



CourseCompanion

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Our Solution

- With no previous work on this project, this is the first semester that this software solution was developed. Our tech stack includes Node.js, ChatGPT API, CSS, HTML, and JS.
- Current contributions include the connection between the server and ChatGPT's API, the design and implementation of the student UI view, and the integration of the class response prompts based on the corresponding syllabus.
 - Potential future contributions may include adding a view that allows the instructor to upload any documents in addition to the syllabus. An important feature that should also be implemented is linking a student's Canvas login to student view of CourseCompanion.

Problem Statement

In response to the recurring issue of students repeatedly asking professors the same questions about course details, we identified a pattern: students often seek reassurance from direct answers rather than consulting the provided syllabus.

To address this pattern and alleviate the burden on professors, we developed CourseCompanion—an AI-powered chatbot accessible via our website. CourseCompanion leverages the course syllabus to provide students 24/7 immediate support and accurate responses to their questions.

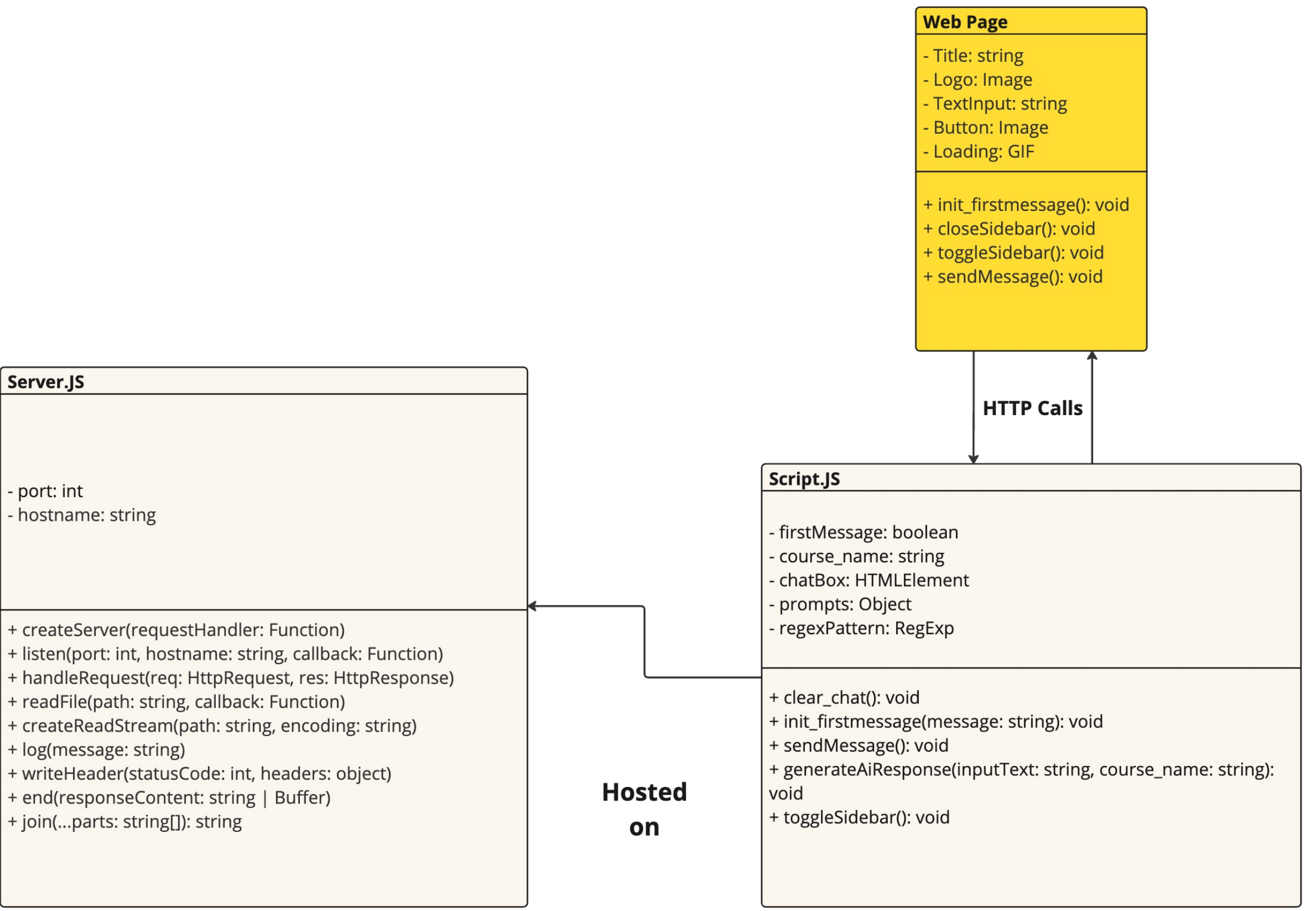
Personal Contributions

I developed an HTTP server specifically designed to host the front-end components of our project, ensuring a robust and versatile setup capable of handling an extensive array of file types such as JPEG, PNG, GIFs, HTML, CSS, and JavaScript. This configuration not only enhances the server's functionality but also ensures a seamless user experience. Furthermore, I successfully integrated the ChatGPT API with the server, establishing a dynamic and responsive connection that leverages advanced AI capabilities to enhance the overall functionality of our system.

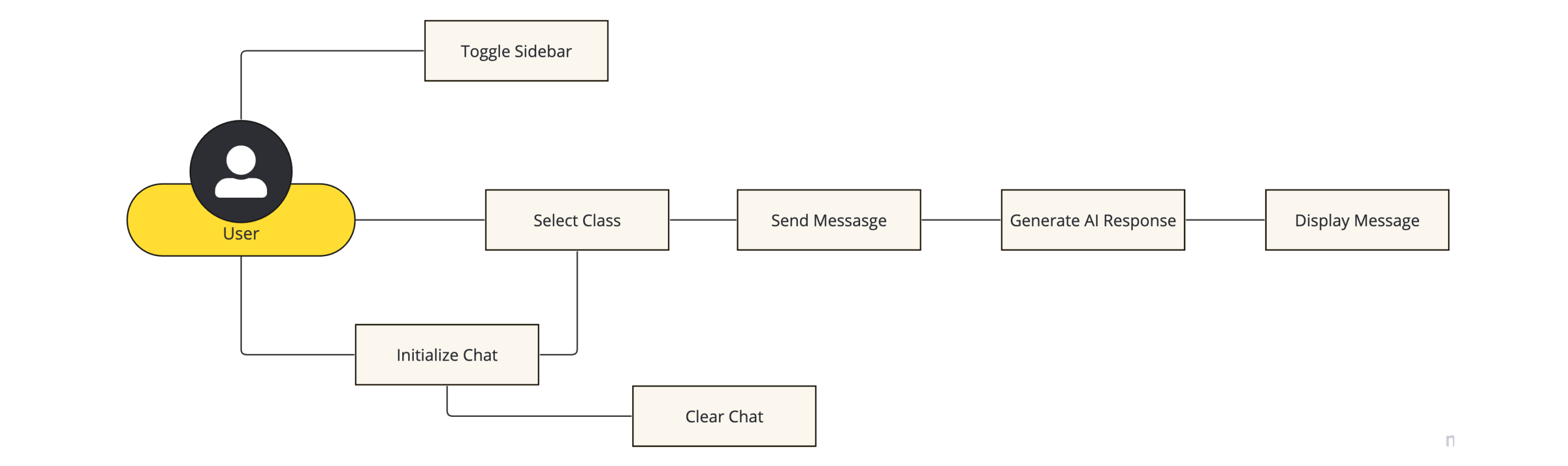
I also thoroughly documented the entire process. The documentation provides a detailed overview of the project's goals and includes user stories. The planning section features a detailed project plan customized for our team, which covers the use case schemas, diagrams of the page structure, and our sprint schedule. Overall, this documentation acts as an extensive manual that captures the project's evolution, design fundamentals, and details of implementation.

For future implementation, we want the future Capstone II students to host this application on a proper URL and have multiple servers to load balance the payload, so it boosts performance of this application.

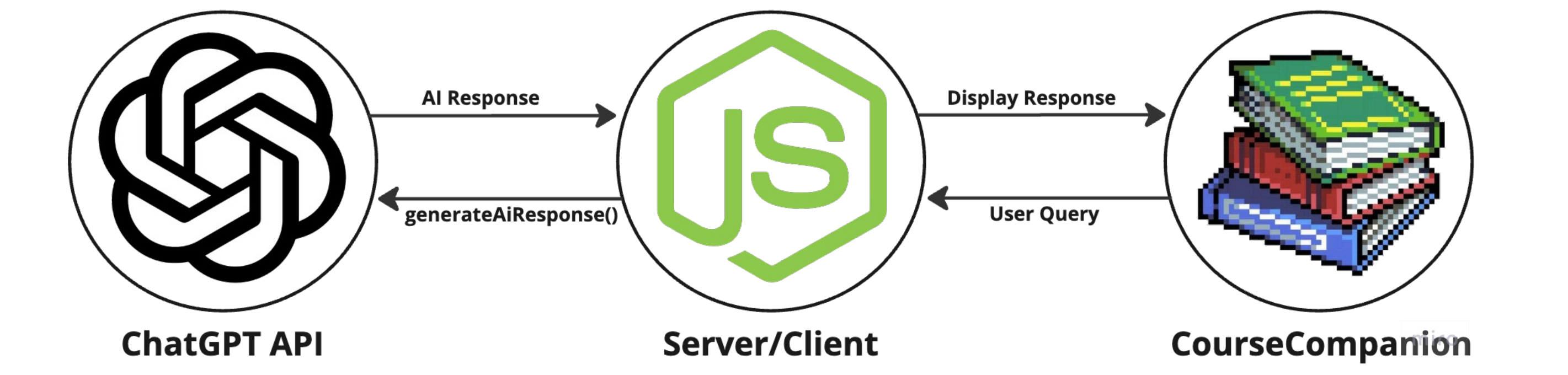
Object Design



Use Case Diagram



Architecture Diagram



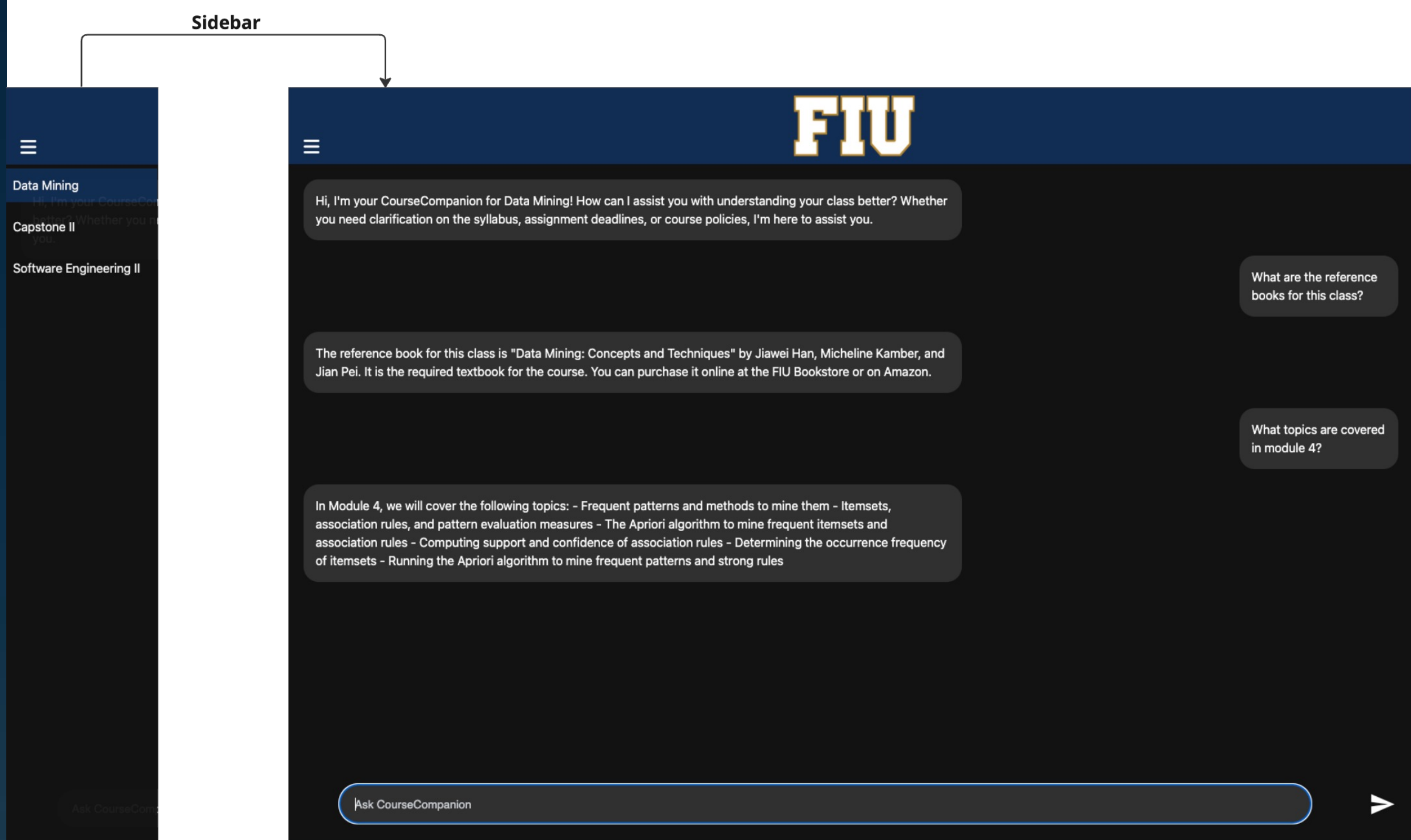
Summary

As a team, we focused on developing a user-friendly webpage for students to interact with an AI chatbot that answers questions about a course syllabus. We were able to establish a connection between ChatGPT's API and our HTTP server. With this set up, we designed and integrated a webpage that allows the student to interface with the server. To ensure that our goals were met, our team tested our solution with current FIU students and took note of their feedback. Moving forward, subsequent teams are encouraged to prioritize the development of a teacher interface incorporating upload functionality, as well as the integration of student Canvas accounts into our CourseCompanion platform.

Technologies



References



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