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A Review On Designing Of Web Application Collaborator

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Abstract: ***Nowadays, everyone is moving towards virtual platforms. We commonly utilize Internet, in the web world everything is available on web. During the covid-pandemic we shifted completely virtually, starting from education, IT industries or the government work. In this virtual meets we came across a problem of tab switching which sometimes consumes lot of time it takes time to load the screen. Our project is basically designed for the educational purpose.***
In this project the main focus is on the IT students. Here we are developing the web application which is a collaboration of online compliers and along with video conferring feature. Using this application we can easily write, debug and run the program. This will help in using both the application simultaneously on the same screen. By creating this web application, we are using compiler for codes written in different programming languages like C, C++, java, python etc.
Keywords: Collaborator, online compilers, online education, Covid-19

I. INTRODUCTION

In recent world everyone are connected by technology. People nowadays use web application which will make work easier and faster. During covid pandemic many countries have ordered the educational institutions to close. Online education is thus, considered as the solution to save academic activities. By moving towards online teaching technologies, teachers and students were inspired to challenge and explore new view of teaching-learning approaches. Many students have experienced this online learning for the first time. Teachers and students have accepted the change and are engaged and motivated in the virtual classroom is the objective of online education. The use of online- based platforms is the solution to the learning process continues to run smoothly. The change brought by digital applications, and platforms has adapted our teaching techniques, where teachers had to either completely discard traditional methods or adjust them in significant ways.

Virtual meetings by online applications provide many benefits, especially through video conferencing which makes the learning process efficient, practical, and safe. With the video conferencing can assist a sense of togetherness and have interactive communication. Online learning is the alternative that can is used as a learning medium during a pandemic. With advancements in communication technology, now we are having effective methods of communication. Technology has made it possible for the communication with many people from anywhere in the world today.

II. LITERATURE SURVEY

A. Collaborator: The new outbreak of online education.

The use of digital tools for teaching and learning has become essential during this pandemic. Use of video conferencing platforms like Google Meet, Zoom and WebEx become organize, due to their screen sharing, uploading files and simultaneous learning features. To come up with the new feature of combining two web application there is a purpose of Collaborator i.e combining of Online Compiler and video conferencing feature. Our application is basically a complementary platform which will provide you a best user experience containing compiler, screen sharing and video conferencing option in one. We use Compilers to run the program in text format and convert them into executable format. Compiler is a software having ability to converts source code into object code as it convert high-level language to low-level and machine language. It converts source code into executable files.

In the web based application we can use it from any network connection which is platform independent. The main aim of developing an online compiler is to reduce the problem of movability of storage and space by making use of cloud computing.

Evolution took place in the history of video conferencing-

Video conferencing techniques will no longer be available for the companies as it will be the most important requirement for the companies which wish to stay relevant. Currently after covid pandemic there are 70% employees around the globe who use video conferencing for their stakes. The remaining 30% still follow the traditional methods for connecting with the communities but this 30% will no longer be in their traditional form.

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There are many existing platforms which provide video conferencing techniques to the users some of them are listed below-

1) *Skype:* Skype is a video calling app which is intended for making audio and video calls and also provides a facility to exchange text messages & files over the internet. The first version of Skype software was launched in 2003. Since then it has gained popularity among the users. It is one of the first sites to introduce VoIP technology.
2) *Cisco Web-ex Meeting:* Cisco Web-ex is an adaptable audio and video conferencing solution for the companies and organizations of all departments. This application can host several meetings at the same time without giving any kind of problems. It provides users a real-time experience.
3) *Google Meet:* G-meet is a Google developed video-conference service. It's one of the two applicants that take the place of Google Hangouts, and can chat to one another on Google Chat.

III. PROPOSED METHODOLOGY

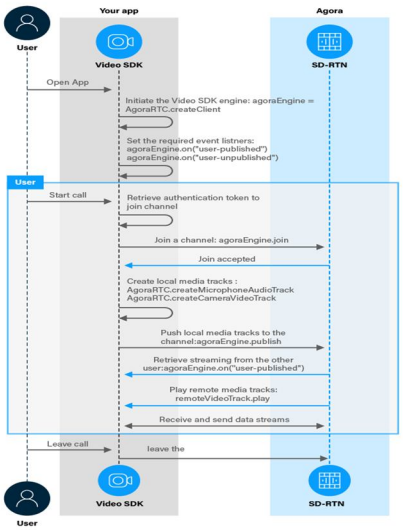
The quantitative technique is the most appropriate strategy for this research since it helps to uncover elements that affect an outcome (Covid-19) and evaluate the elements that affect students' adoption of Collaborator. The model constructs performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC)—will be looked at in this study to understand how they will affect students' adoption of Collaborator. Based on the student's perceptions, this exploratory study will concentrate on the mean value and standard deviation of the aforementioned constructs. In order to do more research on this application a survey was taken among professors of G. H. Raisoni College of Engineering, Nagpur. They all have used the web application on their ends and found it more useful than all the other existing applications present in the market for example-Google Meet, WebEx, Online GDB, Programiz, etc. They have observed the ease with which their work has been done before. They personally liked the user interface and the customization of the web app.

A. Agora

Here, utilizing the popular web application platform Agora, we're creating a web application that integrates online collaboration-video conferencing and chat. Rich in-app experiences can be delivered by developers using a platform that combines video, audio and simultaneous live streaming. Additionally, it has a real-time messaging platform, live interactive streaming, built-in voice chat, real-time recording and video chat. It is simple to write, debug and run programs thanks to the Piston API. This makes it possible to use two applications at once on the same screen. Compilers are used to create the code for this online application, which was developed in a variety of programming languages, including C, C++, JavaScript, Python, and Java.

B. Piston API

Piston is a powerful general-purpose code execution engine that specializes at running dubious and potentially hazardous programs without concern for negative effects. It has a Node.js API inside a container that receives execution requests and securely executes them inside. Its primary sandboxing mechanism is Docker. In summary, the API creates a temporary directory in /piston/jobs for each source code file. For languages like C, C++, C#, and Go, source files are either executed directly or compiled before being run.





IV. SYSTEM FRAMEWORK

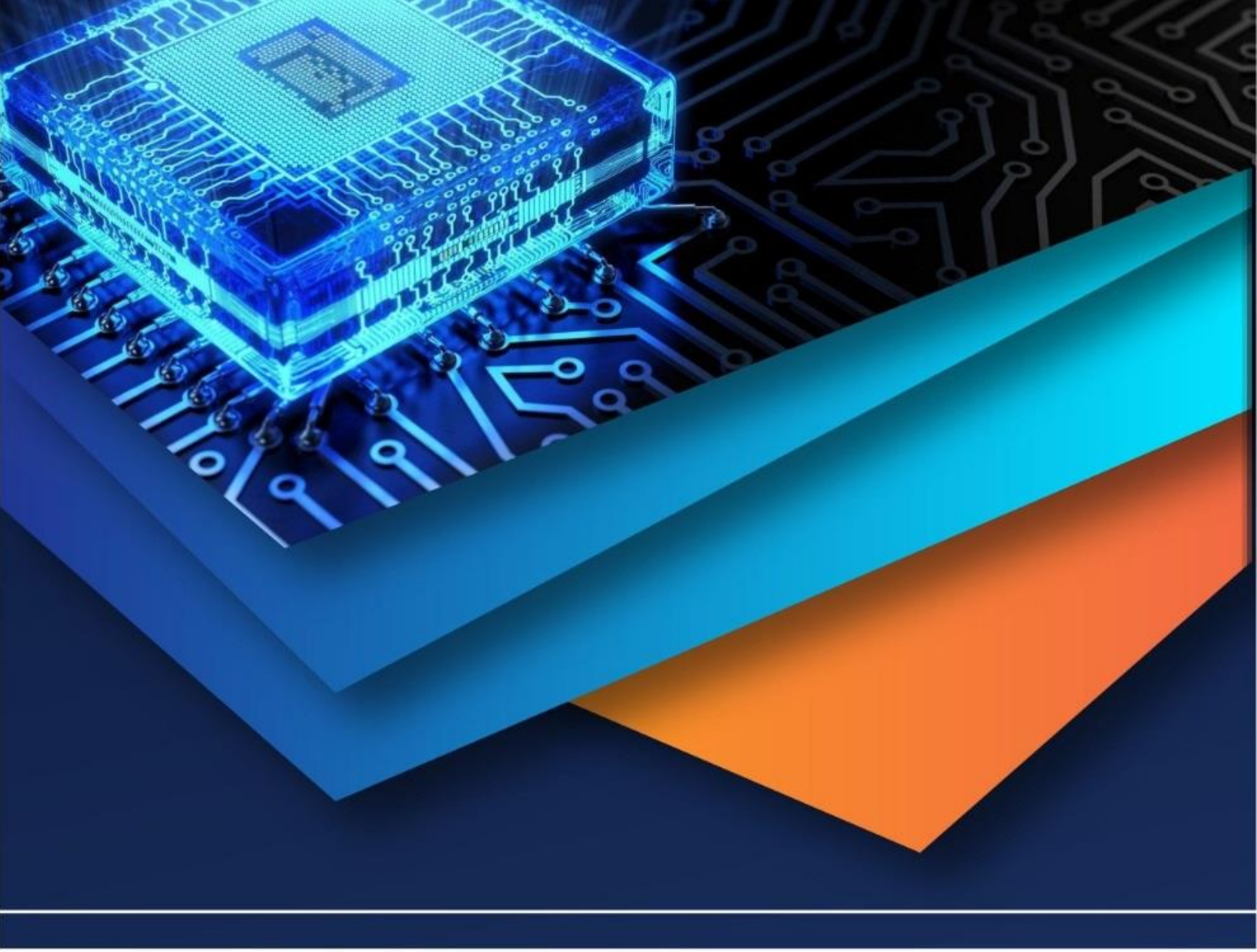
1) *Save:* Save help you save your activities and records. These projects are stored in the project database and the file database.
2) *Compile:* Compile allows you to invoke the compiler to record your code. Compilation results are displayed.
3) *Run:* Run helps you run the accumulated code. This shows the output to the student.
4) *Debug:* Debug allows you to insert breakpoint in your code for eventual debugging purpose.

V. CONCLUSION

Thus, our web application provides the use of online compiler and video – chatting simultaneously in a single browser tab. This helps saving time and abate inconvenience caused while switching tabs, ultimately providing great user experience.
With the rapid increase in technology the video conferencing is the convenient way to communicate with people.

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