Project Description: Google Account Info with Micro-Service Architecture

Project Summary

As a part of the curriculum of the Master 1 course entitled “API and Web Services”, the students will complete this project work which is focused on building a web service that fetches user google information (namely google tasks and gmail emails) using the appropriate API paradigms in a micro-service architecture.

Students are to work in groups of 2-3 members, and the project deliverable is a zip file containing the code of the team. **Note:** the code should **not** include the “node_modules” folder.

The project is to be presented 04/07/2022.

In the following sections, the technologies used, the app architecture, and the project tasks are explained.

For any further detail, please contact the instructor: **Khodor Hammoud**

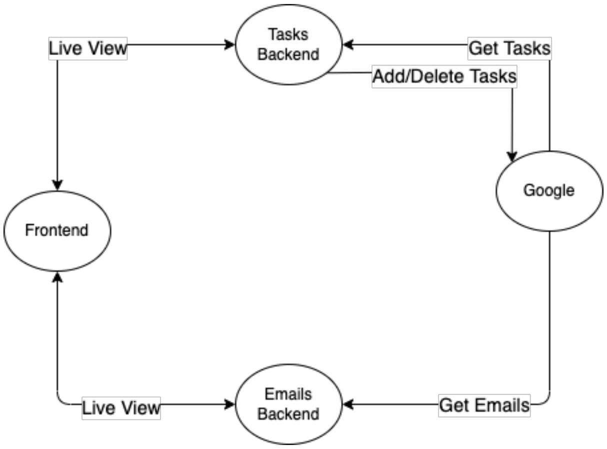
1. About the Web Service

The purpose of this web service is to serve as a single location where users can have a live view of both their google Tasks, and gmail Emails. The application should allow users to login through google, then the users could see a list of their tasks and one for their emails. In addition, the interface should be live updating, showcasing any change in the tasks/emails as soon as they are present on google. In addition, users should be able to add and delete tasks. This is authorized through the google OAuth service, which users grant permission to by logging into google.

2. About the App Architecture

Your web service should consist of 3 components: one frontend and 2 backends. Each of the backends handles communicating with one of the aforementioned entities: one for emails and one for tasks. This is to have a micro-service architecture, which can help us have better control over the maintenance of the application. The diagram below shows the communication between the different components.

Important: the frontend needs to display live updates of the emails/tasks as they are updated on the google servers. It is up to you to determine which API paradigms work best for which usecases.



3. About the Technologies Used

The students are to program this application using whichever frontend technologies they choose, but the backend is preferably to be developed using NodeJS.

The development of the applicatinoo also reuires the creation of a google console application, with the needed OAuth permissions.