CS 463: Senior Software Engineering Project Sprint Report 1

Project Title: Prototype a web-based tool for creating and executing task-delineated, collaborative, AI-assisted assignments

Group 28

Project Deadline: End of Spring 2025

Project Mentor: Sanjai Tripathi

Team Roles

Name	ONID	Role
Oliver Zhou	zhouo	Project Manager
Trent Matsumura	matsumut	Developer - Backend
Ethan Lu	luet	Developer - AI Integration
Collin Kimball	kimbacol	Developer - Web UI
Sai Meenakshisundaram	meenkass	Documentation

Contents

1. Sprint Overview

Planned for the Sprint

For this sprint, we focused on improving user role management, enhancing chatbot interactions with assignment context, refining database efficiency, and organizing the backend and frontend configurations. Specifically, Ethan aimed to integrate assignment-specific chatbot interactions, Trent planned to create filters for chat logs, Collin worked on refining user roles and assignment handling, while Sai contributed to documentation and file organization.

Accomplished During the Sprint

During this sprint, Ethan successfully implemented a URL linking assignments with chatbot interactions, improving contextual understanding when users inquire about assignments. Trent developed filtering mechanisms for chat logs, allowing users to efficiently access relevant chatbot conversations. Collin enhanced user role management by ensuring that roles could only be changed manually and improved assignment functionalities within the system. We also added the ability to download chat logs as .txt or .json files, and updated the UI to include a "View Chat Logs" section with downloadable options for each session. The assignment creation form now includes a text field that allows instructors to define chatbot response parameters (e.g., specific tone or formatting of AI responses). Invite codes, previously stored in an array in server.js, are now planned to be stored persistently in the database.

Furthermore, updates were made to the environment configurations:

- **Frontend .env**:
    - VITE_DOMAIN=dev-apk4qqmiy5yh0m5u.us.auth0.com
    - VITE_CLIENTID=qppk7WCgmB60UwRc5rGhmIbU2SgFv0i7
    - VITE_AUDIENCE=https://capstone-api/
    - VITE_API_BASE_URL=http://localhost:5001/
- **Backend .env**:
    - GOOGLE_API_KEY=AIzaSyCsEyvwoeinDswOW2pXzlYGo3WhZ1P0HDA
    - AUDIENCE=https://capstone-api/
    - ISSUER_BASE_URL=https://dev-apk4qqmiy5yh0m5u.us.auth0.com/
    - TOKEN_SIGNING_ALG=RS256

- ALLOWED_ORIGIN=http://localhost:5173/
- NODE_ENV=development

The project was also deployed and the website is now live at:
https://assisted-assignments.vercel.app/

Issues Faced and How They Were Addressed

A key challenge was ensuring that the chatbot effectively linked assignment queries to relevant course contexts. Ethan tackled this by refining the chatbot's URL handling for assignment pages, ensuring accurate context retention. Trent faced challenges in designing efficient filters for chat logs but overcame them through iterative testing and user feedback. Collin addressed complications with user role enforcement by implementing stricter manual control mechanisms.

Planned for the Next Sprint

For the next sprint, we plan to further refine chatbot interactions, enhance grading functionalities for instructors, and conduct additional usability testing. Other priorities include improving assignment submission tracking, optimizing performance for large-scale data handling, and strengthening documentation for easier system navigation.

2. Individual Contributions

Ethan:

- Implemented URL linking assignments with chatbot interactions.
- Improved chatbot context retention for assignment-related queries.

Impact: Strengthened interactions with the AI tool leading to easier usage of the project website.

Trent:

- Created filters for chat logs to improve searchability.
- Enhanced database interactions for more efficient query processing.

Impact: Strengthened the project through efficient code and contributed to refining features.

Collin:

Administrative Role:

- Project mentor discussion about features

- Continued development of frontend features
- Improved assignment management functionalities.

Impact: Further developing features and project structure to fit the end of project requests and facilitate testing.

Sai:

- Organized backend files and maintained structured documentation.
- Updated course and assignment-related documentation.

Impact: Assisted development with organization, leading for faster and efficient and collaborative workflows.

Oliver:

Administrative Roles:

- Managed project coordination and assigned tasks.

- Reviewed team code/progress and provided feedback.
- Communicated with the project mentor to ensure alignment with objectives.

Impact: Further refining project objectives to the mentor’s desires. Maintaining cohesion as a team.

Contribution Notes

Administrative roles can be linked to email exchanges and chat exchanges between the team and the project mentor. Bi-weekly scheduled meetings also contribute to the team organization throughout the sprint.

Developmental changes from team members can all be found on the repository for their contributions

---

eod.