COLLEGE CODING EDITOR

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ABSTRACT

In most of the coding practical lab in colleges there are more than 30-40 students writing or practicing their codes on their PC. There is a single invigilator to keep an eye on the students. the invigilator has to go to individual students to check their code to clarify their doubts. To check 20 students individually is a very tedious job for the invigilator. To solve all the problems we proposed Coding Class Editor on Cloud Computing project. In this project we have two desktop applications. One for the invigilator and one For the Students. Both the applications are connected over the Cloud Computing. This application also has a messenger inbuilt in them. The invigilator gives the assignment or the coding problems through his application to the students. The students solve the problem and submit it to the invigilator through their application. This helps the invigilator to review code and clarify the doubts of the students with the help of messenger without going to them individually.

Keyword : - *Code Editor, Cloud Computing, Websocket, Messenger.*

1. INTRODUCTION

We are living in an era where we can do everything using technology. From having an own personal assistant to sending cars to space. But even in this time we are still using that same old teaching methodology to conduct classes in coding practical labs. We know it is practically very tedious for the lecturer or invigilator, to review given assignments to the students. As a result of this the lecturer is not able to give attention to each student and due to this their doubts, problems do not get clarified which affects the development of the Coding Skill of the Students. In this work, we propose a Coding Class Editor on Cloud Computing. This is achieved by using Cloud, which is nowadays readily available in practical labs. In this project we have two desktop applications. One for the invigilator and one For the Students. Both the applications are connected over the Cloud.

This application also has a messenger inbuilt in them. The invigilator gives the assignment or the coding problems through his application to the students. The students solve the problem and submit it to the invigilator through their application. This helps the invigilator to review code and clarify the doubts of the students with the help of messenger without going to them individually.

2. OBJECTIVES

- The invigilator gives the assignment or the coding problems through his application to the students.
- The students solve the problem and submit it to the invigilator through their application.

- This helps the invigilator to review code and clarify the doubts of the students.
- With the help of messenger the invigilator and student can clarify their doubt about programs/problems.

3. LITERATURE REVIEW

There are already many applications available for coding editors for different languages which are usually based on cloud computing. Our literature review focuses on the research works on Cloud Computing, Real-time Code Editor Application for Collaborative Programming which were published in Elsevier.Springer, ACM Digital Library, IEEE Digital Library etc. We discussed a few related works on this in the following.

Aditya Kurniawan, Aditya Kurniawan , Christine Soesanto , Joe Erik Carla Wijaya purpose a real-time code editor application using web socket technology to help users collaborate while working on the project. Their application provides a feature where users can collaborate on a project in real-time. The authors use analysis methodology which involves conducting a study of the current code editor applications, distributing questionnaires and conducting literature study. CodeR is a web application that provides workspace to write, perform, display the results of the code through the terminal, and collaborate with other users in real-time. The application's main features are providing workspace to make, execute and build the source code, real-time collaboration, chat, and build the terminal. Their application supports C, C++, and Java programming languages.

Warangkhana Kimpan, Theerasak Meebunrot, Busaya Sricharoen proposed the Online Code Editor that was created for programmers or developers who want to write programs without any platform requirements or without any specific physical computers. It is based on a web application running on Private cloud computing. The features of the editor are performed on web programming languages, e.g. HTML, PHP, CSS, and JavaScript. The editor is able to isolate programming languages by highlighting syntax of programs. Users can create new projects and files, import and export files that they want on a server. Moreover, Save, Auto save, Delete, etc. are the additional functions of the editor. The text editor development, the open source software called "Ace" was used for some functions such as Undo, Redo, and Syntax highlight. The experimental results indicated that the proposed editor can be practically used on Private cloud computing. Moreover, the comparison of the features among the proposed editor running on Private cloud, Notepad++, and EditPlus which running on personal computers, was summarized.

There are lots of coding editors available on cloud computing. With the help of above research we proposed Coding Class Editor on Cloud Computing project. In this project we have two desktop applications. One for the invigilator and one For the Students. Both the applications are connected over the server cloud. This application also has a messenger inbuilt in them. The invigilator gives the assignment or the coding problems through his application to the students. The students solve the problem and submit it to the invigilator through their application. This helps the invigilator to review code and clarify the doubts of the students with the help of messenger without going to them individually.

4. PROPOSED SYSTEM

There is a single invigilator to keep an eye on the students during practical exams. The invigilator has to go to individual students to check their code to clarify their doubts. Moreover those students who complete their practical early have to wait for the exam to get over. The following are the features of the project.

I.   This application helps to create and see the result of the executed source code by terminal.

II.   Every student and teacher can chat globally through the global chat option.

III.   The teacher can see the code of all the students present in the class.

IV.   Teachers can also clear doubts of students through one to one or private chat applications.

V.   It will support C, C++, JAVA, PYTHON, etc programming languages.

Workflow Diagram

       The Coding Class Editor is basically divided into two modules, first for the teacher and second for the student. Their working diagrams are as follows.
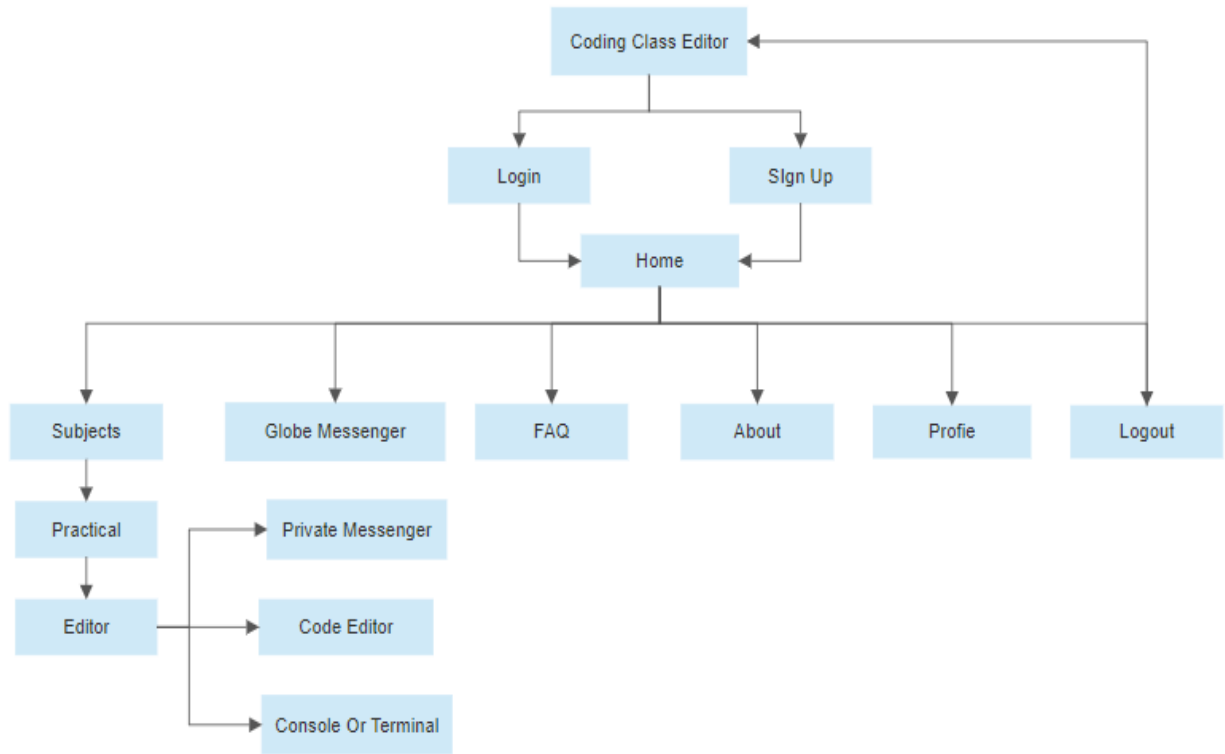

Fig -1: Workflow Diagram

5. CONCLUSIONS

       The main features of the application is to provide workspace to create, execute and build the source code, real-time collaboration between teacher and all students, chat and build the terminal to execute code.

       Helps the teacher view the code on their computer screen without having to go to each student's computer screen.

6. FUTURE SCOPE

       Currently we are developing the project for those who are not disabled. But in the future we will build Voice Recognition to convert speech into code. Which helps disabled people to write code.

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