

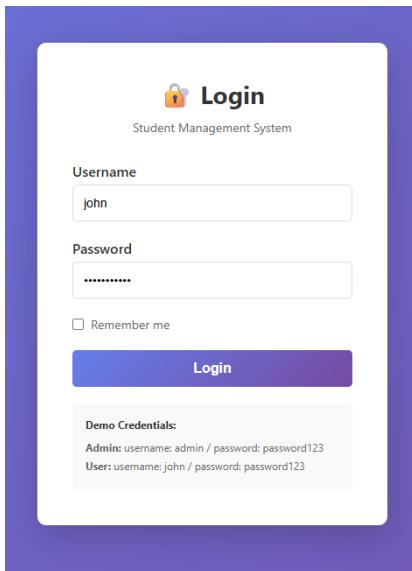
Lab6 Homework ITCSIU22266

Exercise 5:

```
if (isLoggedIn) {
    // User is logged in, allow access
    chain.doFilter(request, response);
} else {
    // User not logged in, redirect to login
    String loginURL = contextPath + "/login";
    httpResponse.sendRedirect(loginURL);
}
```

AuthFilter.java navigate user to login page if they haven't logged in yet or the session expired.

For example, user session has expired, then navigate to login page, else, gain access to the webpage



Student Management System

Welcome, John Doe user
Last login: 10 days ago

Student List

ID	Code	Name	Email	Major
14	SV0014	Trabeklo Trabeklo	Culhcop@gmail.com	Computer Science
13	SV0012	Tan Meo	itnktu22266@student.hcmiu.edu.vn	Computer Science
12	SV0011	DANG DANG KHOU	dang7421@gmail.com	Computer Science
11	SV008	DANG DANG KHOU	khoud12312@gmail.com	Computer Science
10	SV007	John Hollie Doe	johndoe@company.co.uk	Computer Science
6	SV006	John Doe	john.doe@gmail.com	Information Technology
5	SV005	David Wilson	davidw@email.com	Computer Science
4	SV004	Sarah Davis	sarahd@email.com	Data Science
3	SV003	Michael Brown	michael.b@gmail.com	Software Engineering
2	SV002	Emily Johnson	emily@email.com	Information Technology
1	SV001	John Doe	johnsmith@email.com	Computer Science

Exercise 6:

Login as admin, will navigate to admin dashboard

Student Management System

Welcome back, Admin User!

Enter what's happening with your students today.

 11 Total Students

Quick Actions

[View All Students](#) [Add New Student](#) [Search Student](#)

Admin have permission to edit/delete student,

Student Management System

Welcome, Admin User admin
Last login: 10 days ago

Student List

[Add New Student](#)

ID	Code	Name	Email	Major	Action
14	SV0014	Trabeklo Trabeklo	Culhcop@gmail.com	Computer Science	Edit Delete
13	SV0012	Tan Meo	itnktu22266@student.hcmiu.edu.vn	Computer Science	Edit Delete
12	SV0011	DANG DANG KHOU	dang7421@gmail.com	Computer Science	Edit Delete
11	SV008	DANG DANG KHOU	khoud12312@gmail.com	Computer Science	Edit Delete
10	SV007	John Hollie Doe	johndoe@company.co.uk	Computer Science	Edit Delete
6	SV006	John Doe	john.doe@gmail.com	Information Technology	Edit Delete
5	SV005	David Wilson	davidw@email.com	Computer Science	Edit Delete
4	SV004	Sarah Davis	sarahd@email.com	Data Science	Edit Delete
3	SV003	Michael Brown	michael.b@gmail.com	Software Engineering	Edit Delete
2	SV002	Emily Johnson	emily@email.com	Information Technology	Edit Delete
1	SV001	John Doe	johnsmith@email.com	Computer Science	Edit Delete

Edit Student

Student Code *

Format: 2 letters + 3+ digits

Full Name *

Email *

Major *

Update StudentCancel

Student List

[Add New Student](#)

ID	Code	Name	Email	Major	Actions
14	SV0014	Tralalelo Tralala	cuhmpc@gmail.com	Computer Science	Edit Delete
13	SV0012	Tan Meo	itcsiu22266@student.hcmiu.edu.vn	Computer Science	Edit Delete
12	SV0011	DANG DANG KHOA	dang37421@gmail.com	Computer Science	Edit Delete
11	SV008	DANG DANG KHOI	khoibk123123@gmail.com	Computer Science	Edit Delete
10	SV007	John Hollie Doe	john.doe@company.co.uk	Computer Science	Edit Delete
6	SV006	John Doe	john.doe@gmail.com	Information Technology	Edit Delete
5	SV005	David Wilson	david.w@email.com	Computer Science	Edit Delete
4	SV004	Sarah Davis	sarah.d@email.com	Data Science	Edit Delete
3	SV003	Michael Brown	michael.b@email.com	Software Engineering	Edit Delete
2	SV002	Emily Johnson	emily.j@email.com	Information Technology	Edit Delete
1	SV001	John Doe	john.smith@email.com	Computer Science	Edit Delete

If login as user, wont have permission to edit or delete student.

ID	Code	Name	Email	Major
14	SV0014	Tran Le Thanh	cuocnghiep@gmail.com	Computer Science
13	SV0012	Tan Meo	itmlu22266@student.hcmut.edu.vn	Computer Science
12	SV0011	DAHOI DANG KHOA	dang7474@gmail.com	Computer Science
11	SV0008	DANH DANG KHOI	khoa123123@gmail.com	Computer Science
10	SV0007	John Hollie Doe	johndoe@company.co.uk	Computer Science
6	SV0006	John Doe	johndoe@gmail.com	Information Technology
5	SV0005	David Wilson	davidw@email.com	Computer Science
4	SV0004	Sarah Davis	sarahd@email.com	Data Science
3	SV0003	Michael Brown	michaelb@email.com	Software Engineering
2	SV0002	Emily Johnson	emily@email.com	Information Technology
1	SV0001	John Doe	johndsmith@email.com	Computer Science

If tried to access delete action through URL, will be blocked also

The screenshots show a standard 403 Forbidden error page from a web browser. The top one is for the 'Delete' action and the bottom one is for the 'Add New Student' action, both pointing to the same URL.

Exercise 7:

Admin has add new student function

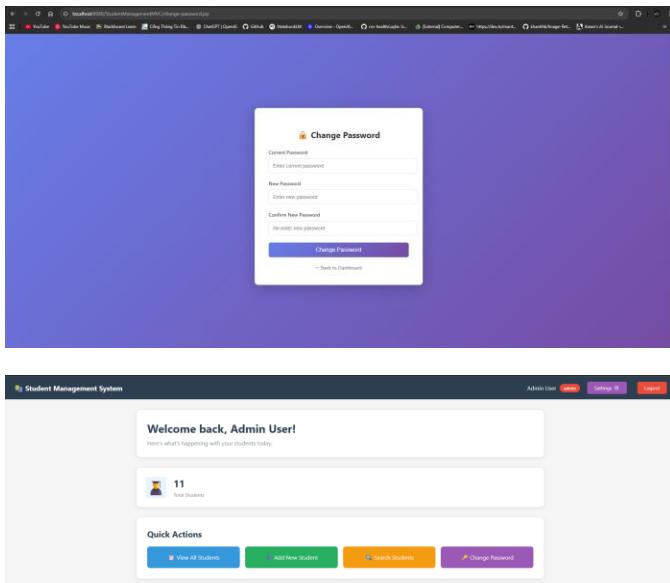
The screenshot shows a 'Student List' page with a 'Add New Student' button at the bottom left. This indicates that the 'Add New Student' function is available to the current user.

while user don't have permission to add student

The screenshot shows a 'Student List' page where the 'Add New Student' button is missing or disabled, indicating that the user lacks the necessary permissions to perform that action.

Exercise 8:

Add change password button to change the password of the account



Full code explaination:

Access website,
localhost:8080/StudentManagementMVC

AuthFilter.java get the cookie and session of the browser.

```
@Override
public void doFilter(ServletRequest request, ServletResponse response, FilterChain chain)
|    throws IOException, ServletException

    HttpServletRequest httpRequest = (HttpServletRequest) request;
    HttpServletResponse httpResponse = (HttpServletResponse) response;

    String requestURI = httpRequest.getRequestURI();
    String contextPath = httpRequest.getContextPath();
    String path = requestURI.substring(contextPath.length());

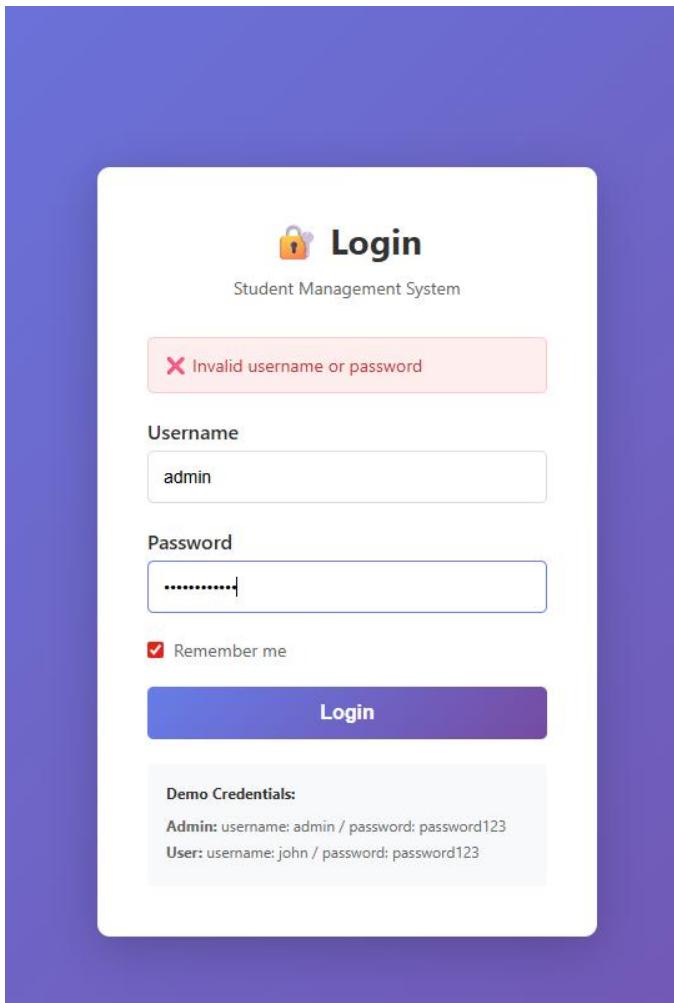
    // Check if this is a public URL
    if (isPublicUrl(path)) {
        // Allow access to public URLs
        chain.doFilter(request, response);
        return;
    }

    // Check if user is logged in
    HttpSession session = httpRequest.getSession(false);
    boolean isLoggedIn = (session != null && session.getAttribute("user") != null);

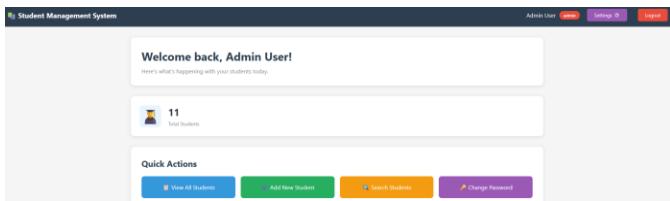
    if (isLoggedIn) {
        // User is logged in, allow access
        chain.doFilter(request, response);
    } else {
        // User not logged in, redirect to login
        String loginURL = contextPath + "/login";
        httpResponse.sendRedirect(loginURL);
    }
}
```

If user is logged in and the session still available, then grant access, else, navigate to login.

User login into the webpage with user name and password. Click remember me for faster login next time.



After login, check what is the user role, if admin, show admin dashboard.



If user, show user dashboard

ID	Code	Name	Email	Major
14	SV0014	TrinhDanh Trinh	cuhtomp@gmail.com	Computer Science
13	SV0012	Tan Mao	lccs12230@students.hcmus.edu.vn	Computer Science
12	SV0011	DANG DANG KHANH	dang7441@gmail.com	Computer Science
11	SV008	DANG DANG KHON	khoa8112312@gmail.com	Computer Science
10	SV007	John Holle Doe	john.doe@compay.co.uk	Computer Science
9	SV006	John Doe	john.doe@gmail.com	Information Technology
8	SV005	David Wilson	david.will@email.com	Computer Science
7	SV004	Sarah Davis	sarah.d@email.com	Data Science
6	SV003	Michael Brown	michael.b@email.com	Software Engineering
5	SV002	Emily Johnson	emily@email.com	Information Technology
4	SV001	John Doe	john.smith@email.com	Computer Science

User don't have permission to perform actions of admin role.
This is blocked by AdminFilter.java

```

@Override
public void doFilter(ServletRequest request, ServletResponse response, FilterChain chain)
    throws IOException, ServletException {

    HttpServletRequest httpRequest = (HttpServletRequest) request;
    HttpServletResponse httpResponse = (HttpServletResponse) response;

    String action = httpRequest.getParameter("action");

    // Check if this action requires admin role
    if (isAdminAction(action)) {
        HttpSession session = httpRequest.getSession(false);

        if (session != null) {
            User user = (User) session.getAttribute("user");

            if (user != null && user.isAdmin()) {
                // User is admin, allow access
                chain.doFilter(request, response);
            } else {
                // User is not admin, deny access
                httpResponse.sendRedirect(httpRequest.getContextPath() +
                    "/student?action=list&error=Access denied. Admin privileges required.");
            }
        } else {
            // No session, redirect to login
            httpResponse.sendRedirect(httpRequest.getContextPath() + "/login");
        }
    } else {
        // Not an admin action, allow access
        chain.doFilter(request, response);
    }
}

```

Admin can do many actions such as edit, add, delete students.

The screenshot shows a web-based student management system. At the top, there's a header with the title "Student Management System" and a sub-header "Manage, Administer User Accounts". Below the header is a "Student List" section with a table. The table has columns for ID, Code, Name, Email, Major, and Actions (Edit, Delete). The data in the table is as follows:

ID	Code	Name	Email	Major	Actions
14	SV0014	Trabekko Trabek	cuhcep@gmail.com	Computer Science	Edit Delete
13	SV0012	Tan Mee	it052226@student.hcmiu.edu.vn	Computer Science	Edit Delete
12	SV0011	DANG DANG KHOA	dang1421@gmail.com	Computer Science	Edit Delete
11	SV0008	DANG DANG KHOC	khoc12312@gmail.com	Computer Science	Edit Delete
10	SV0007	John Hollie Doe	johndoe@company.co.uk	Computer Science	Edit Delete
9	SV0006	John Doe	johndoe@gmail.com	Information Technology	Edit Delete
5	SV0005	David Wilson	david.w@gmail.com	Computer Science	Edit Delete
4	SV0004	Sarah Devil	sarah.d@gmail.com	Data Science	Edit Delete
3	SV0003	Michael Brown	michael.b@gmail.com	Software Engineering	Edit Delete
2	SV0002	Emily Johnson	emily.j@gmail.com	Information Technology	Edit Delete
1	SV0001	John Doe	johndoe@mail.com	Computer Science	Edit Delete

Both admin and user can change password

The screenshot shows a "Change Password" form. The form consists of three input fields: "Current Password", "New Password", and "Confirm New Password". Below the "Confirm New Password" field is a "Re-enter new password" field. At the bottom is a large blue "Change Password" button. Below the button is a link to "Back to Dashboard".

Change Password

Current Password
Enter current password

New Password
Enter new password

Confirm New Password
Re-enter new password

Change Password

← Back to Dashboard