Vision Statement

Team: Microsophons

Team Members:

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Project Description:

A collaborative IDE in the browser that allows multiple users to program together remotely.

What problem the project is solving?

It is hard for programmers to program and communicate together at the same time. Our project will show the result of the web code (JS/TS/HTML). Multiple files editing is allowed. Codes can also be shared through links on social networks.

Why the problem is important?

Everyday millions of programmers need to program, and most of them need some kind of collaboration, i.e. coding together. Since sometimes people are not able to meet and code face-to-face, it is very hard for them to remotely contribute real-time code for a certain project. This project provides a helpful solution for pair or multi-person programming remotely by allowing all users communicate and code real-time.

How the problem is solved today?

Use Github to see one's own change and other's change on the code. They need to use another application to communicate with others.
Github needs to resolve merge conflicts, but coding on this project directly won't have such problem.

Expected Project Outcome

The project will be able to allow two or more people to code together remotely. People can program and communicate at the same time. We will build in more features and develop more ways to do better than current code management system (e.g. Github). For example, we will allow users to save changes on the cloud, or share their code via social network.

Initial Project Milestones

First , we need to learn javascript, master the networking programming basics, and develop simple networking applications for practice.

By using this knowledge, then, we will try to achieve sending simple real-time messages between clients using javascript, as a foundation for further development.

Having established the simple communication framework, we will host Microsoft 'Monaco' editor in the browser, and set-up 1-1 communication tool. That being said, two people will be able to edit the same file together, and see other's cursor and change via real time communication of browsers.

How do you plan to articulate and design a solution?
- We will learn and absorb different APIs and languages, including HTML, CSS, JavaScript for frontend, MySQL for the database, Python, PHP, Ruby for the backend
- Use existing Monaco project as our editor control
- SignalR or Socket.IO for communication

Overview the process model you will employ to achieve the milestones

We will use agile software development model. We will also have daily scrums, in order to move forward a little by a little everyday. We will meeting our mentors weekly to ask them questions that occur during each week. Our team members also have a weekly meeting so that we can code together and discuss in a more efficient way.