ONLINE CODING TOOL

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Abstract:

Online coding tool is a web-based programming exercise system designed for introductory programming courses. Using Online coding tool, instructors can assign practice problems to reinforce concepts and assess mastery of skills. Students access their assigned problems using a web browser. This tool make the students to write a function or complete program to perform a simple task such as classifying input or performing a computation on input data. When the solution has been submitted, the tool tests their code against a series of test cases designed by the instructor and reports which tests executed correctly.

Keywords: introductory programming courses, mastery of skills, web browser, classifying input, performing computation.

I.   INTRODUCTION

The online coding tool existing system works only for the test cases. In the web page it cannot fit for various systems screen sizes. It has some terrific rules so it's not user friendly. During the exam time, resetting the problems is a tedious task and website on pressing the back button exists the web page. The students are interested to solve the problems as the user interface of existing system lacks in attraction. Background colors cannot be changed hence like a black and white TV. This project is developed by using PHP as front, PHPMYADMIN as back end and HTML for generating dashboard and chart.

The main objective of this paper is used to generate report of Online coding tool users in graphical view based on their performance. As well as rather than only testing test cases can test for manual inputs also, a new button load can be used which can be enabled or disabled only by the administrator. Bootstrap option is used to adjust the screen according to the various system screen size.

II.   RELATED WORK

A literature review is a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. They are secondary sources, and do not report new or original experimental work[2]. It is both a summary and explanation of the complete and current state of knowledge on a limited topic as found in academic books and journal articles. There are two kinds of literature reviews you might write at university: one that students are asked to write as a stand-alone assignment in a course, often as part of their training in the research processes in their fields, and the other that is written as part of an introduction to, or preparation for, a longer work, usually a thesis or research report. The focus and perspective of your review and the kind of hypothesis or thesis argument [3] you make will be determined by what kind of review you are writing. One way to understand the differences between these two types is to read published literature reviews or the first chapters of theses and dissertations in your own subject area[4]. Analyze the structure of their arguments and note the way they address the issues. It's discusses published information in a particular subject area, and sometimes information in a particular subject area within a certain time period. A literature review can be just a simple summary of the sources, but it usually has an organizational pattern and combines both summary and synthesis. A summary is a recap of the important information of the source, but a synthesis is a re-organization, or a reshuffling, of that information. It might give a new interpretation of old material or combine new with old interpretations. Or it might trace the intellectual progression of the field, including major debates. And depending on the situation, the literature review may evaluate the sources and advise the reader on the most pertinent or relevant.

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III.   EXISTING SYSTEM & PROPOSED SYSTEM

The existing instructory website had a normal user interface right from its login page. The website has a lot of text contents which shall we replaced to provide a rich UI [6]. The website has few problems like the enabled option of copy paste. The website lagged in producing statistical information about the user's performance to the instructor. The website presently handles only content with 3 languages. The website had few bugs which have been spotted [7]. Works for test cases, cannot pass manual inputs. Background screen color cannot be changed. Resetting problems during exam time is a tedious task. On pressing back button exits from the website.

In proposed system, Online coding tool can pass manual inputs, the description about the test cases is generated. A forum is proposed for inter-communication. Certain alteration in the web pages is proposed. A new button load can be used which can be enabled or disabled only by the administrator. Bootstrap option is used to adjust the screen according to the various system screen size.

IV. FLOW OF ONLINE CODING TOOL ACCESS

This work is developed by using PHP as front end, PHPMYADMIN as backend and HTML for generating leader board and chart. The main objective of this project is used to generate report of Online coding tool user in graphical view based on their performance. Software development satisfies the need of accessing and managing the user records. In this methods user's records are maintained in a secured way by using encryption/decryption methods. The unique user identification and password will be needed for accessing and managing the records. The reports are like generating automated pie-chart, leader board, most completed problem and total number of submissions by the user.

MVC has the following characteristic:

- A **Controller** can send commands to its associated view to change the view's presentation of the model (e.g, by scrolling through a document). It can also send commands to the model to update the model's state (e.g, editing a document).
- A **model** notifies its associated views and controllers when there has been a change in its state. This notification allows the views to produce updated output, and the controllers to change the available set of commands. A passive implementation of MVC omits these notifications, because the application does not require them or the software platform does not support them.
- **A view** requests the information from the model that it needs to generate an output representation.

The following are some of the cloud access of data in real time:

Login

There are two levels of user in this system one is Admin another one is mentor based on their role in the online coding tool. The role will help to classify the users. If the role demote the admin this module will redirect the user to admin panel in online coding tool. Else it will redirect the user to Mentor panel.

Admin and Mentor has to login by using their unique user name and password. In this Module the username and password will be validated. If the user entered details are matched with the table values it will allow the user to access the system otherwise it won't allow the user to access the system.

Mentor Details

In this module Admin can view, modify the mentor details. There is a provision for assigning mentor and mentees under the specific mentor from the users table. Admin is the only authorized person the access this module. Mentor also have the rights to select and add the mentees. Other user doesn't have rights to access this module for security purpose.

Student Details

Student details module has the table which containing the information about the students. There is edit and delete options for each row in the table. Admin can sort the student details in ascending and descending order. The table has the search feature to track the particular student information. These features are applicable to the mentors to access their mentees information.

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Monitoring

In this module Admin can view details of the particular user's login sessions. Each and every submission will be traceable in Online coding tool application. The submissions will be able to view by admin as well as mentor. But mentor can view only their mentees records.
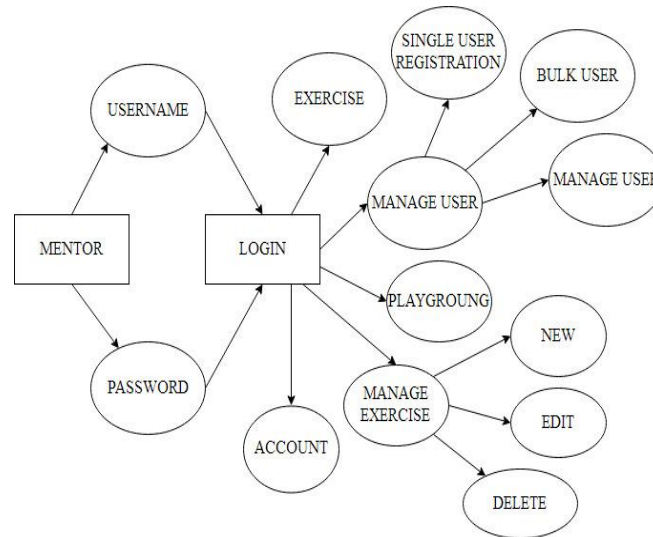

Fig 1: Architecture diagram for Online coding tool

V. CONCLUSION

The Online coding tool is mostly used as the website for programming practices and used as the programming challenges within the organization. Using this we can able to know multiple knowledge and techniques to solve the problem. It is used mainly for the training purpose by the organization. It has increased its features by ease the risk face by the instructor to assign the program problems to the multiple students in the organization.

VI. FUTURE ENHANCEMENTS

The Online coding tool can be enhanced by changing the language manually of each program that the instructor is assign to work. The problem solving technical notes may get attached to each program. The additional languages may get included so that students will be able to practice all the language whenever necessary.

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