Due to my poor English, please let me know if you are confused about some content.

Type: Web Application

Basic functions:

Register

Login

Modify personal information

Text chatting

Other basic web functions

Type of users: teachers students

Teacher: make plans, assign tasks, look through the code, make groups of students, coding, check tasks and process, set permissions for project ...

Student:make plans, get tasks, coding, look through code, modify status of tasks ...

All user: search resources, get complete codes from a project, real-coding with each other...

Story:

Group work:

A teacher can divide students into n groups and assign the project for them, then the teacher have permissions to assign tasks for every project and can manage students' permissions to read and edit files. For instant, the teacher can let A student only look through a file or only modify one file. Teacher can make a plan for every project which can be export as ics file. Teachers can assign roles to students or students themselves such as leader,developer and so on. The plan will describe the whole project but not for certain person. And the student will get the result about group and project, plan. Students can set their own plan for themselves. When they finish one task, they can submit the code and store it as a tag(version control). when the whole project have been finished, the leader(if there is) will change the status of project into finish then the teacher will accept the message and give marks.

Personal work:

A teacher can publish same project or question to all students and set a series of tasks. When students finish one task, they modify the status. Finally, after the deadline, the status can not be changed and the teacher can give marks.

I have a friend who study CS in US. He always finished his homework on a Linux virtual machine which is assigned by university. Therefore, Can we build a bridge between the platform and the tester(OS) when students submit their work, they can get result fast? I have no idea about the workload and if I can finish it.

Common functions:

Some functions in collaborative programming need to be implemented such as marking the file being edited, checking the parts of project according to permission, version control, anti-conflict file.

Question:

1. Run code or not?

The design of platform just is used to finish the collaborative programming, but if it can not run it, it is not convenient for developers. However, if it allows to run code, the performance and other questions happened.

1. Two individuals edit same file at same time.

Should two people be prohibited from editing the same file or creating branches to each participant?

1. Websocket

Now I just find websocket can implement real-time coding in a web site.

1. How to let students fill in the real task progress?
2. Do you need a background administrator?

In fact, in past time, my website is built on Tencent cloud server. I always use a server management software called Linux—Bt and phpmysql to manage the website background and database.

1. UI only for computer?

Because the main function of the platform is to code with other in a real-time way, few mobile devices except laptop will be used to develop programming, I would like to design UI only for computer.