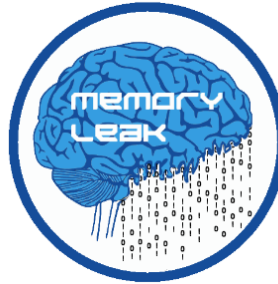


Memory Leak Final Report



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1. Executive Summary

Our application allows any student, at any time, to post a question anonymously, without disrupting the visibility of preexisting questions. If a question does not have an accepted answer, it displays right on the home page, so that other students will see the unanswered question, and feel compelled to answer. When answering questions or making comments, every student is on a level playing field; there is no concept of tutors, nor instructors. This way, students can be assured that their questions will be answered in a timely manner, without any judgment on behalf of the commenters and answerers.

2. Comparison of Initial and Final Requirements

There were two main points for the initial requirements. The first was the User Stories and Use Cases. The initial list consisted of 17 User Stories. Due to time constraints and a team decision, we dropped the user story, "As a user, I would like to edit my profile information." The team felt that there was no information that the user would need to edit as their username/login was provided from Google through their Gmail account. The second requirement was System Components. The system components consisted of using Node.js, Angular/TypeScript and Firebase/Firestore. There was no adjustment to the system requirements as the final requirements consisted of using the same system components and frameworks.

3. Comparison of Initial and Final Timeline

Our initial timeline consisted of 4 Sprints that were 2-3 weeks in length, with each sprint consisting of 4-5 user stories with a varying number of tasks. As the project progressed, there were user stories that had to be pushed into the next sprint due to not fully completing them. We are currently on track to finish the 16 user stories that the group has deemed important to complete. All required deliverables that were outlined per the Project Plan have been met or will be met by the submission deadline.

4. Project results compared with expectations

We initially had very high expectations for the project, and we have easily met and exceeded these. Our main goals were to develop a more anonymous and open community platform, implement a ticketing-system approach to displaying questions to ensure that all questions get answered, and allow community moderation in order to ensure that answers are accurate and follow certain guidelines. We incorporated the first goal of anonymity not only into the asking of a question, but also in any subsequent comments or answers that the user submits, allowing them to continue to contribute to the question anonymously. For the second goal, we wanted to make the ticketing system as integrated as possible into the application. As a result, we decided to incorporate a way for the user who asked the question to designate an accepted answer. Then, any questions without an accepted answer are shown on the home page as a way for users to prioritize these questions, similar to a ticketing system. However, answered questions

are still available through the search function. The final goal required much more creativity. We wanted to find a way to balance having community input while not allowing malicious users to be able to negatively impact the user experience. Thus, we incorporated three main community features. The first is the ability for users to “upvote” and “downvote” answers to show their agreeance or disagreeance. This allows for other users that may not know the answer to know what would be valid. The second feature is the ability to comment. Thus, users can add additional information about a question or answer in order to help clarify. The last and most extreme option is for a user to flag a question. This allows the community to report questions that do not meet certain guidelines, such as potential academic misconduct issues. These flagged questions are then able to be reviewed by a moderator who can make the final decision on if the indicated response is acceptable or needs to be removed. With all of these features, community moderation plays a large role in the process. Thus, all of our intended expectations were not only met, but exceeded. We believe that this application could be easily incorporated into everyday use by UWF students in its current state, and we hope that the department would be willing to take a chance on our different approach to tutoring.

5. Software Evaluation

Based on the initial project plan, we implemented Aria for accessibility for impaired and disabled users throughout our web application. To ensure accessibility, we implemented the WAVE tool, an extension available on the Google Chrome Web Store that allows users to analyze web pages for accessibility issues and errors. The results of this analysis are detailed in our Accessibility Assessment. Additionally, we performed routine security evaluations for each sprint beginning after sprint 2. The results of these evaluations are outlined in the respective security evaluation document for each sprint.

6. Work to be Done

In the future, we would like to make some small adjustments to our final product. One of these would be fine tuning our CSS styling on each page to ensure that all aspects of the pages align properly based on screen size. We would also like to remove any unnecessary commented code that remains in our codebase and clean up and reorganize our Trello board. Additionally, we would like to finish any remaining testing of Angular components. Ultimately, we have accomplished all core components of our project, and all remaining work is not crucial, but is preferential.