

## SWE523 PROJECT STUDY 2 (2025)

### Single Sign On (SSO) Authentication with Google or GitHub

**Due date:** 7 Nov 2025, class time.

In this study you will add OAuth2 authentication to your project (Project 1). You can integrate your project with either Google or GitHub OAuth2 authentication server. Please check related examples and slides posted on Sabis.

At least there must be 2 roles in your application such as “user” and “admin”. You should decide which user should access to which resources (pages, images and documents). Your application must allow to upload user images as well (see Figure 2). Show that you can adjust cookie expire time.

Below views are given as example you can do as shown here or you can just build a REST-API and show that your system works (by Postman).

The figure consists of four screenshots illustrating the car-rental project's login and home pages.

- Top Left:** Home page with a banner "A NEW WAY TO RENT" and three cars. A red circle highlights the "Login" button in the top right corner of the header.
- Top Right:** Login page titled "Car Rental". It features a "Login with OAuth2" button and a message: "Please login using one of the following options:" followed by a "Login with Google" button.
- Bottom Left:** Error page titled "Oops, insufficient privilege!". It says "Sorry you can not access this page!" and "Click [this](#) to login." A screenshot of a browser window showing the URL "localhost:8080/rental" is also provided.
- Bottom Right:** Home page with a banner "A NEW WAY TO RENT" and three cars. A red circle highlights the "Logout" link in the top right corner of the header.

**Figure 1:** Example login and home views for car-rental project. Some pages, such as rental here only “Admin” role have access, if a normal user role tries to access this page, he/she must be informed and forwarded to login page.

The figure shows a screenshot of a user management interface titled "Taskers".

- Header:** Contains navigation links: MKT, Tasks, Assign, Users, Calendar, Config, and a user account section with "admin" and "Logout".
- Section:** "Taskers" with a sub-section "Add".
- Table:** Displays a list of users with columns: Picture, Name, Phone, Level, Description, and Operations (with icons for edit, lock, delete, and more).
- Data:** Five user entries are listed:
  - Alper (Picture: Male, Level: 2, Description: Hard working)
  - Hans (Picture: Male, Level: 2, Description: Expert on installation)
  - Mustafa (Picture: Male, Level: 5, Description: The boss)
  - Mehmet (Picture: Male, Level: 1, Description: Test user)
  - Henry (Picture: Female, Level: 4, Description: Great musician, can fix instruments)

**Figure 2.** Example user page with profile images from Tasker application.

**Grading:**

No	Task	Grade
1	Project 2 is ready as a base.	15
2	Authentication is working.	25
3	Security filter chain is working (roles and resources) .	25
4	Image upload is working.	25
5	Everything works as described with no error, exceptions handled properly.	10

**PS:** Student must show up for presentation to collect points.