Bi-Weekly Status Report #4

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Bi-Weekly Summary

Over the past two weeks, we focused on developing additional use cases and scenarios for our project, as well as deciding on certain aspects of our backend architecture. After meeting again with our faculty mentor, we are now in the process of determining the pros and cons of various databases for our file storage. We are also in the process of brainstorming how to get the various aspects of our project to intersect with our overall outcome / how our project will make the client's experience easier.

Accomplishments

Since the last bi-weekly report, we drafted design and architecture documents to describe our frontend and backend systems. While developing use cases, we also came up with some functional and non-functional requirements, as well as formulating business cases for each of our use cases. After meeting with our faculty mentor, we realized we need to come up with a more concrete plan for our database system.

Individual Contributions

Name	Contribution	Weekly Hours	Total Hours
Michael Davis	Worked on development in GoLang to familiarize myself with it. I connected a database in postgres to a server and I also got a post request working on a Go server. Worked with Zach in order to break down how we wanted the backend to be formed. We talked about the concurrent editing a bit as well as how we wanted the user file storage to work.	8, 8	58
Lily Krohn	Looked into alternative options for using Monaco editor with typescript, but lots of issues occur with this so we decided on just using regular javascript to implement this editor. Additionally, kept notes from faculty meetings regarding planning going forward. Discussed "orthogonal plane" with faculty mentor and brainstormed how to get our ideas to intersect with each other.	8, 8	58
Chris Lopez	Researched back end technologies and best tools for real time collaboration. Discussed with the team about direction of project implementation and how we want to handle features.	9, 6	61
Kyle Marek	Worked on implementing a basic homepage design for our web application. Looked into react redux as well as react-router to be used within our frontend. Thought about the use case for our	10, 8	68

	overall project and how to sell the idea in a business case.		
Zachary Mohling	Explored possible designs of the real-time collaborative editor, including a peer-to-peer approach. Continued researching internal mechanisms of git and studying the libgit2 API.	6, 6	62
Griffin Stout	Looked into source code for Theia, a different web-based IDE that uses monaco text editor. Got monaco editor (partially) working by implementing it with javascript instead of typescript, but this is just a bandaid. Uploaded all of our weekly notes with our advisor to the website, as well as other reports.	7, 8	64

Pending Issues

Name	Pending Issue
Michael Davis	Right now, I need to understand Redis a bit more along with libgit2 so I can design a good plan for data storage. I also need to understand concurrent editing a bit more.
Lily Krohn	Monaco will not be able to be implemented using typescript, so we will need to use javascript instead. Need to brush up on basic javascript skills and knowledge in order to do this.
Chris Lopez	Learn more about existing technologies and how we can implement them in our project.
Kyle Marek	Monaco text editor is difficult to fit into certain boundaries with css and we will have to figure out a better way to implement that.
Zachary Mohling	Kubernetes package manager, Helm, has recently upgraded to v3, and it's causing compatibility issues with other prospective tools like Skaffold and Istio
Griffin Stout	Don't fully understand how to implement monaco text editor. Need to do more research about React and typescript.

Plans

Name	Plan
Michael Davis	I am planning on creating a simple demo for concurrent editing just as a proof of concept. Afterwards I will work making a detailed design plan for utilizing redis and libgit2.
Lily Krohn	Develop a better full "story" in order to keep creating use cases for our project.

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	Also continue developing biography of sources we can cite in our next design document. Do a vanilla javascript tutorial in order to brush up on knowledge.
Chris Lopez	Help Zach create proof of concept for peer to peer design
Kyle Marek	Work on implementing a basic login/registration along with a homepage to be able to show a basic implementation of our project. Try to work on monaco text editor.
Zachary Mohling	Create a proof of concept for our peer-to-peer design
Griffin Stout	Continue delving into theia's documentation and source code to understand how to implement monaco text editor. Get a better understanding of React.