

WeCode

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Intro & Goal

WeCode is a web application with real-time code editor and voice and text communication, that also incorporates quick access to documentation. Our goal is to make WeCode the goto product for programmers to code and collaborate with ease. With WeCode, we hope to address the collaboration obstacles faced by programmers, such as merge conflicts and scheduling meetings.

Who's it for?

Programmers are our main target. As programmers ourselves we understand first-hand how this can change the way programmers collaborate. With a single code editor and real time communication, WeCode can change the way we program together.

Why build it?

From the beginning of our programming days, we are taught to live and breath the concept of pair-programming so with WeCode, we can effectively and efficiently do so. Furthermore, working in groups and communicating with each other is a guarantee thing in the industry.

Glossary of Terms

1. WebRTC: real-time communication with video conferencing.
2. In-Session: portion of WeCode that encapsulates the real-time communication and code editor
3. IFrame - A frame where you can put html on

System Architecture Overview

WebRTC - Real-time video and audio communication

Socket.io - Socket API incorporated with WebRTC to allows for multiple users.

Ace - API for the code editor

Node.js - Server API used for WeStudy

AngularJS - Javascript framework

Jade - Templates that work as HTML

Google Collaboration API - Real-time API used for the code editor

Requirements

Use Cases:

1. As a user, I can edit code with syntax highlighting.
2. As a user, I can see other people editing the file in real time.
3. As a user, I can work on a specific project from GitHub.
4. As a user, I can send(receive) instant messages to (from) other collaborators.
5. As a user, I can invite other people to collaborate on my code.
6. As a user, I can toggle the chat panel.
7. As a user, I can toggle the search panel.
8. As a user, I can mute my voice chat.
9. As a user, I can disable the camera.
10. As a user, I can toggle the attendee panel and be able to see all the attendees.
11. As a user, I can see all my project files and directories.
12. As a user, I can switch between files to code on.
13. As a user, if I click the search option, I can type ask a question and receive search results.

Prototyping and Test Cases

<https://github.ucsb.edu/CitrixNChill/WeStudy>

Appendixes:

WebRTC - Ace - Node.js - AngularJS - Jade - Socket.io - Google Realtime API - TogetherJS