

INTERNATIONAL UNIVERSITY

VIETNAM NATIONAL UNIVERSITY HCMC

School of Computer Science & Engineer

Report Lab 4

Course: WEB APPLICATION DEVELOPMENT

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Lab 4: Web Session using Cookie

Exercise 1:

SimpleCookies.java – Servlet class conquers the whole process.

My code:

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Servlet.java to
edit this template
 */

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.io.PrintWriter;

/**
 *
 * @author thanhphatchau
 */
@WebServlet(urlPatterns = {" /SimpleCookies"})
public class SimpleCookies extends HttpServlet {

    /**
     * Processes requests for both HTTP <code>GET</code> and
<code>POST</code>
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html; charset=UTF-8");
        PrintWriter out = response.getWriter();
        Cookie cookie = new Cookie("thanhphatchau", "ititiu21135");
        response.addCookie(cookie);
        cookie.setPath("/SimpleCookies");
        cookie.setDomain("http://localhost:8080/lab4/SimpleCookies?");
    }
}
```

```

        cookie.setMaxAge(3600);
        try {
            /* TODO output your page here. You may use following
sample code. */
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet SimpleCookies</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<h1>This is cookie example</h1>");
            out.println("<table border = 1><tr><td>Name:</td>");
            out.println("<td>" + cookie.getName() + "</td></tr>");

            out.println("<tr><td>Value:</td><td>" + cookie.getValue() + "</td></tr>");

            out.println("<tr><td>Path:</td><td>" + cookie.getPath() + "</td></tr>");

            out.println("<tr><td>Domain:</td><td>" + cookie.getDomain() + "</td></tr>");
        }
        finally{
            out.close();
        }
    }

    // <editor-fold defaultstate="collapsed" desc="HttpServlet
methods. Click on the + sign on the left to edit the code.">
    /**
     * Handles the HTTP <code>GET</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    @Override
    protected void doGet(HttpServletRequest request,
    HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

    /**
     * Handles the HTTP <code>POST</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs

```

```

        * @throws IOException if an I/O error occurs
        */
    @Override
    protected void doPost(HttpServletRequest request,
    HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

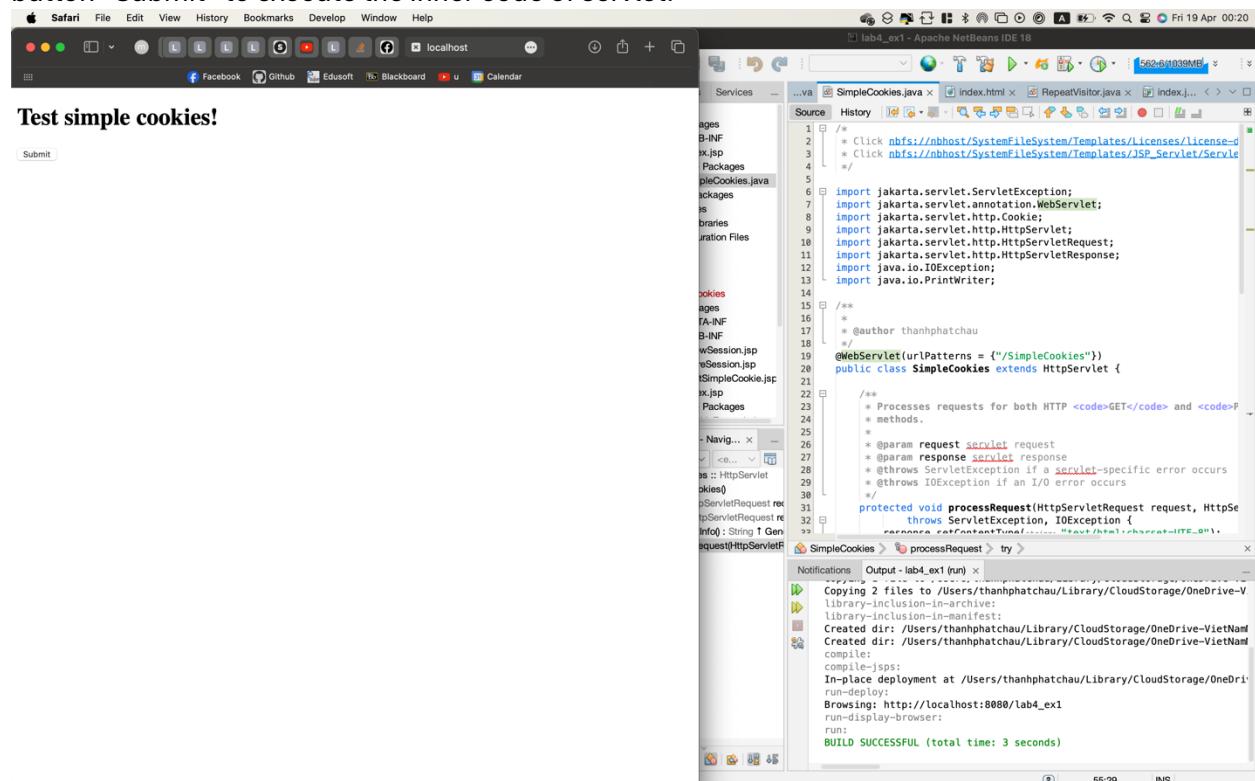
    /**
     * Returns a short description of the servlet.
     *
     * @return a String containing servlet description
     */
    @Override
    public String getServletInfo() {
        return "Short description";
    } // </editor-fold>

}

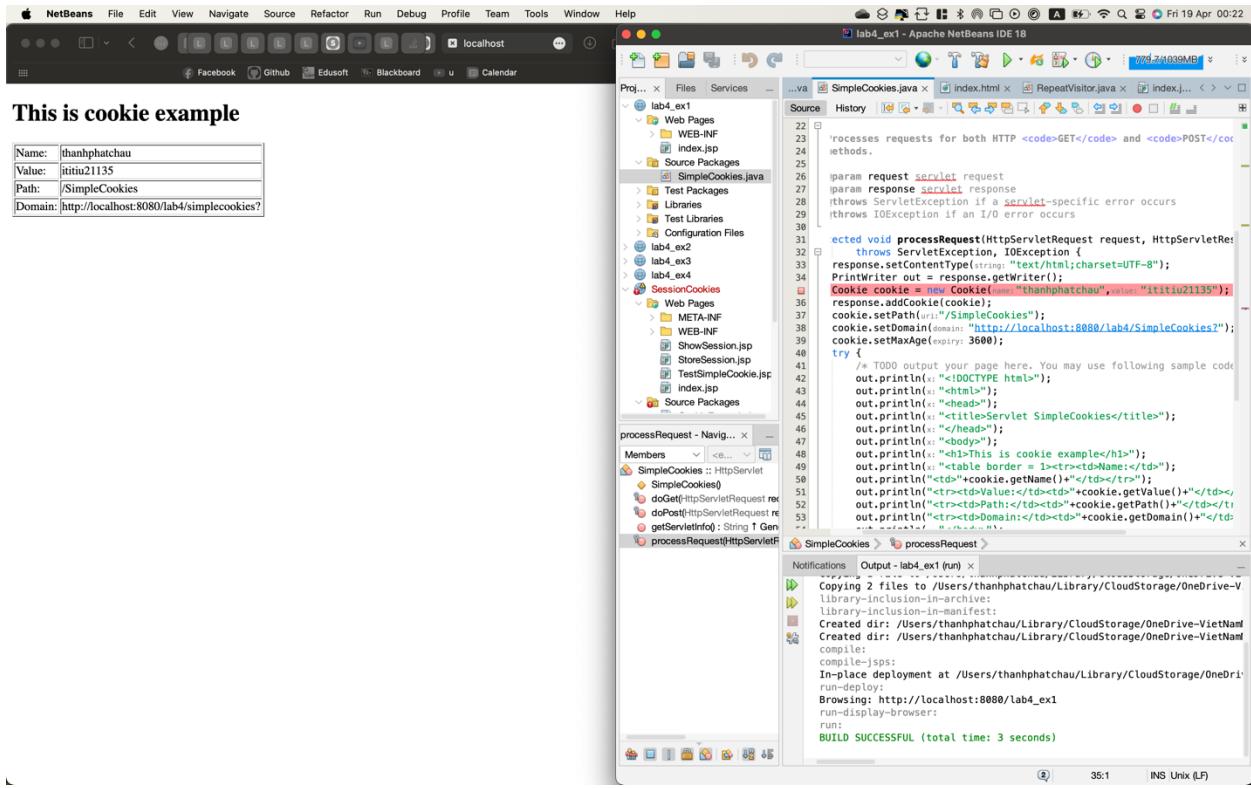
```

Implementation on server:

When I run the project, file index.jsp would appear to let user interact with the web page. Click on button “Submit” to execute the inner code of servlet.



All the provided information about my lastest created cookie is on the table.



Exercise 2:

Index.jsp – This file helps me create form to execute my servlet class.

My code:

```
<%-->
Document      : index
Created on   : Apr 18, 2024, 10:55:12 PM
Author        : thanhphatchau
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
        <h1>Print out the cookies</h1>
        <hr><!-- comment -->
        <form action=".CookieExample">
            <table>
                <tr>
                    <td>Input Cookie Name:</td>
                    <td><input type="text" name="cname"></td>
                </tr>
            </table>
        </form>
    </body>
</html>
```

```

<tr>
    <td>Input Cookie Value:</td>
    <td><input type="text" name="cvalue"></td>
</tr>
<tr>
    <td><input type="submit"></td>
</tr>
</table>
</form>
</body>
</html>

```

CookieExample.java – servlet class helps me execute code.

My code:

```

/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Servlet.java to
edit this template
 */

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.io.PrintWriter;

/**
 *
 * @author thanhphatchau
 */
@WebServlet(urlPatterns = {"CookieExample"})
public class CookieExample extends HttpServlet {

    /**
     * Processes requests for both HTTP <code>GET</code> and
<code>POST</code>
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    protected void processRequest(HttpServletRequest request,
HttpServletResponse response)

```

```

        throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    try (PrintWriter out = response.getWriter()) {
        /*print out cookies */
        out.println("Print out the cookies:");
        out.println("<table border =
1><tr><td>Name:</td><td>Content</td><tr>");
        Cookie[] cookies = request.getCookies();
        for(int i = 0; i < cookies.length; i++){
            Cookie c = cookies[i];
            String name = c.getName();
            String value = c.getValue();
            out.print("<tr><td>" + name +
"</td><td>" + value + "</td></tr>");
        }
        out.println("</table><br><hr>");
        /*set new cookie*/
        String name = request.getParameter("cname");
        if (name != null && name.length() >0){
            String value = request.getParameter("cvalue");
            Cookie c = new Cookie(name,value);
            response.addCookie(c);
            out.println("Set the cookies:");
            out.println("Name: " + c.getName());
            out.println("Value:" + c.getValue());
        }
    }

    // <editor-fold defaultstate="collapsed" desc="HttpServlet
methods. Click on the + sign on the left to edit the code.">
    /**
     * Handles the HTTP <code>GET</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    @Override
    protected void doGet(HttpServletRequest request,
    HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

    /**
     * Handles the HTTP <code>POST</code> method.
     *
     * @param request servlet request
     * @param response servlet response

```

```

    * @throws ServletException if a servlet-specific error occurs
    * @throws IOException if an I/O error occurs
    */
@Override
protected void doPost(HttpServletRequest request,
HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

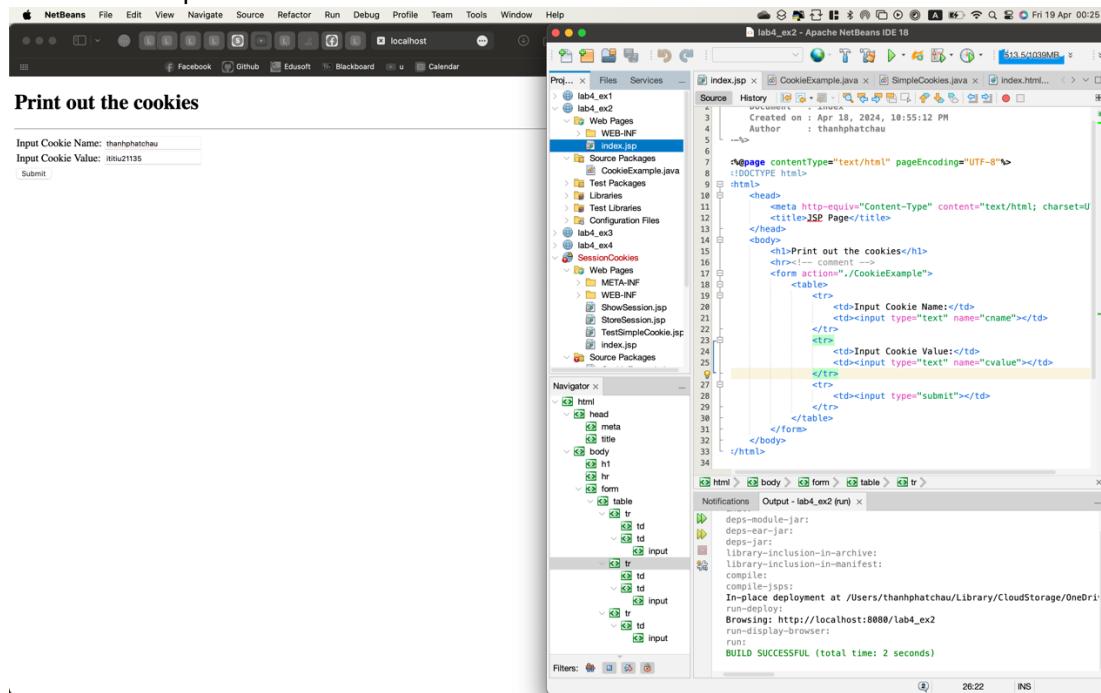
/**
 * Returns a short description of the servlet.
 *
 * @return a String containing servlet description
 */
@Override
public String getServletInfo() {
    return "Short description";
} // </editor-fold>

}

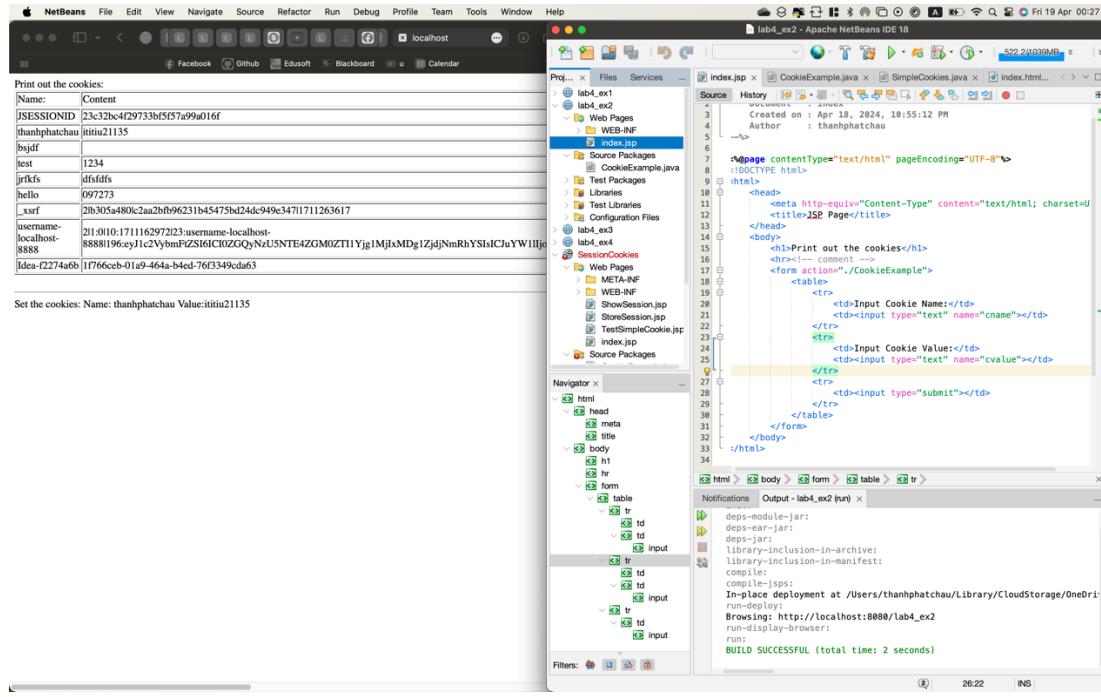
```

Implementation:

- When I run the project, a form is created. My mission now is providing cookie name and value in the input section.



- Then, I click on Submit button to execute servlet class. All my cookies will be shown up in the table included the last created one.



Exercise 3:

RepeatVisitor.java - servlet class.

My code:

```

/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Servlet.java to
edit this template
 */

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.io.PrintWriter;

/**
 *
 * @author thanhphatchau
 */
@WebServlet(urlPatterns = {" /RepeatVisitor"})

```

```

public class RepeatVisitor extends HttpServlet {

    /**
     * Processes requests for both HTTP <code>GET</code> and
     <code>POST</code>
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        boolean newbie = true;
        Cookie[] cookies = request.getCookies();
        if(cookies != null){
            for(int i = 0; i< cookies.length; i++){
                Cookie c = cookies[i];

if((c.getName().equals("repeatVisitor"))&&(c.getValue().equals("yes"))
)) {
                    newbie = false;
                    break;
                }
            }
        } /* end of if*/
        int counter = 0;
        String title;
        if (newbie){
            Cookie returnVisitorCookie = new Cookie("repeatVisitor",
"yes");
            returnVisitorCookie.setMaxAge(60*60*24*365);
            response.addCookie(returnVisitorCookie);
            title = "Welcome Abroad";
        } else {
            title = "Welcome Back";
            counter+=1;
        }
        response.setContentType("text/html;charset=UTF-8");
        String docType="<!DOCTYPE HTML PUBLIC \"-//W3C//DTD HTML
4.0\"+\"Transitional//EN\">\n";

        try (PrintWriter out = response.getWriter()) {
            out.println(docType +
"<HTML>\n" +
"<HEAD><TITLE>" + title + "</TITLE></HEAD>\n" +
"<BODY BGCOLOR=\"#FDF5E6\">" +
"<H1 ALIGN=\"CENTER\">" + title + "</H1>\n<p ALIGN=\"CENTER\">
Counter:" +counter +
"</BODY></HTML>");

```

```

        /* TODO output your page here. You may use following
sample code.
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet RepeatVisitor</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<h1>Servlet RepeatVisitor at " +
request.getContextPath() + "</h1>");
        out.println("</body>");
        out.println("</html>");
        */
    }
}

// <editor-fold defaultstate="collapsed" desc="HttpServlet
methods. Click on the + sign on the left to edit the code.">
/**
 * Handles the HTTP <code>GET</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */
@Override
protected void doGet(HttpServletRequest request,
HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

/**
 * Handles the HTTP <code>POST</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */
@Override
protected void doPost(HttpServletRequest request,
HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

/**
 * Returns a short description of the servlet.
 *
 * @return a String containing servlet description

```

```

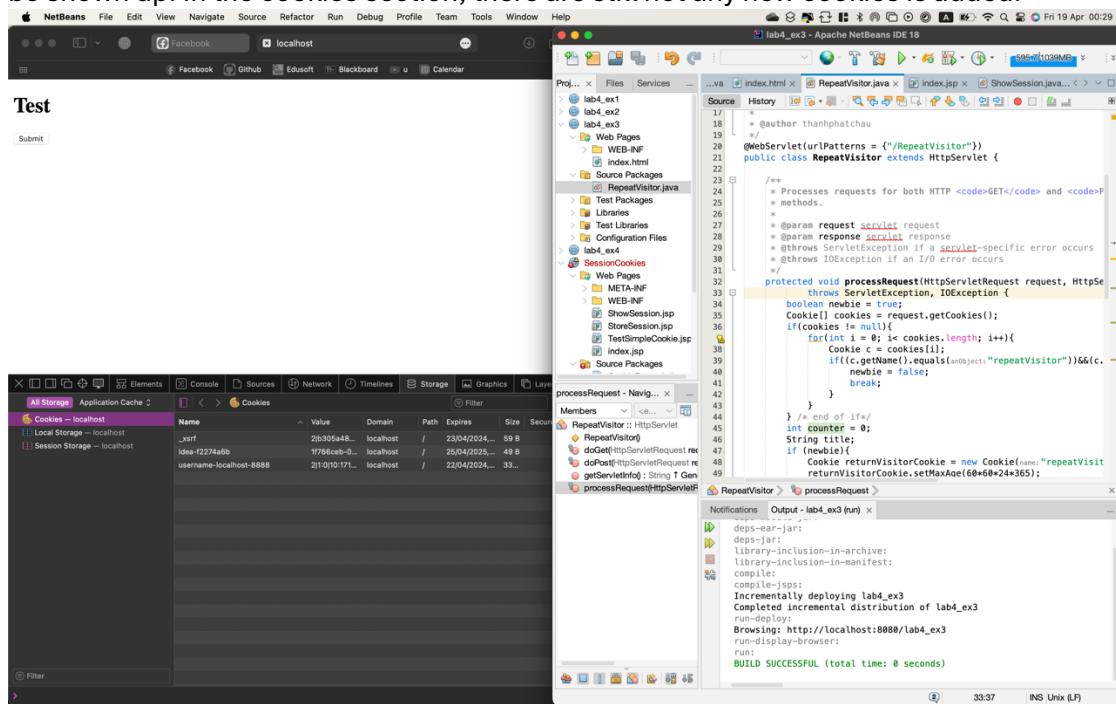
    */
@Override
public String getServletInfo() {
    return "Short description";
} // </editor-fold>

}

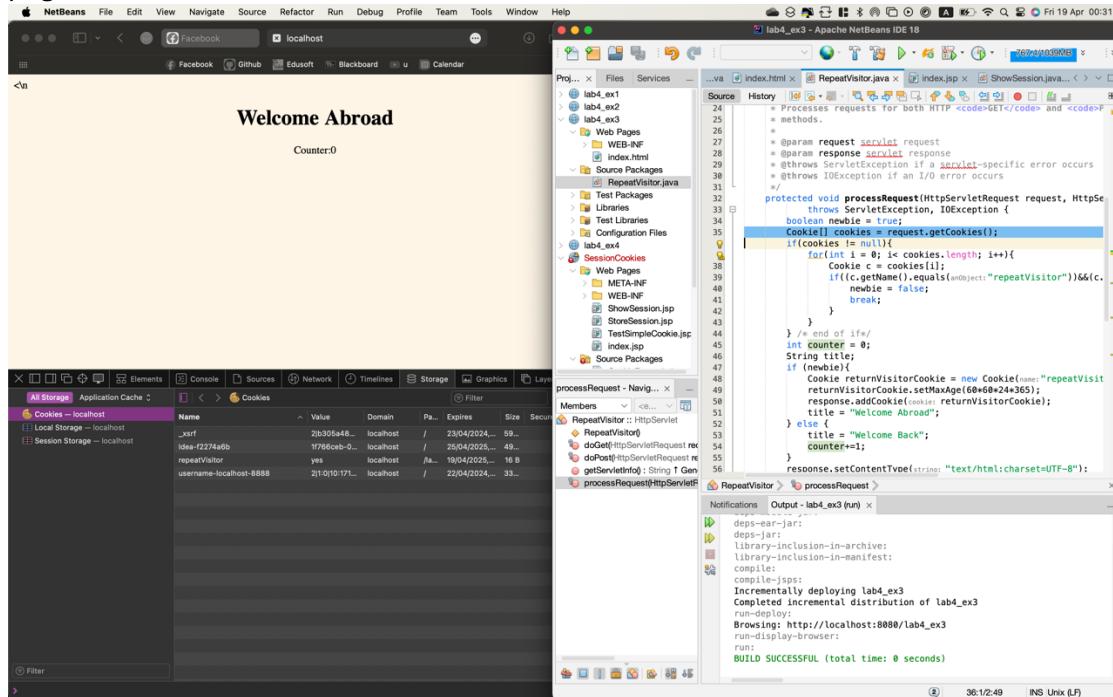
```

Output:

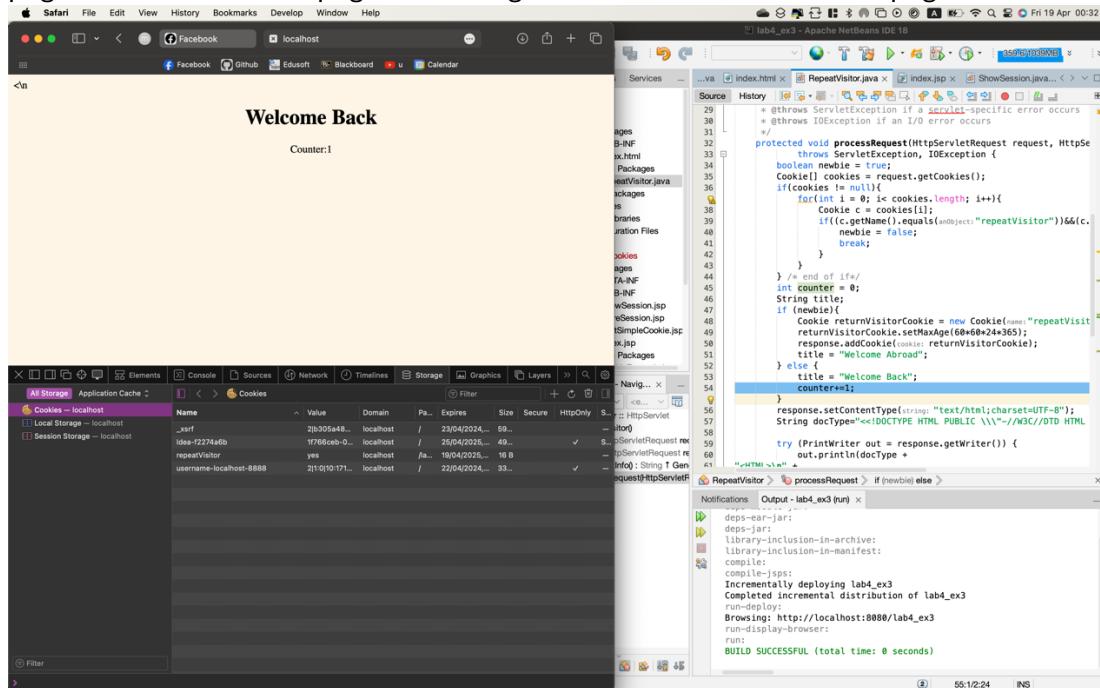
- When I run the project, a page included submit button to start the execution of servlet will be shown up. In the cookies section, there are still not any new cookies is added.



- When I click on Submit button, a new cookie is added as tracking my first time visiting the page.



- Then, I refresh the page. The counter add up to 1 to track that I have already visited this page before. Title on the page also change to welcome me back to the page.



Exercise 4:

ShowSession.java – servlet java class.

My code:

```
/*
```

```

 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Servlet.java to
edit this template
 */

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.HttpSession;
import java.io.IOException;
import java.io.PrintWriter;

/**
 *
 * @author thanhphatchau
 */
@WebServlet(urlPatterns = {" /ShowSession"})
public class ShowSession extends HttpServlet {

    /**
     * Processes requests for both HTTP <code>GET</code> and
<code>POST</code>
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html; charset=UTF-8");
        HttpSession session = request.getSession();
        String heading;
        Integer accessCount =
(Integer)session.getAttribute("accessCount");
        if (accessCount == null){
            accessCount = new Integer(0);
            heading = "Welcome, Newcomer";
        } else {
            heading = "Welcome back";
            accessCount = new Integer(accessCount.intValue()+1);
        }
        session.setAttribute("accessCount",accessCount);
        String title ="Session Tracking Example";

```

```

        String doctype= "<!DOCTYPE HTML PUBLIC \"-//W3C//DTD HTML
4.0\" + \"Transitional//EN\">";
        try (PrintWriter out = response.getWriter()) {
            /* TODO output your page here. You may use following
sample code. */
            out.println(doctype+
                "<html>" +
                "<HEAD><TITLE>" + title + "</TITLE></HEAD>\n" +
                "<BODY BGCOLOR=\"#FDF5E6\">\n" +
                "<CENTER>\n" +
                "<H1>" + heading + "</H1>\n" +
                "<H2>Information on Your Session:</H2>\n" +
                "<TABLE BORDER=1>\n" +
                "<TR BGCOLOR=\"#FFAD00\">\n" +
                "    <TH>Info Type<TH>Value\n" +
                "<TR>\n" +
                "    <TD>ID\n" +
                "    <TD>" + session.getId() + "\n" +
                "<TR>\n" +
                "    <TD>Creation Time\n" +
                "    <TD>" +
                session.getCreationTime() + "\n" +
                "<TR>\n" +
                "    <TD>Time of Last Access\n" +
                "    <TD>" +
                session.getLastAccessedTime() + "\n" +
                "<TR>\n" +
                "    <TD>Number of Previous Accesses\n" +
                "    <TD>" + accessCount + "\n" +
                "</TABLE>\n" +
                "</CENTER></BODY></HTML>"

            );
        }
    }

    // <editor-fold defaultstate="collapsed" desc="HttpServlet
methods. Click on the + sign on the left to edit the code.">
    /**
     * Handles the HTTP <code>GET</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    @Override
    protected void doGet(HttpServletRequest request,
    HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }
}

```

```

/**
 * Handles the HTTP <code>POST</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */
@Override
protected void doPost(HttpServletRequest request,
HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

/**
 * Returns a short description of the servlet.
 *
 * @return a String containing servlet description
 */
@Override
public String getServletInfo() {
    return "Short description";
} // </editor-fold>

}

```

Output:

- When I run the project, index.jsp will be shown up to help me execute servlet class.
- When I first time visit the page, heading change to Newcomer and it also provides the time I visited the page and counts number of my access. Here, when I am a newcomer, number

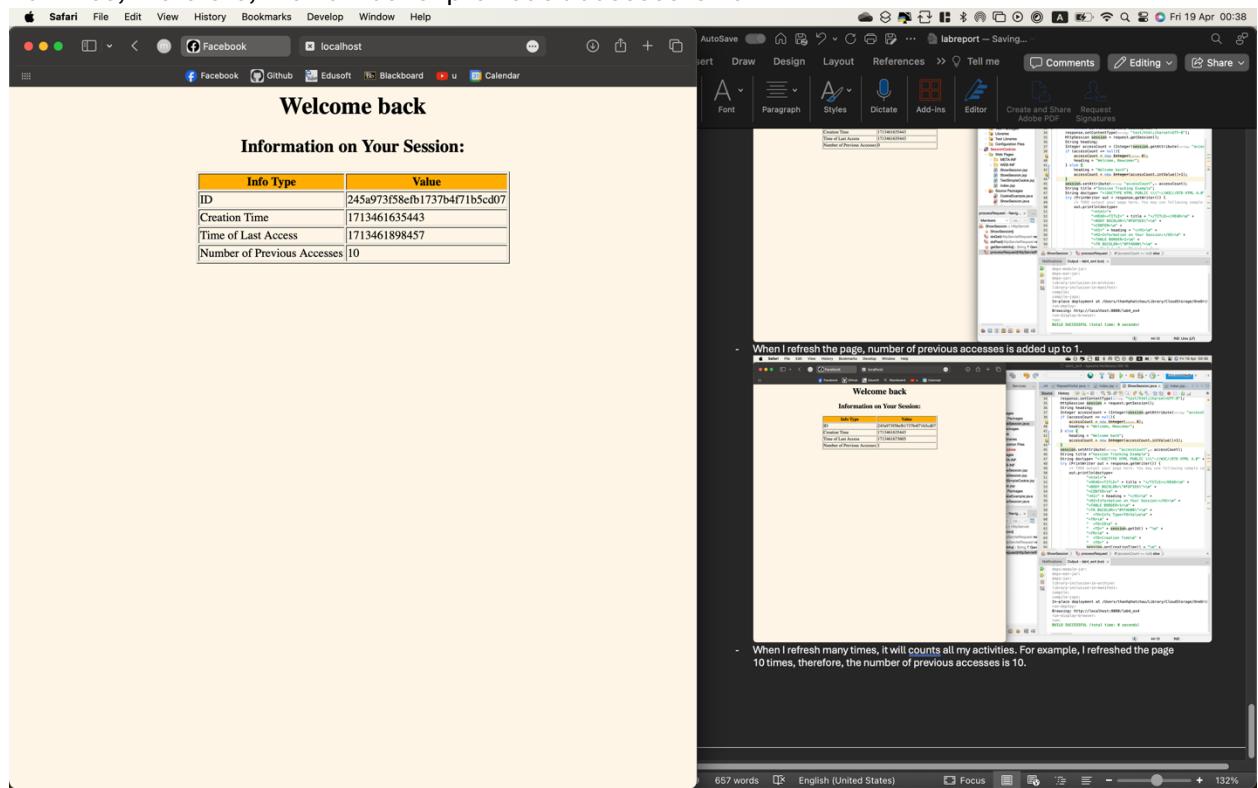
of previous accesses is 0.

The screenshot shows the Apache NetBeans IDE interface. On the left, the Project Explorer displays files like `lab4_ex1`, `lab4_ex2`, `lab4_ex3`, and `lab4_ex4`. The `lab4_ex4` project is selected, showing `ShowSession.java` and `index.jsp` in the Source tab. The code for `ShowSession.java` includes logic to track session access counts and generate HTML output. The `index.jsp` file contains JSP code for displaying session information. To the right, a browser window shows the initial page "Welcome, Newcomer" with the heading "Information on Your Session:". A table provides session details, including the number of previous accesses (0). Below the browser is the NetBeans Output window showing deployment and run logs.

- When I refresh the page, number of previous accesses is added up to 1.

The screenshot shows the Apache NetBeans IDE interface again. The `index.jsp` file has been modified to increment the session access count by 1 each time it is accessed. The browser window now shows the updated page "Welcome back" with the heading "Information on Your Session:". The table now shows the number of previous accesses as 1. The NetBeans Output window continues to show deployment and run logs.

- When I refresh many times, it will counts all my activities. For example, I refreshed the page 10 times, therefore, the number of previous accesses is 10.



Assignment 2:

Output:

- When I run the project, index.jsp shows a page includes username and password. I filled out the form to complete submission.

The screenshot shows a web browser window with the title "Login Page". The page contains a form with fields for "Username" (admin) and "Password" (*****). Below the form is a "submit" button. To the right of the browser is the Apache NetBeans IDE interface. The "Source" tab of the editor shows the JavaServer Pages (JSP) code for index.jsp. The code includes HTML for a login page, a form action pointing to "/loginservlet", and a table with two rows for "Username" and "Password" input fields, followed by a "submit" button. The "Output" panel at the bottom of the IDE shows a successful build and deployment process.

```

<html>
    <head>
        <title>Login Page</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0, shrink-to-fit=no">
    </head>
    <body>
        <h1>Login Page</h1>
        <hr><!-- comment -->
        <form action="/loginservlet">
            <table>
                <tr>
                    <th>Username:</th>
                    <th><input type="text" name="username"></th>
                </tr>
                <tr>
                    <th>Password:</th>
                    <th><input type="password" name="password"></th>
                </tr>
                <tr>
                    <th><input type="submit" value="submit" /></th>
                    <th></th>
                </tr>
            </table>
        </form>
    </body>
</html>

```

- When I input correct username and password, servlet move me to mailbox.jsp to fill out the form.

The screenshot shows a web browser window with the title "Register Mail Account". The page contains a form with fields for "Your Name" (Phat Chau), "Gender" (Male), "Birthday" (01/08/2003), "Major" (Network Engineering), "I live in" (Vietnam), and "Select ID" (ITITIU21135@gmail.com). Below the form are "Submit" and "cancel" buttons. To the right of the browser is the Apache NetBeans IDE interface. The "Source" tab of the editor shows the JavaServer Pages (JSP) code for mailbox.jsp. The code includes HTML for a registration page, a form action pointing to "/readInfo", and a table with five rows for "Your Name", "Gender", "Birthday", "Major", and "Select ID". The "Output" panel at the bottom of the IDE shows a successful build and deployment process.

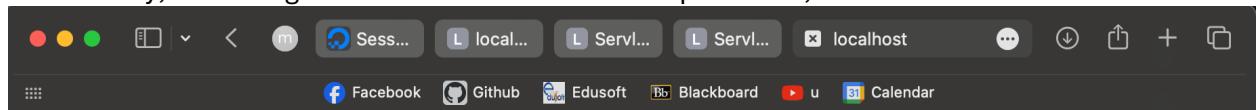
```

<%-->
<%-- Document : mailbox
   Created on : Apr 19, 2024, 12:49:19 AM
   Author : thanhphatchau --%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
        <h1>Register Mail Account</h1>
        <hr><!-- comment -->
        <form action="/readInfo">
            <table>
                <tr>
                    <td>Your Name:</td>
                    <td><input type="text" name="fname" placeholder="Your Name"></td>
                </tr>
                <tr>
                    <td>Gender:</td>
                    <td><input type="radio" name="gender" value="male" checked="checked" /> Male <input type="radio" name="gender" value="female" /> Female</td>
                </tr>
                <tr>
                    <td>Birthday:</td>
                    <td><input type="date" name="dob"></td>
                </tr>
                <tr>
                    <td>Major:</td>
                    <td><input type="text" name="major" value="Network Engineering" /></td>
                </tr>
            </table>
        </form>
    </body>
</html>

```

- Additionally, when I log in with correct username and password, a session is created.



Register Mail Account

Your Name: Phat Chau

Gender: Male Female

Birthday: 01/08/2003

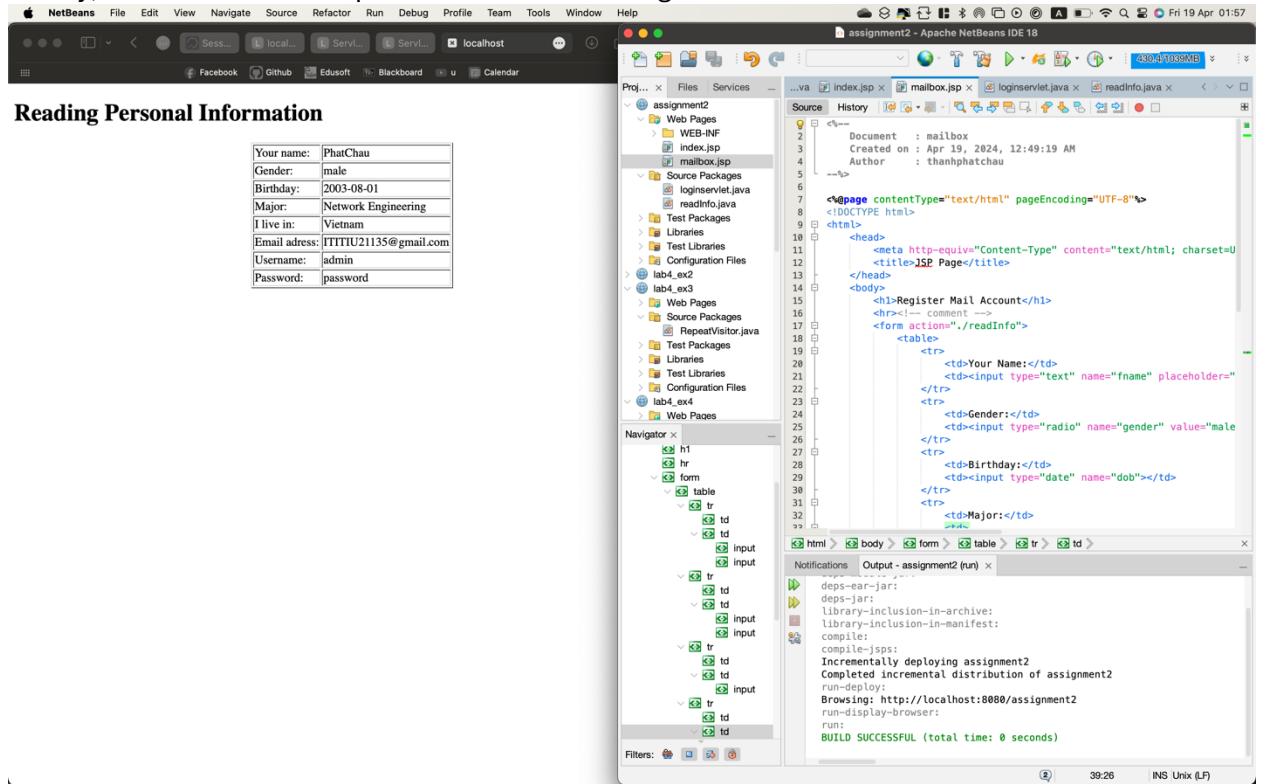
Major: Network Engineering

I live in: Vietnam

Select ID: ITITIU21135@gmail.com

All Storage Application Cache								
	Name	Value	Domain	Path	Expires	Size	Secure	HttpOnly
Cookies – localhost	_xsrf	2 b305a48...	localhost	/	23/04/2024,...	59 B	–	–
Local Storage – localhost	Idea-f2274a6b	1f766ceb-0...	localhost	/	25/04/2025,...	49 B	✓	S...
Session Storage – localhost	JSESSIONID	258d571c1...	localhost	/a...	Session	38 B	✓	–
	password	admin	localhost	/a...	Session	13 B	–	–
	sddfsdf	fsfsdff	localhost	/a...	Session	14 B	–	–
	user	admin	localhost	/a...	Session	9 B	–	–
	username-localhost-8888	2 1:0 10:171...	localhost	/	22/04/2024,...	33...	✓	–

- Finally, all the result will be printed out when clicking on Submit button.



My code:

Index.jsp:

```
<!DOCTYPE html>
<!--
Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
Click nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Html.html
to edit this template
-->
<html>
    <head>
        <title>login page</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    </head>
    <body>
        <h1>Login Page</h1>
        <hr><!-- comment -->
        <form action=".//loginservlet">
            <table>
                <tr>
                    <th>Username:</th>
                    <th><input type="text" name="username"></th>
                </tr>
                <tr>
```



```

        <option value="Computer Science">Computer
Science</option>
        <option value="Data Science">Data
Science</option>
        <option value="Network
Engineering">Network Engineering</option>
    </select>
</td>
</tr>
<tr>
    <td>I live in:</td>
    <td><input type="text" name="address"></td>
</tr>
<tr>
    <td>Select ID:</td>
    <td><input type="email" name="mail"
placeholder="your_id@gmail.com"></td>
</tr>
<tr>
    <td><input type="submit"></td>
    <td><input type="reset" value="cancel"></td>
</tr>
</table>
</form>
</body>
</html>
```

LoginServlet.java:

```

/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Servlet.java to
edit this template
 */

import jakarta.servlet.RequestDispatcher;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.HttpSession;
import java.io.IOException;
import java.io.PrintWriter;
import static org.glassfish.soteria.Utils.encodeURL;

/**
 *
 * @author thanhphatchau
```

```

        */
    @WebServlet(urlPatterns = {" /loginservlet"})
    public class loginservlet extends HttpServlet {
        private static final long serialVersionUID =1L;
        private final String userID ="admin";
        private final String password ="password";

        /**
         * Processes requests for both HTTP <code>GET</code> and
        <code>POST</code>
         * methods.
         *
         * @param request servlet request
         * @param response servlet response
         * @throws ServletException if a servlet-specific error occurs
         * @throws IOException if an I/O error occurs
        */
        protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
            throws ServletException, IOException {
            String user = request.getParameter("username");
            String pass = request.getParameter("password");

            if(userID.equals(user)&&password.equals(pass)){
                HttpSession session = request.getSession();
                session.setAttribute("user","thanhphatchau");
                session.setMaxInactiveInterval(30*60);
                Cookie userName = new Cookie(pass, user);
                response.addCookie(userName);
                String encodedURL =
                response.encodeRedirectURL("mailbox.jsp");
                response.sendRedirect(encodedURL);
            } else{
                RequestDispatcher rd =
                getServletContext().getRequestDispatcher("/index.jsp");
                PrintWriter out = response.getWriter();
                out.println("<font color=red>Either username or password
is wrong.</font>");
                rd.include(request,response);
            }
        }

        // <editor-fold defaultstate="collapsed" desc="HttpServlet
methods. Click on the + sign on the left to edit the code.">
        /**
         * Handles the HTTP <code>GET</code> method.
         *
         * @param request servlet request
         * @param response servlet response

```

```

        * @throws ServletException if a servlet-specific error occurs
        * @throws IOException if an I/O error occurs
        */
    @Override
    protected void doGet(HttpServletRequest request,
    HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }

    /**
     * Handles the HTTP <code>POST</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    @Override
    protected void doPost(HttpServletRequest request,
    HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }

    /**
     * Returns a short description of the servlet.
     *
     * @return a String containing servlet description
     */
    @Override
    public String getServletInfo() {
        return "Short description";
    } // </editor-fold>

}

readInfo.java:
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Servlet.java to
edit this template
 */

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;

```

```

import java.io.IOException;
import java.io.PrintWriter;

/**
 *
 * @author thanhphatchau
 */
@WebServlet(urlPatterns = {"readInfo"})
public class readInfo extends HttpServlet {
    String username;
    String password;

    /**
     * Processes requests for both HTTP <code>GET</code> and
     <code>POST</code>
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        Cookie[] cookies = request.getCookies();

        for(int i = 0; i < cookies.length; i++) {
            Cookie c = cookies[i];
            String name = c.getName();
            String value = c.getValue();
            if(name.equals("password")&&value.equals("admin")) {
                username = value;
                password = name;
            }
        }
        String name = request.getParameter("fname") +
        request.getParameter("lname");
        String gender = request.getParameter("gender");
        String dob = request.getParameter("dob");
        String major = request.getParameter("major");
        String living = request.getParameter("address");
        String email = request.getParameter("mail");
        try (PrintWriter out = response.getWriter()) {
            /* TODO output your page here. You may use following
sample code. */
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet readInfo</title>");

```

```

        out.println("</head>");
        out.println("<body>");
        out.println("<h1>Reading Personal Information</h1>");
        out.println("<table border=1 align=\"center\"><tr><td>Your
name:</td><td>" +
                    +name+"</td></tr>" +
                    "<tr><td>Gender:</td><td>" + gender +"</td></tr>" +
                    "<tr><td>Birthday:</td><td>" + dob +"</td></tr>" +
                    "<tr><td>Major:</td><td>" + major +"</td></tr>" +
                    "<tr><td>I live in:</td><td>" + living
                +"</td></tr>" +
                "<tr><td>Email adress:</td><td>" + email
            +"</td></tr>" +
                "<tr><td>Username:</td><td>" + username
            +"</td></tr>" +
                "<tr><td>Password:</td><td>" + password
            +"</td></tr>" +
        );
        out.println("</body>");
        out.println("</html>");
    }
}

// <editor-fold defaultstate="collapsed" desc="HttpServlet
methods. Click on the + sign on the left to edit the code.">
/**
 * Handles the HTTP <code>GET</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */
@Override
protected void doGet(HttpServletRequest request,
HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

/**
 * Handles the HTTP <code>POST</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */
@Override
protected void doPost(HttpServletRequest request,
HttpServletResponse response)
    throws ServletException, IOException {
}

```

```
    processRequest(request, response);
}

/**
 * Returns a short description of the servlet.
 *
 * @return a String containing servlet description
 */
@Override
public String getServletInfo() {
    return "Short description";
} // </editor-fold>

}
```