

For the final evaluation of SWE 4538 - Server Programming Lab, you will be tasked with developing the backend for an application. There's no requirement to create a complex frontend for this project. Instead, you can showcase the entire project using tools like Postman or a simple frontend, which could be a basic HTML or EJS file. This project will be an individual effort, and you'll need to implement the following functionalities as part of your submission:

1. Basic Authentication - This includes creating functionalities for user sign-up, as well as enabling user sign-in for authenticated access. Additionally, you should implement mechanisms for users to reset their forgotten passwords. Finally, incorporate a logout feature, ensuring users can securely end their sessions when needed.
2. Google OAuth - This authentication method will allow users to securely log in using their Google credentials.
3. Basic CRUD (CREATE, READ, UPDATE, DELETE) operations in a database- Each of these operations should have a minimum of 10 requests to showcase their functionality thoroughly. Additionally, it's important to include query strings and parameters in the request formats to demonstrate versatility and flexibility in handling data. If necessary, feel free to create additional requests beyond the minimum to provide a comprehensive overview of your backend's capabilities. You can use any database of your choice.
4. File Handling - You need to deal with various types of files, such as images, audio, and video. Your task is to implement CRUD (Create, Read, Update, Delete) operations for these files. To demonstrate your proficiency, you should aim to incorporate at least two different types of file-handling techniques into your backend solution.
5. Handling Form Data - Take user requests through form data and handle them accordingly.

Total lab evaluation:

- **weekly task (50%),**
- **project (40%) and**
- **lab viva (10%)**