A CRITICAL REVIEW ON ONLINE PLATFORM: BRIGHT SPARKS TUTORING

Kashmira Mathur*1, Goutam Gupta*2, Deepika Gupta*3, Janvi Madhok*4

*1Inderprastha Engineering College, Ghaziabad, India.

*2Dr. A.P.J. Abdul Kalam Technical University, Lucknow, India.

ABSTRACT

This paper introduces Bright Sparks Tutoring, along with their typical architecture, and concludes with a broad discussion on wide-spanning focus areas for future developmental research. This Platform is a combination of various micro services for the overall development of a student's academic advancement. It consists of all the information that a developer should have while working on a project and for the enhancement and sharpening of the developer's skill as well. This platform can be used by beginners to advance coders. Those who are willing to start a carrier in this field, they will also get all the required information and those who already have a strong back can sharpen their skill set more and can take it to a more advance level. Moreover, Users will also get placement opportunities via us and can attend webinars on tech topic. They will also get 24 x 7 supports from the admin using our community channels.

Keywords: Bright Sparks Tutoring, Tutoring System In Education, Affective Computing In Education, Educational Technology, Affective Tutoring System, Coding Platform, One Stop Solution For All.

I.   INTRODUCTION

The day-to-day use of computers and the Internet have created endless opportunities for the online education community. It enables students to learn a subject through the massive supply of online learning resources from anywhere and anytime. Traditionally, students seem less motivated by conventional methods of learning when a teacher directs students to learn through memorization and recitation techniques, such as in classrooms. They are more tempted towards smart devices, i.e., computers, smart phones, and tablets. These devices are invading the education field at an increasing pace as new ways of learning, which shows promising improvement in productive achievement. There has been evolution from a very primitive form of computer-assisted instruction, ranging through various forms of e-learning systems, progressing to form learner adaptive systems, with significant development in their user interface as well, highlighting and facilitating a smooth cognitive interaction of man and machine. The systems have transformed to become a true intersection of computer science, cognitive psychology and educational research. They have offered various focus points in system development across various time periods highlighting research areas, on and off being addressed by researchers from time to time.

Bright Sparks Tutoring aims to provide an all-in-one platform to users for their overall educational development using various microservices. In this, users can learn different skills/Technologies according to their interest area and then can practice and judge their skills by practicing coding on the provided compiler and also by solving quizzes and assignments provided for every topic. There are different Code editors for different Technologies.

1.1 Problem Definition

While Using the Currently available platforms, We have encountered a number of problems which we had tried to overcame in our system like there is no other platform which contains such microservices. Moreover, while studying on Google on any website we don't get any space to make notes or to mention what are things that we'll be covering today while studying. So, to Overcome this property we have Introduced a Note Maker and a TODO List in our system which is thereby integrated with the Study Material Provided. Then again, After making the project there is no need to go at some other platform for constructing a report for the same. There is an automatic report generator which will help you in making report in IEEE Format. Also, You can Build an eye-Catching Resume for yourself.

1.2 Background about the project idea

The idea for this project came while facing the problems that are present on the existing platform.

1.3 Objectives of proposed system

To make a unique platform where one can enhance their skills by Learning, Coding and Testing. To overcome the disadvantages of the existing platform available. No such platform available which contain all such micro services. To build a complete project in a single online compiler without even refreshing the page.

1.4 Feasibility Study, need and significance

This Project is made by taking into account each and every factor that one should one consider while making any such application and the need, demand and problems faced in the current times. This Project can be used by anyone who Is wanting to pursue a career in the field of Information Technology/Computer Science. Age, Qualification, Work Experience etc doesn't matter. One can start to explore, Learn and Code anytime and from anywhere on our platform. It will Provide you a proper guidance and 24*7 support, a platform to practice your skill, a stage to showcase all your gained knowledge and also by providing you Placement opportunity.

1.5 Novelty of Project

1.5.1 Online compiler

This online compiler helps users to practice coding on our platform in many different languages and to code in different Technologies. Users can open more than one tab (i.e. multiple tabs) at same time for developing front-end of any website of their choice and the uniqueness of making the website from this platform is that the user is not suppose to refresh the page againand again. The content will auto refresh in the way you write the code. If you'll code on any platform to make a website using HTML , CSS etc. you'll need to keep on refreshing the page after updations but that difficulty has been removed on this platform.

1.5.2 Resume Builder

This module of platform helps users to create eye-catching resumes using magnificent themes of their choice in just a few seconds. The novelty of this is that the resume will be editable. If the user wants to edit their details they can do it any time.

1.5.3 Events (Hackathon, Webinar

This platform provides an environment to take part in various Coding Competitions that will be organized by the admin frequently. The user will be notified about these details using the notification bar on the channel and using google groups in which our registered users will be added. The admin will be also organizing Webinars on various Tech Topics regarding which the user will be notified in the same way using notification bar , google groups and also through our social media channels.

1.5.4 Placement Hub

The user will be notified regarding the placement opportunities from the notification bar present on our platform and also through our community channels.

II. PROPOSED SYSTEM

2.1 Functionalities of CLIENT:

• PROFILE GENERATION TO ACCESS PLATFORM • RESUME BUILDER • ATTEND WEBINARS ON TECH TOPICS • LEARN AND CODE IN MUTIPLE TABS SIMULTANEOUSLY • PARTICIPATE IN HACKATHONS AND COMPETITIONS • PLACEMENT HUB FOR JOB NOTIFICATIONS

2.2 Functionalities of ADMIN:

• ORGANIZE HACKATHONS • ORGANIZE WEBINARS FOR USERS • SOLVE QUERIES OF USERS • RECENT PLACEMENT UPDATES • ADD CLIENTS TO GOOGLE GROUPS FOR UPADATION

III. SOFTWARE REQUIREMENT ANALYSIS

3.1. Functional Requirements

a) Use Case diagram with proper factoring
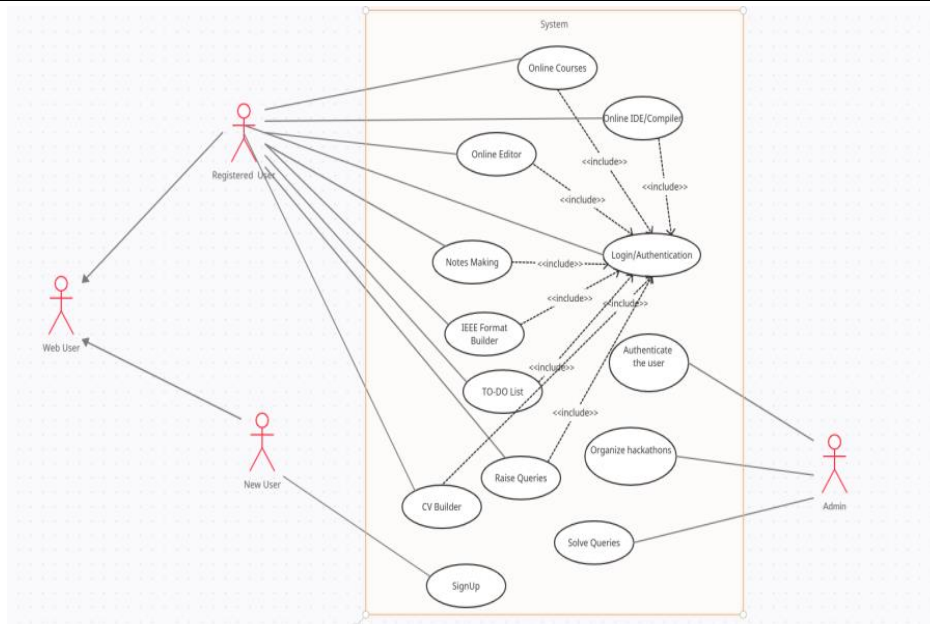
b) Use case descriptions

ACTORS: The users that interact with a system. An actor can be a person, an organization, or an outside system that interacts with your application or system. They must be external objects that produce or consume data.

Registered User: User which has already created an account on the website or is an authenticated user as it's details is being stored in the database.

New User: User whose details are not stored by an admin so he/she needs to create an account to store the personal details to the database and access the functionalities of the system.

Admin: Admin will authenticate the user, organize hackathons, webinars and solve the queries. SYSTEM: A specific sequence of actions and interactions between actors and the system. A system may also be referred to as a scenario.

SYSTEM CAPABILITIES:

Online Compiler: User can run the program choosing between different program languages.

Online Editor: User can develop software using HTML, CSS and JavaScript without explicitly linking them to each other.

Login/ Authentication: User need to login to access the services and authenticate through the admin.

Online Courses: User can access the courses and navigate between them.

Notes Making: User can make the notes, can edit and remove them also.

TO-DO List: User can make the to-do list to list the goals, can edit and remove them also.

Hackathons/competitions: User can access the hackathons, competitions to test his learning.

CV Builder: User can build his CV according to the performance and project he/she had accomplished.

Signup Page: User can create the account to access the services and store the personal details to the admin.

Contacts Page: User can raise the queries related to the webinars, and any further help related the system functionalities.

3.2. Non-functional Requirements

The Basic necessity for making this project run is Internet Connection. It will smoothly run with a minimum bandwidth of connection as it provides "Anytime Anywhere Access".

3.3. Major Modules and their functionalities

Online Compiler: Online compiler provides the facility of compiling and executing the codes online with the provision of multiple languages. • Online Editor: Online Editor is used for making a complete web project online by using the external CSS and JS. • Resume Builder: Users can create some eye-catching attractive resumes by

putting all their details and a resume will be generated which can be further downloaded. • Project Report Generator: A project report in IEEE Format can be generated. • Job Notifications: Users will be notified with all the latest updates of upcoming Job Opportunities.

IV.   PLATFORM DEVELOPMENT APPROACH

We have used a modular approach for building this application in the form of micro services. Upon the completion of this project, we'll combine all the micro services in a layered form in order to make a usable application by the users. Modular approach is an emerging trend educational thinking that shifts traditional method of instruction to an outcome-based learning paradigm. Modularization is based on the principle of dividing the curriculum into small discrete modules or units that are independent, non sequential, and typically short in duration.

V.   CONCLUSION

Concluding everything in a nutshell, This Platform Provides a no. of services which will definitely help the users of the application to develop 100% of their skills in this domain. Also, In the future Scope of this application, One will be provided with a platform to compete in coding competitions that will be organized on a large scale and you can see your rank on a nationwide scale. At last, one should use all the services in judicious and effective manner.

ACKNOWLEDGEMENT

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