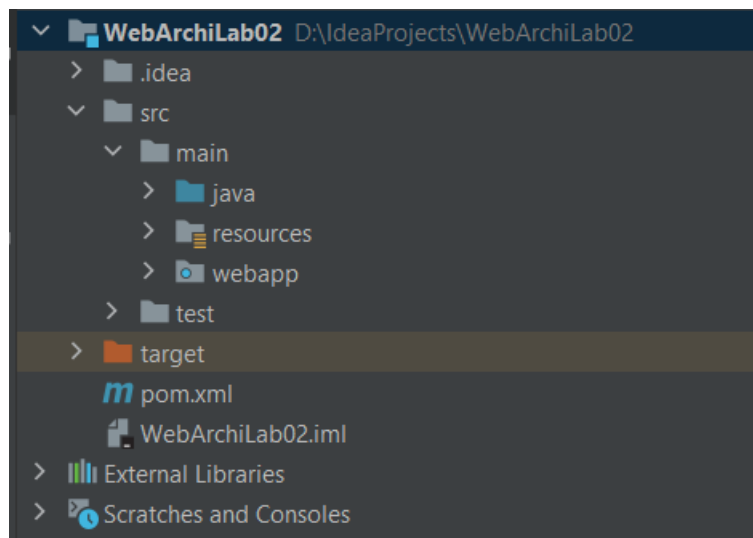


Figure 1: Web Application Directory

- Create a file named `index.html` under the `webapp` directory and fill it with the following code:

```
1 <html>
2 <body>
3 <head>
4 <title> A simple Innput form and Sevlet </title>
5 </head>
6 Please enter you name below:
7 <form name="myform" method="get" action="myServlet">
8 <input type="text" name="user"/>
9 <input type="submit" name="submit" value="submit"/>
10 </form>
11 </body></html>
```

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- Create a file named `myServlet.java` under the `java` directory and fill it with the following code:

```
1 import javax.servlet.*;
2 import javax.servlet.http.*;
3 import java.io.*;
4 public class myServlet extends HttpServlet {
5     @Override
6     public void doGet(HttpServletRequest request, HttpServletResponse
        response)
7         throws ServletException, IOException {
8         String userName = request.getParameter("user");
9         response.setContentType("text/html");
10        PrintWriter out = response.getWriter();
11        out.println("<HTML>");
12        out.println("<HEAD>");
13        out.println("<TITLE>Servlet Response</TITLE>");
14        out.println("</HEAD>");
15        out.println("<BODY>");
16        out.println("Hello Mr. " + userName);
17    }
18 }
```

- Edit the `web.xml` file under `webapp/WEB-INF` directory and fill it with the following:

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"
3         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4         xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
5             http://xmlns.jcp.org/xml/ns/javaee/web-app_4_0.xsd"
6         version="4.0">
7     <servlet>
8         <servlet-name>myServlet</servlet-name>
9         <servlet-class>myServlet</servlet-class>
10    </servlet>
11    <servlet-mapping>
```

```
11         <servlet-name>myServlet</servlet-name>
12         <url-pattern>/myServlet</url-pattern>
13     </servlet-mapping>
14 </servlet-mapping>
15 </web-app>
```

- Run the project and deploy it in Tomcat or any other container of your preference.

Task 2

In the same project, do the following:

Takes two numbers as input and prints a random number between those two numbers.

Task 3

- The `getSession` method of the `javax.servlet.http.HttpServletRequest` interface has two overloads. They are as follows:

```
1 HttpSession getSession()
2 HttpSession getSession(boolean create)
```

The first overload returns the current session associated with this request, or if the request does not have a session identifier, it creates a new one.

- To create a session the code is: `HttpSession session = request.getSession(true);`
- The `setAttribute` method adds a name/attribute pair to the `HttpSession` object. The code is:

```
1 public void setAttribute(String name, Object attribute) throws
    IllegalStateException
```

- The `getAttribute` method retrieves an attribute from the `HttpSession` object. The code is:

```
1 public Object getAttribute(String name) throws
    IllegalStateException
```

-
- Write a servlet which will produce the following output with the help of `HttpSession` class.

| | |
|-------------------------------------|----------------------------------|
| Welcome, Newcomer | |
| Information on your session: | |
| Info Type | Value |
| Session ID | 5EC45F995B4769BA40201D1D49A39CC8 |
| Creation Time | Wed Oct 28 06:35:52 BDT 2020 |
| Time of last Access | Wed Oct 28 06:35:52 BDT 2020 |
| Number of previous accesses | 0 |

Figure 2: Logged in for the first time

| | |
|-------------------------------------|----------------------------------|
| Welcome back! | |
| Information on your session: | |
| Info Type | Value |
| Session ID | 5EC45F995B4769BA40201D1D49A39CC8 |
| Creation Time | Wed Oct 28 06:35:52 BDT 2020 |
| Time of last Access | Wed Oct 28 06:36:49 BDT 2020 |
| Number of previous accesses | 2 |

Figure 3: Accessed the page for the 3rd time without logging out