Guidance based placement preparation process for the students

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Abstract: Guidance based placement preparation process for the students is to provide all the necessary features or factors which are required for the preparation of a placement drive like aptitude questions of different topics, coding tests and various logical and verbal reasoning questions in one place. Candidates can simply log in to this platform and practice aptitude questions of various topics and also enhance their coding skills by using the online compilers of different programming languages available on this platform. This is a basic web-App which can be accessed through Computer or laptops and obviously with mobile phones. The required hardware and software are freely available and easy to work with. Placement Preparation Platform, as described above, will lead to error-free, secure, reliable and easy to manage system for the preparation of the placement drives. It will assist the users or candidates to focus on their preparation and progress rather than focusing on switching to different platforms for every other thing. Thus, it will help organization in better utilization of resources. The organization can put various questions and update the questions accordingly. The aim is to provide rather user-friendly platform where candidates can complete all the preparations regarding placement and also organizations can train their students without worrying about switching platforms and faculties can focus more on the study-material they provide. This proposed project will provide the platform where faculties can train their students for placement drives by setting questions according to their strategy and conducting various tests. Faculties can also set aptitude questions and also coding questions along with various testcases to test the efficacy of the code. Key feature of the proposed platform is that candidates can take tests and practice coding at any time in the duration set by the faculty.

Index Terms **- Management system, Placement, Aptitude, Web-App, Platform.**

I. INTRODUCTION

As we all know, majority of us study and prepare for the biggest and most important goal of the life that is getting a good job in an esteemed firm. Hence, getting a job after completing graduation is of paramount importance. For getting a job through campus drives or off-campus drives one has to go through the recruitment process which includes aptitude tests, verbal ability tests and coding tests. In order to be better prepared for all the aforementioned subjects one has to practice regularly on various platforms. In current scenario, where everything has gone online and people are working from home, and also students are learning via online classes conducted by the institutes, faculties are providing placement preparation materials and also conducting online test sessions regarding placement. But the problem in this kind of test sessions is that faculties are not able to monitor all the students who are taking tests and not all the students participate actively. Many students take screenshots of the questions and solve it afterwards without any time constraints and therefore they are not getting prepared for the real test situation where there will be the pressure of time. Being the students, having faced all these issues during our placement preparation, we will try to solve the aforementioned issues and make the process of placement preparation hassle-free by creating this platform.

This (Placement Preparation Platform) proposed project will provide the platform where faculties can train their students for placement drives by setting questions according to their strategy and conducting various tests. Faculties can also set aptitude questions and also coding questions along with various testcases to test the efficacy of the code. This proposed platform will provide the report of student performance to the faculties. Key feature of the proposed platform is that candidates can take tests and practice coding at any time in the duration set by the faculty In this System user can login as faculty or as a student. Based on the role user will direct to different dashboards. Here students can participate in various activities such as attempting quizzes and practicing coding questions. Whenever student writes code in the code editor and clicks on the submit button, a request will be sent to the server where the user written code will be run against all the testcases provide by the faculty and then the user written code will be stored into the database and response will be sent to the browser (client)

II. EXISTING DESIGN

II.I: Soumyajit Dutta and Biswarup Banerjee have developed an edtech platform called NextVAC, [4] where one of the most innovative features is the automated code evaluation tool. A recent study has showed up that 95% of computer science engineering graduates are unable to code simple programs. Also, several other contemporary news reports have shown that India lacks skilled computer science graduates. The prime reason behind such situations in India is that the way coding is taught in school is not hands on. It is more about teacher teaching theories and students studying just to pass the examinations. Punit Jajodia and team, At Programiz, they're all about removing barriers that beginner programmers face when learning to code. One of those barriers is the lack of a computer to program on. Many of us are lucky enough to have access to a computer at an early age and grow our interest in them, but most people don't have that access. In Punit Jajodia's own country Nepal, many people in the poorest parts of the country still don't have access to computers. Forget about personal computers, most students don't even have access to computer labs

II.II: LIMITATIONS IN EXISTING DESIGN

In the different systems we saw above in the survey of the existing systems, in the first paper [1] the system's compiler has lots of shortcomings and loopholes. The most pressing issue is that whenever someone writes a code which runs infinite number of times such as infinite loops then the system does not tackle this issue which renders all the resources exhausted. Other limitation or the problem with this system is that it does not have any protection against any user-injected malicious code which compromises the user written code as well as the user's credentials. Also, the user interface is substandard and makes the user experience quite cumbersome. In the other system, in the second paper [2] the system lacks various features such as automated code evaluation judge and it does not have any test feature to conduct the tests of the students. It is just a simple compiler which supports only three basic languages such as Python, Java, C, C++.
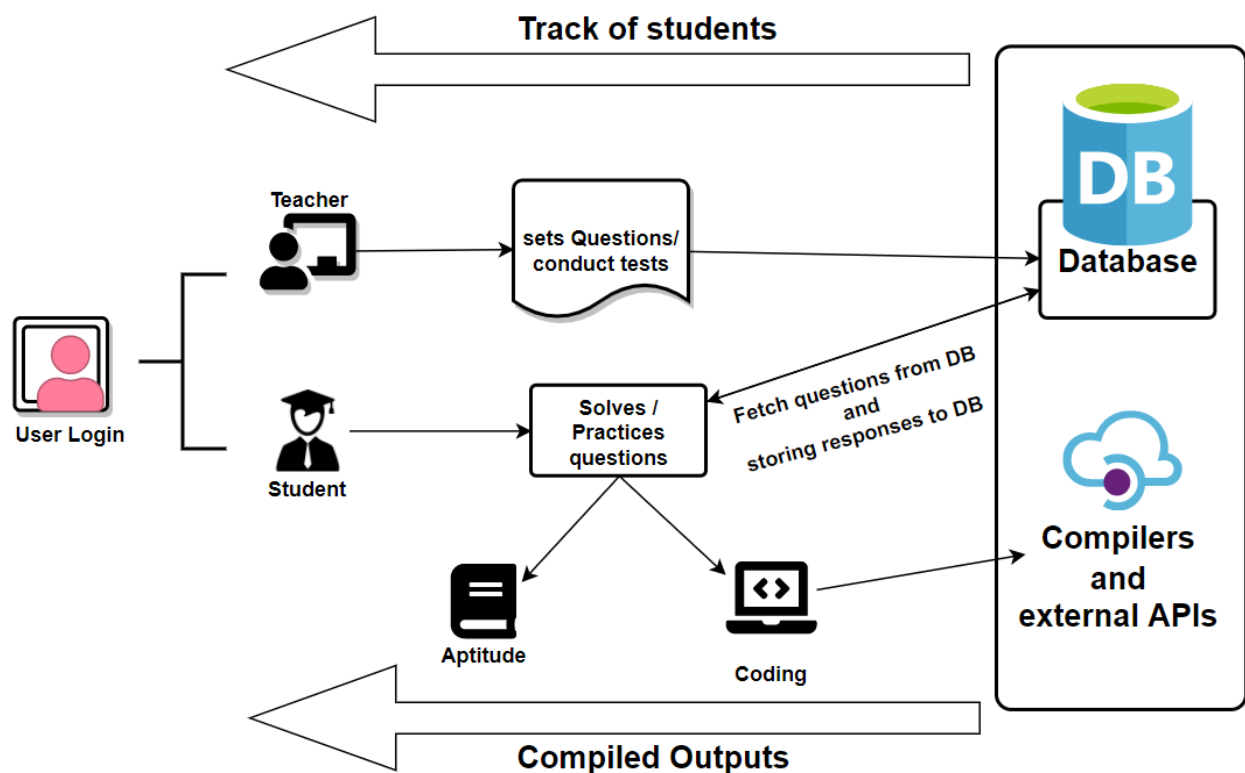
III. PROPOSED SYSTEM AND IMPLEMENTATION

Figure no:1 – System Architecture and work-flow

III.I: SYSTEM ARCHITECTURE

In this System user can login as faculty or as a student. Based on the role user will direct to different dashboards. Here students can participate in various activities such as attempting quizzes and practicing coding questions. Whenever student writes code in the code editor [6] and clicks on the submit button, a request will be sent to the server where the user written code will be run against all the testcases provide by the faculty [5] and then the user written code will be stored into the database [7] and response will be sent to the browser (client).

III.II: FRAMEWORK

This Guidance based placement preparation platform for the students system greatly simplifies the process of conducting coding and aptitude tests. This system will prominently relieve the faculties' burden, as the entire method of conducting tests is computerized. Once the test is completed by students, faculties and students both can view their results. Apart from taking tests

students can also practice various aptitude and coding questions provided by faculties any time even on their smartphones. Whenever faculty post any questions or any test the students will be notified about the same.
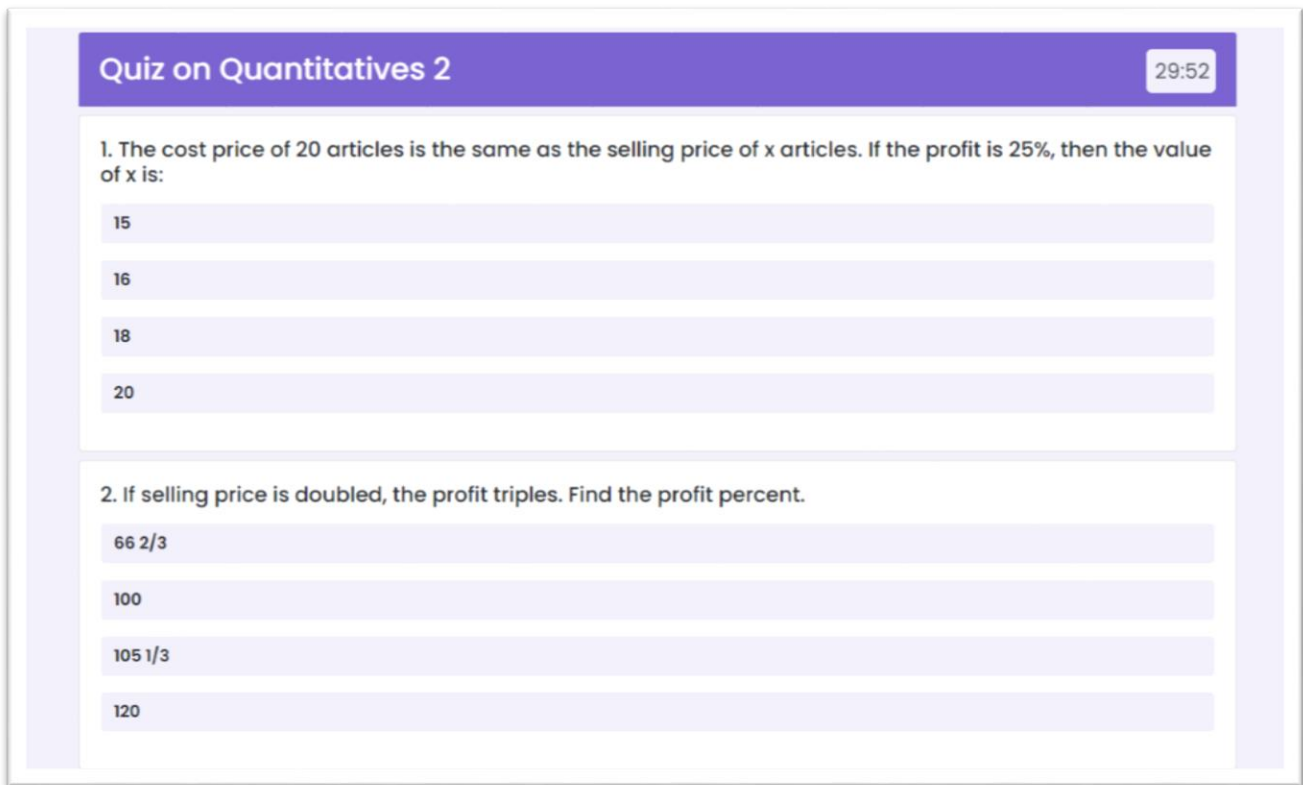
IV. RESULTS AND OUTPUTS
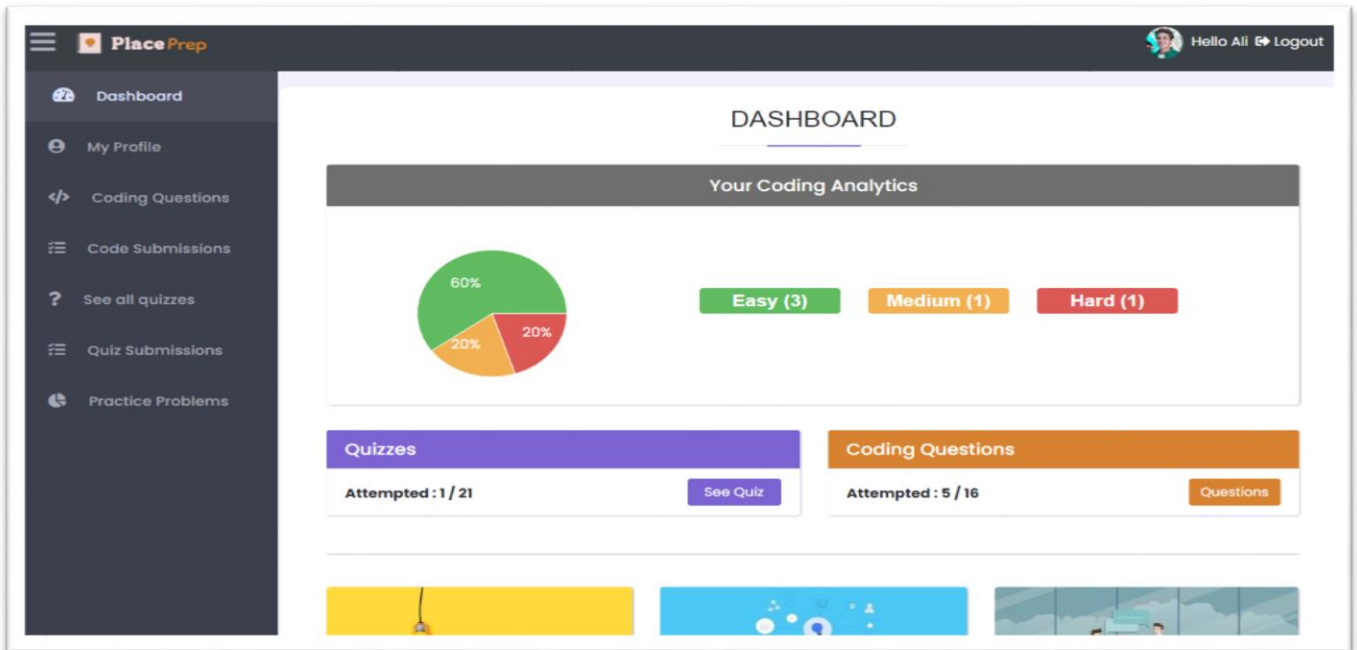
Figure no:2 – Dashboard
Above figure shows the Dashboard of platform where students can see the analytics of the questions they have solved.
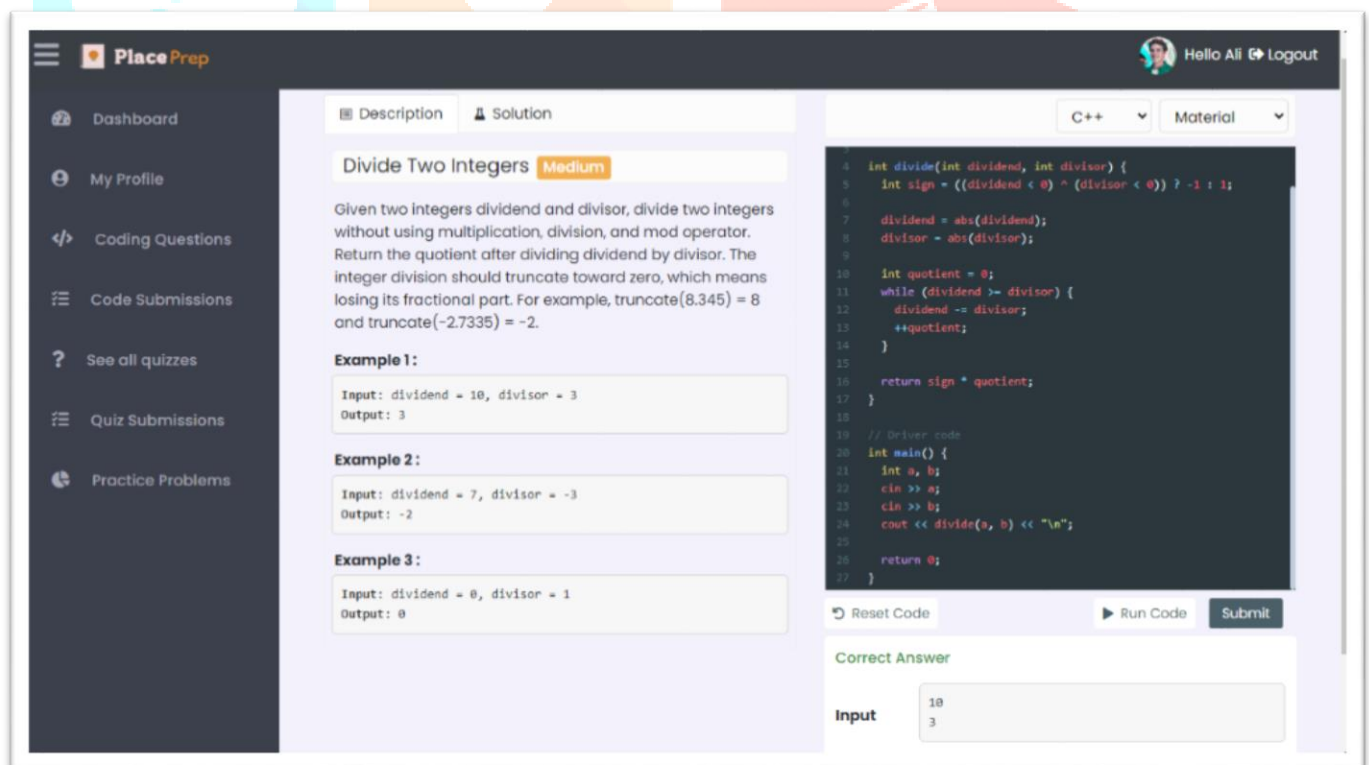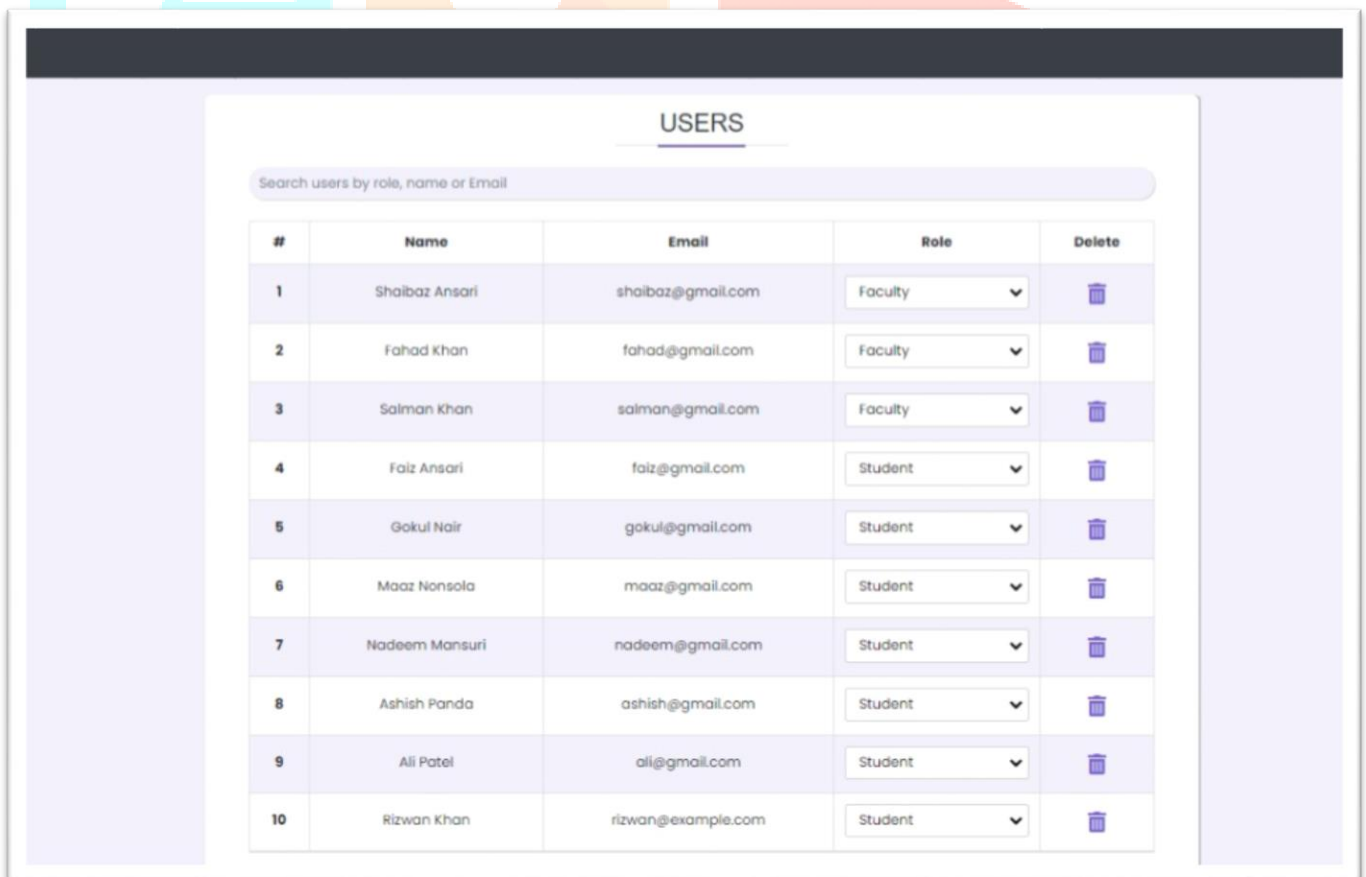

Figure no:3 – Coding questions with text-editor
Here students can practice various coding questions set by faculties in different programming languages
(C, C++, JAVA, Python)

Figure no:4 – Quiz

Students can attempt the quizzes which are set by different faculties and also can see score of quiz. Faculties can get the list of the students who have submitted the quiz.

Figure no:5 – List of Users

Administrator can see all the users who are using this platform and can change their roles, also can delete them if want.

IV.I: COMPARISON WITH EXISTING SYSTEM

Parameters	PlacePrep	Existing System
Compiling Engine	Built from scratch	Using third party API
Progressive Web App	Yes	No
Timer	Server-side	Client-side
Single Page Application	Yes	No
Aptitude practice section	Yes	No
Database	No SQL	SQL

Table 1 – Comparison with Existing System

V. FUTURE SCOPE

The future scope of this system is to focus on to add some more parameters to predict more efficient placement status on new advanced software platform as technology changes.

VI. CONCLUSION

Guidance based placement preparation process for the students we designed is more advanced and useful for all kind of placement situation like online offline and it provides easy and simple placement process to a person who facing the problems of placement. It is also useful for teacher to provide the guidance with new advanced technologies. We concluded that our system is best suited in these current technological changes.

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