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Online Compiler with Whiteboard

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Abstract: ***The Internet has proved to be a life-changing invention of our time. Not only it is itself an invention, but it has been the key player to major things that have been invented in the twentieth century. The internet has proven itself in re-inventing almost everything, with education being no exception to it. CodeBox is also an effort, via the internet, to educate the young minds on the how-tos of coding and developing the spirit of competitive coding. It takes a lot of time and practice to get good at coding, and CodeBox aims to assist the user in this journey. In other code editors they offer facility to run languages which includes HTML, CSS, JAVASCRIPT. This Languages are web based totally languages the ones code editors are permit to run the programming languages that's why programmers face many difficulties to run programming languages which include JAVA, php and many others. but in our venture, we add programming language which is java .by way of the usage of server-primarily based code editor programmer can run programming language i.e., JAVA. The project: "Quiz utility" is a set of quantity of different forms of quizzes like technical, video games, sports, etc. A person can access/play all the quiz and may try any of the only. There could be restrained number of questions and for every correct solution person will get a credit score.***
Keyword: Web application, Database, Web server, Private cloud, Coding, Internet, Learning, Practice, IDE, Problem Solving, etc.

I. INTRODUCTION

The technological development trend in software engineering has been improving, where the design of software began move from the desktop to the web. Nowadays, many IDE (Integrated Development Environment) application has been made, such as Eclipse, Visual Studio, etc. but IDEs which based on desktop still have significant disadvantages such as long time for configuration and installing the plug-in needed for IDE to run the project. This problem could be a huge waste of time when there are many devices that have to be configured Many software applications have been run in the cloud, and use a web browser as a user interface that allows ubiquitous access, instant collaboration, and avoid installation and configuration on desktop computers one of the technologies used for instant collaboration is single IDE (like pair programming) Pair programming is the practice of having two programmers' access and work on the same code in a single development environment in pair programming programmers have the abilities to create, edit and delete source code in real time.

Coide is designed for coding practice and development, Coide gives code challenges and publications aimed toward helping you put together for process interviews. Codie offers more than 50+ exercise troubles to its programmer network. character challenges in subjects like algorithms, database systems, and dynamic programming accompany entire have a look at plans.

Code Box, as the name suggests is an e-learning web app which will primarily focus on providing a platform where students and coding enthusiasts can learn the basics of programming through smart modules. The soul goal of Code box is to provide a learning medium for the teachers, students, and all those who are keen to learn and enhance their coding skills. Moreover, to make the learning easy and fast, Code box itself provides modules for learning and developing new skills about the different programming languages. It will also focus on making it easy for students of non-technical background to learn coding from scratch. In the field of competitive programming Code box provides a great way to showcase the students problem-solving skills, which is certainly something a lot of companies look for. Code Box will focus on giving users the required data to learn the basic skills of programming, and then eventually on enhancing the skills required for competitive programming and give the users a sense of the realworld competition. A coding platform is a type of hardware, on which programmers code. It is a particular operating system or even a custom environment that's pre-built and designed to allow the easy creation of digital products. Coding platforms are also extensively used in Hackathons to conduct scalable campus hiring drives and identify the best tech talent. A coding platform also helps in evaluating potential hires' knowledge of tools, frameworks, libraries and hands-on experience of the required skill or technology. A coding platform provides a comprehensive coding assessment environment for coders. These platforms come integrated with role-based simulators, in-built question libraries, digital notepads and more features for a holistic experience. An application platform, for example, consists of hardware, an OS and coordinating programs that use the instruction set for a particular processor or microprocessor.

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II. LITERATURE REVIEW

Code Editor In [1] paper the writer stated server-primarily based totally code editor is created to run multiple programming in addition to internet based absolutely languages, and presents the features create record, assemble, and run file were created to make this editor complete [1]. The effect of data and communique generation (ICT) has prompted coaching and studying strategies [1]; in particular, it has enabled getting to know by manner of electronic media (e-gaining knowledge of).

Wenli Looi's paper on Analysis of Code Submissions in Competitive Programming Contests[2] analyzes contest submissions on Codeforces, a preferred competitive programming website where participants solve about 5 to 10 algorithmic problems in a standard contest. Though it didn't achieve the accuracy as expected, the GDA model was easier to understand and allowed to detect and point out particular differences in coding techniques between programmers of different ranks and countries[2].

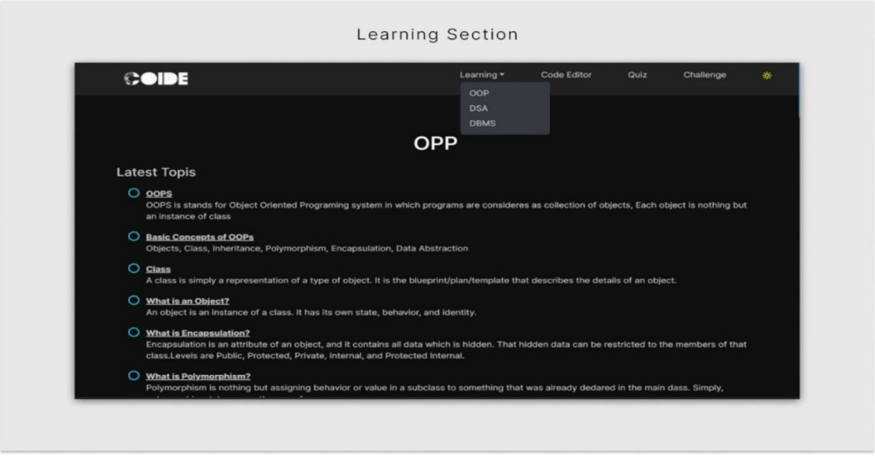
S. Wasik et al attempted to review The Online Judge Systems[3], Online judges are systems designed for the reliable evaluation of algorithm source code submitted by users, which is next compiled and tested in a homogeneous environment. The study stated that online judge systems, integrated by crowdsourcing concepts, usually played a vital role in accurately and efficiently solving complex industrial- and science-driven problems[3].

In [4] paper affords a cloud based totally integrated development environment (Cloud IDE) for embedded systems based absolutely on open-source solutions that has the capability to ease some of those burdens. In contrast to current solutions, it supports flashing and debugging of a goal board attached to the local host computer whereas, the entire improvement takes region in a cloud environment [4]. The purpose of this have a look at is to contribute to the information of the way usability is treated in product development exercise. It has a descriptive as well as a normative aspect (cf. Moenaert et al., 2010): to attain insight into how product improvement groups in large-scale multinationals address usability in the present day practice of product improvement. the second one - normative - purpose of the take a look at is to evaluate what factors in product development have an impact on the usability of merchandise either positively or negatively [2].

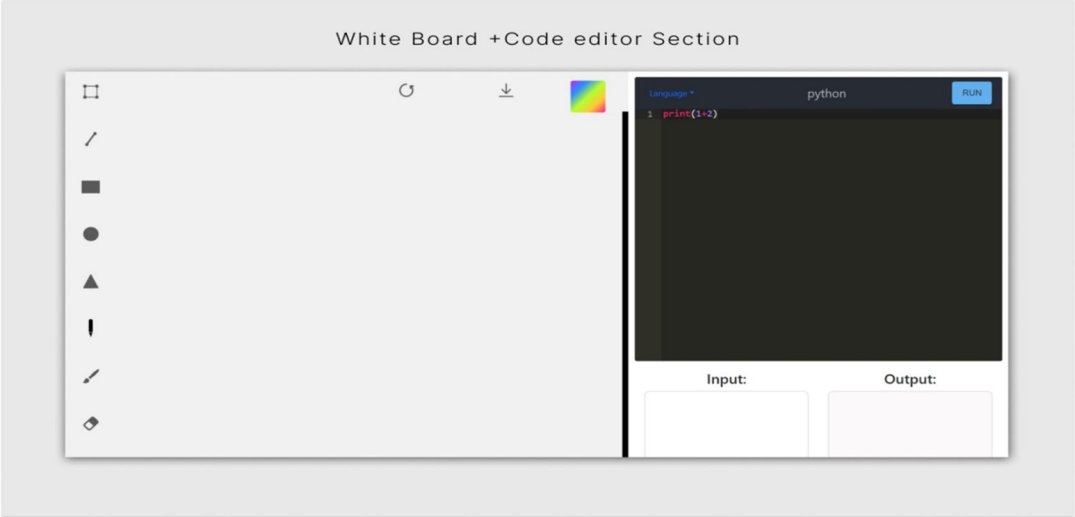
A. Proposed Methodology

The method for web site advent includes the steps of evaluation, making plans, content, layout, Programming, testing.when developing an internet site, you must begin to respond to a very particular set of questions so that it will basically make clear and outline the present expectations across the net utility and interplay that will be generated. The product will provide easy compilation and execution of code. Generally developer need to write programs for different languages for different purpose and need to compile as well as execute such a programs , get the output anytime and anywhere. Solution to their requirement is Web Based IDE.

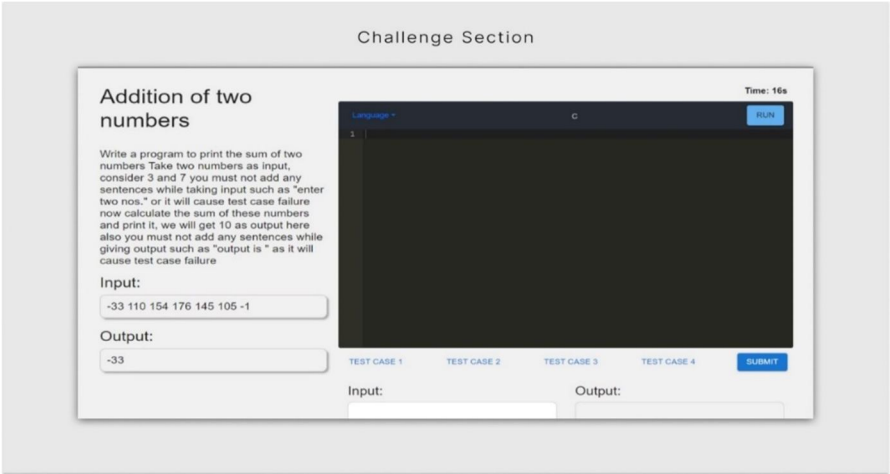
1) *Learning Section:* Learning section provide or consist of all the cheat sheet and interview base important topics related to the core subjects with provide brief explanation at a short time which make user ready for their interview or exam very easily. It contains well written, well thought and well explained computer science and programming notes. In the learning section we mention the all core subjects notes like DBMS, OOP's, DSA. Web based learning and classes are continuously turning out to be essential for the training framework around the world. Online channel has made instruction appropriate and effectively open by every last one. Instruction area in India has been a consistently increment article. India has been one of the significant areas on the planet when it identified with advanced education. Anyway on the web and distance courses have been there from quite a while, presentation of the online method of taking classes in judgment to the conventional eye to eye homeroom strategy in colleges and universities have been estimated uniquely in the last not many past years in India.



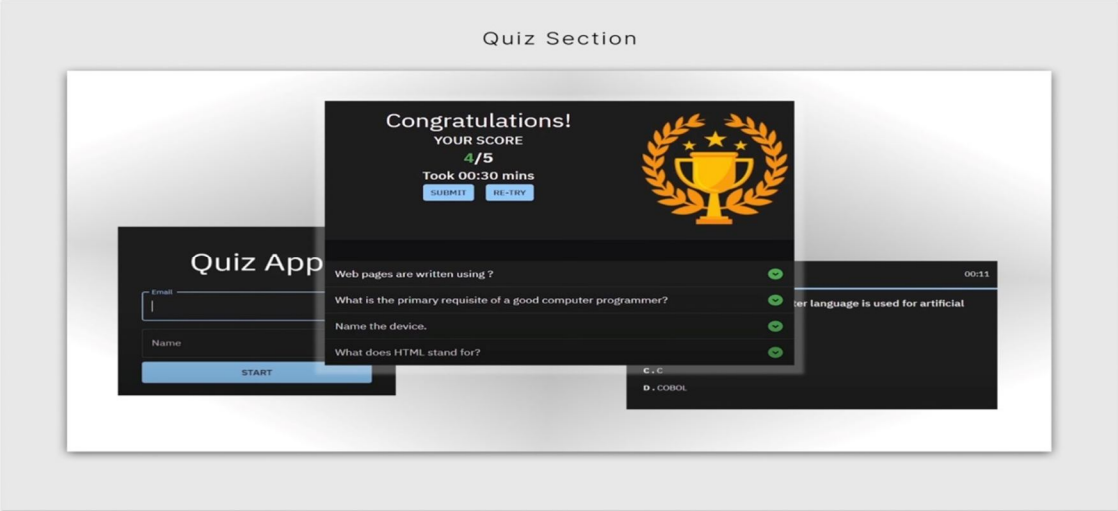
2) *Online Coding Platform with Whiteboard:* Here you can test your progress by giving mock test. This is for practice *purpose*. After giving test result will be on user's mail. Introduction to coding courses typically cover lines of code, algorithm development, simple sequences, arithmetic tasks, asynchronous tasks, function blocks, and low-level languages. Depending on the course, you will learn basic Python, JavaScript, HTML, or CSS. Whiteboards are a helpful tool for group discussions and collaboration but can be ineffective for remote team members calling in over a video conference call. Often the camera has to be turned to awkward angles to view the whiteboard and meeting participants in the room may be partially or fully obstructing the camera's view. Even if you can view the whiteboard you may still only see the presenter's back. Whiteboarding removes barriers from your brainstorming sessions and makes it easy for anyone to just pick up dry-erase marker and start illustrating ideas. Online meeting participants can see the live whiteboard just like any other presentation, and meeting moderators can easily record the meeting and access a full timeline presentation of the whiteboarding session to share in a recap or host for future reference.



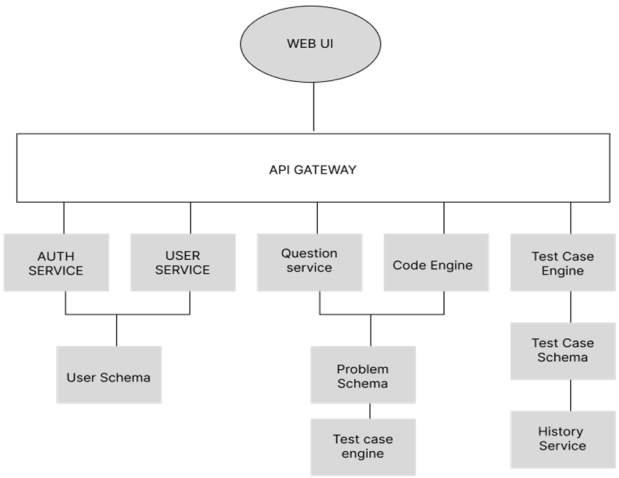
3) *Interactive Coding Section:* Interactive Coding Section provide you both the compiler as well as whiteboard section at same window which make user to work faster and easily. its online compiler and debugging tool which allows you to compile source code and execute it online in different programming languages. In theoretical computer science interactive communication models are studied within the area of communication complexity. While communication complexity can be viewed as a direct extension of the study of non-interactive communication models which were discussed in the previous section, its development has been largely disjoint from the development of information theory, and the areas have not reconnected until fairly recently. The discussion so far focused on coding for interactive computing over a noiseless binary channel. In this section we will focus on error-correction problems when the channel contains random or adversarial noise.



4) *Quiz Section:* Quiz section where you can get topics wise quizzes which are related to technical subjects (Like OOPS, DSA, C, SQL. etc.) and quiz like pseudo–Codes Basic Questions etc. For ex- First you completed searching algo from DSA section and you want to test your knowledge related to it. So, you can come at quiz section and give the test. Taking **quizzes** Here are a few teaching and learning principles we have seen work particularly well for **quiz sections** at UW. The Quiz is a very powerful activity that can meet many teaching needs, from simple, multiple-choice knowledge tests to complex, self-assessment tasks with detailed feedback. Questions are created and stored separately in a Question bank and can be reused in different quizzes. When creating a Quiz you can either make the questions first and add them to the Quiz, or add a Quiz activity (as below) and create the questions as you go along.



5) *System Description:* Coding platform is a technology that focuses on competitive programming challenges among the students in college. The programming challenges can be solved in a variety of programming languages like C, C++, Python, Java. On the student's side, when a student submits a solution to a programming challenge, their submission is scored on the accuracy of their output. Students are then ranked on the leaderboard and earn badges based on their accomplishments to drive competition among students. The most important part of this system is that it shows the students their strengths and weakness based on their performance, which helps them develop accordingly. Faculties can update problems with test cases anytime and assign tasks to students and also conduct semester practical examinations in this platform. fig.



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III.CONCLUSION

A Coding Platform for students may sound as simple as any online IDE's having the same functionalities. But this project, upon implementation and regular maintenance, would have a significant and drastic change towards their career preparation. This would rapidly increase the number of placements happening and would enhance the pool of skilled resources in the college. A panel of staffs could be given the responsibility of managing this project and the project can be extended to be developed as a full-scale product. Hence, technical placement training by outside vendors can be eliminated in a step-by-step manner.

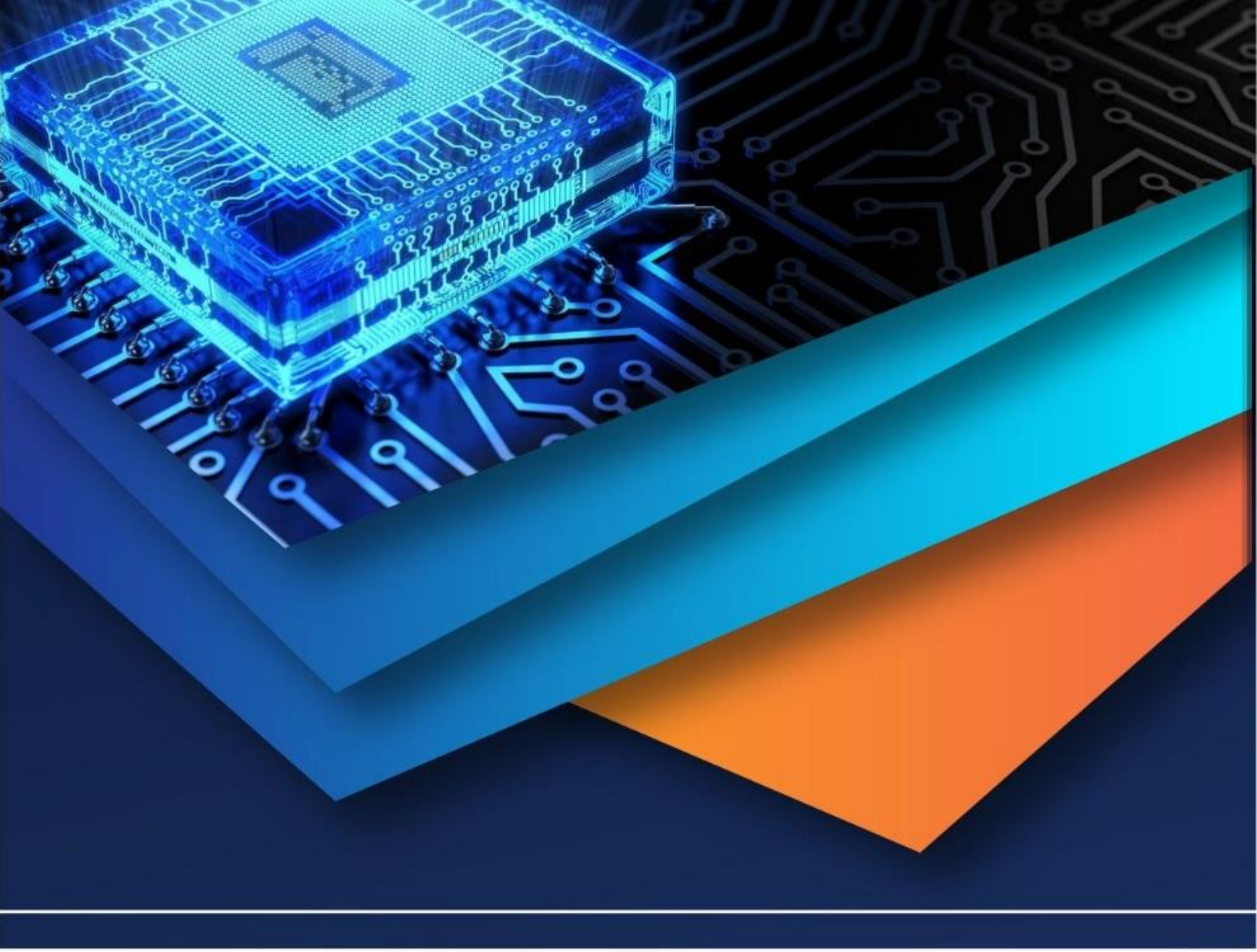
IV. ACKNOWLEDGEMENT

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