

Quiz Web Application

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Abstract– The project “Quiz Web Application” is a collection of different types of quizzes from different type of subjects and fields. A user can access these quiz and can attempt any one of those. There will be limited number of questions and each answer will be credited accordingly. Through this application the user will come to know his/her level of proficiency in a subject. This application provides a platform to practice their knowledge on various subjects and fields.

Keywords: Html, CSS, Java script, VS code, Nodejs, Arrays.

INTRODUCTION

The main objective of the Project on Quiz Application is to provide a learning environment to the individuals and manage Examinations, Marks, Courses. The project is built at admin end and only admin can make change to schedule and questions. The purpose of the project is to build an application program to reduce the manual work for managing the test series and improve intellectual knowledge. This project outlines the development of quiz a comprehensive web application designed to facilitate the creation, distribution, and participation in quizzes across various subjects and domains. Quiz web application aims to provide an intuitive and user-friendly platform for educators, students, and knowledge enthusiasts to create and take quizzes tailored to their specific needs. The application features a robust backend system coupled with a responsive frontend interface, ensuring seamless interaction and optimal user experience across devices.

Objective:-

1. Quiz web application incorporates secure user authentication mechanisms, allowing users to register, login, and manage their profiles.
2. Educators and content creators can easily craft quizzes through an intuitive interface.
3. Participants can engage in quiz sessions in real-time or at their own pace. Quiz web application dynamic interface presents questions sequentially. Feature such as timers and marking enhance the quiz-taking experience, fostering a sense of challenge and achievement.
4. Quiz automatically evaluates quiz responses, generating comprehensive score reports upon completion. Users can review overall performance metrics.
5. Built with modern web technologies, Quiz prioritizes accessibility and scalability. The application adheres to web standards and responsive design principles, ensuring compatibility across browsers and devices.

PROBLEM DEFINITION

The quiz web application aims to develop an application for the user which is capable of providing a platform for practicing his/her intellect in various subjects and fields. Certainly, there are many websites for question and answer purposes but its hard to find a website with a proper testing atmosphere for general students. These web application provides testing of more then onesubject as per the admin requirement. This application provides a learning atmosphere for the user and testing environment to sharpen oneself.

LITERATURE REVIEW

Quizz, a gamified crowdsourcing system that simultaneously assesses the knowledge of users and acquires new knowledge from them. Quizz operates by asking users to complete short quizzes on specific topics; as a user answers the quiz questions, Quizz estimates the user's competence. To acquire new knowledge, Quizz also incorporates questions for which we do not have a known answer; the answers given by competent users provide useful signals for selecting the correct answers for these questions. Quizz actively tries to identify knowledgeable users on the Internet by running advertising campaigns, effectively leveraging the targeting capabilities of existing, publicly available, ad placement services. The feedback allows the ad targeting mechanism to further optimize ad placement. They present controlled experiments that examine the effect of various incentive mechanisms, highlighting the need for having short-term rewards as goals, which incentivize the users to contribute. [1]

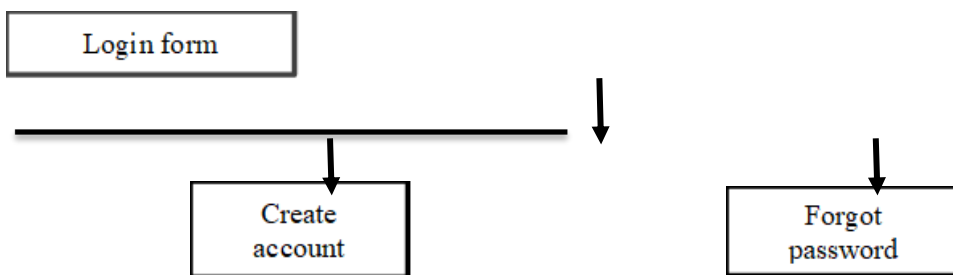
Clones in software development increases maintenance cost and it leads to poor software quality. This paper is basically combination of two issues: literature review of code clone detection techniques and experimental work for the evaluation of chosen techniques from literature. From the analysis it has been observed that token based approach reports more false positives as compared to other techniques. Text based and token based approaches have precision values greater than tree based approach, but tree based approach has higher recall values. Token based, Tree based and metric based approaches are useful in combination with refactoring tools. It has been observed that in terms of speed, text-based approach is suitable to small size projects, but token based technique is scalable to large size projects also. The aim of the paper is to find the strengths and weaknesses of these techniques which will be helpful to select a clone detection technique for a particular purpose.[2]

In 2004, the Universitat Politècnica de Catalunya decided to change one of its critical and strategic information services: the online teaching support platform. An Open Source software, Moodle, was adopted and the previous proprietary software was abandoned. In 2020, the home confinement of the population due to the pandemic caused by COVID-19 has been a stress test for the entire university community, and very specifically by those responsible for providing the support of the online teaching support platform. The solution applied involved using Moodle's IMS LTI interoperability features to deploy a high-performance version of the Moodle Quizz Module As A Service (SaaS), to plug-and-play within the university's LMS without drawing on its internal resources. This solution combined with a systems strategy, private cloud operations, internal communication and teacher training, solved this problem and successfully complete the assessment of the university course in a situation of confinement.[3]

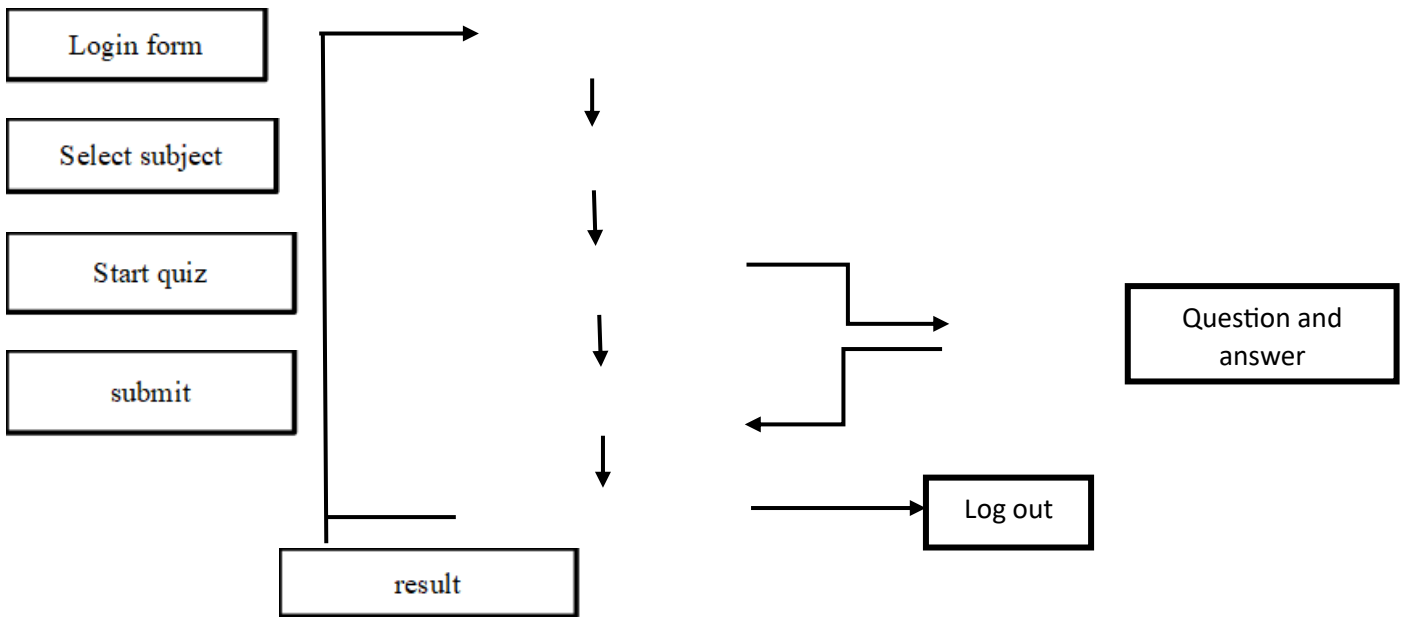
The main objective of the project MCQ Quiz Application is to manage the details of students, examinations, marks, courses and papers. The project is totally at administrative end and thus only the administrator is granted the access. The purpose of the project is to build an application to reduce the manual work for managing the MCQ quiz. To create an appropriate platform for best managing of MCQ test, To overcome the time consuming issues and taking MCQ tests, To release the marks of the test taker as soon as possible, To manage the information of different tests[4]

An Online Quiz Application is the most widely used application nowadays. It is one of the most helpful ways to conduct examinations or to prepare for them in any organization. The programs which help in conducting the exam in an effective way and saves time are Online Quiz Programs. It also helps to get through the tutorials of particular topics. You can put forth any query of yours and you will get the appropriate answer to your question. Therefore, it can be said that an Online Quiz Application helps you to save time in giving exams and provides security. This research paper will describe a Quiz Application that helps the students in a college or in a university to give exams in an effective way.[5]

SYSTEM ARCHITECTURE AND METHODOLOGY



- 1. Login Page:** The Login Page Module verifies the identity of visitors to the website using their login credentials, which include a username and password. Users are able to access different parts of the website after providing legitimate login credentials. The "Forgot Password" button allows users to access the Forgot Password Page and provide other login option in the event that they forget their password.
- 2. Signup Page:** The Signup Page Module enables new users to register for an account. User data, including login credentials, are securely stored in our database with passwords hashed for added security. Each user is assigned a unique identifier upon registration, ensuring system integrity and preventing unauthorized access.
- 3. Forgot Password Page:** The Forgot Password Page Module assists users in another possible access to their account credentials in case they forget them. By providing necessary verification steps, users can reset their passwords securely, maintaining access to their accounts.



Reset

4.Timeout: The time out is the time limit set by the admin for the user to finish the test within.

5.Result: The Result page provides the user who attempted the quiz with a detailed result of attempted questions, percentage and total credit scored by the user.

6. Logout: The user can logout the account after the result is acquired.

7. Reset: The user can try attempting again by resetting the quiz.

8. Mark for Review: The user can mark an answer and answer it later on.

9. Previous and Next: The user can go to the previous question and make changes if needed. In case of next the user can go to the next question.

10. Question and Answer: The user is provided with a question along with options to the answer and each marked option is calculated to the final result according to the correct answer.

11. Submit: The user can submit his/her test when they feel the need be.

SYSTEM ANALYSIS AND DESIGN

USE CASE DIAGRAM: A Use Case Diagram is a vital tool in system design, it provides a visual representation of how users interact with a system. It serves as a blueprint for understanding the functional requirements of a system from a user’s perspective, aiding in the communication between stakeholders and guiding the development process.

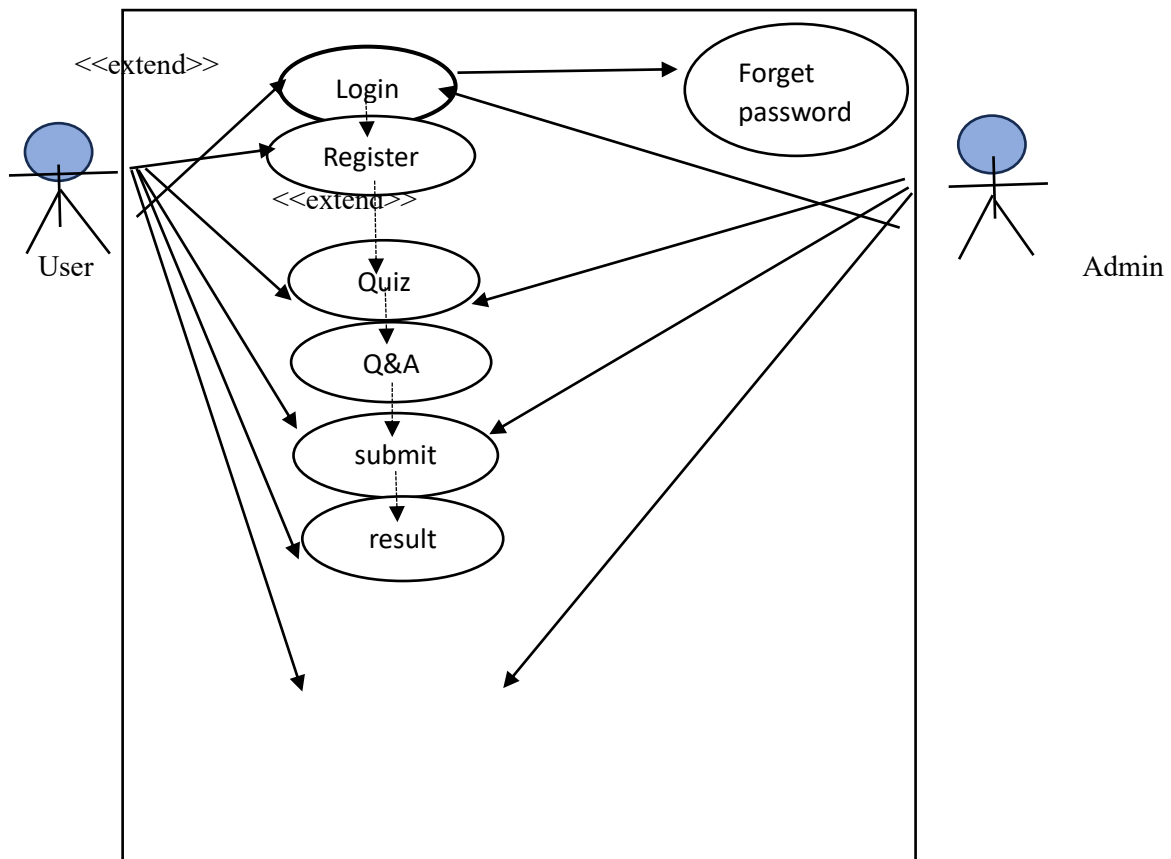


Fig: Use Case Diagram

DFD Diagrams – DFD is the abbreviation for Data Flow Diagram. The flow of data of a system or a process is represented by DFD. It also gives insight into the inputs and outputs of each entity and the process itself. DFD does not have control flow and no loops or decision rules are present. Specific operations depending on the type of data can be explained by a flowchart. It is a graphical tool, useful for communicating with users, managers and other personnel. It is useful for analyzing existing as well as proposed system.

1. Zero Level DFD :-

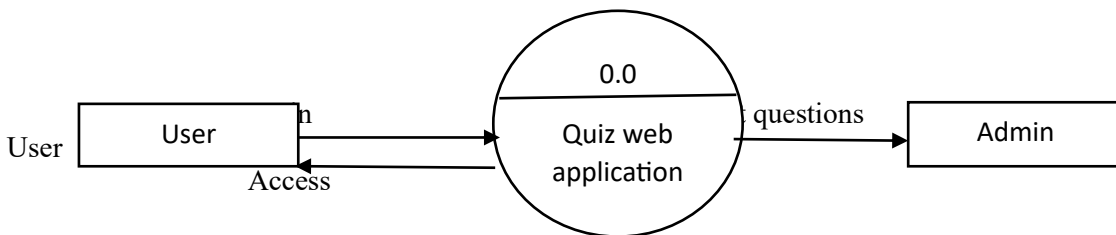
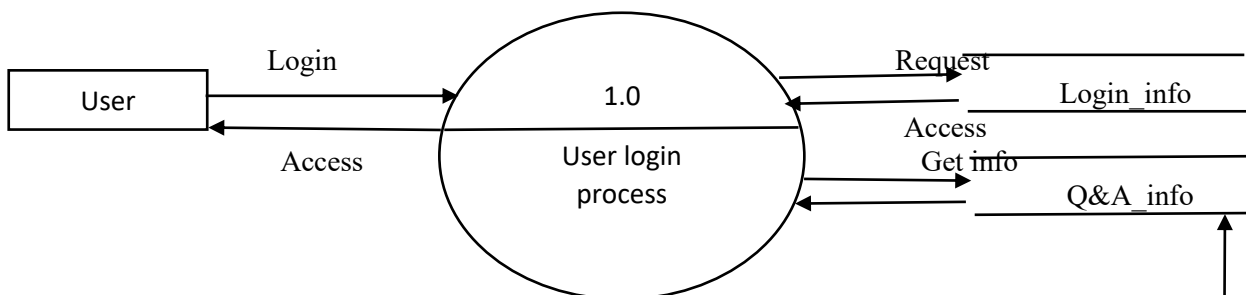


Fig: Level 0

2. First Level DFD :-



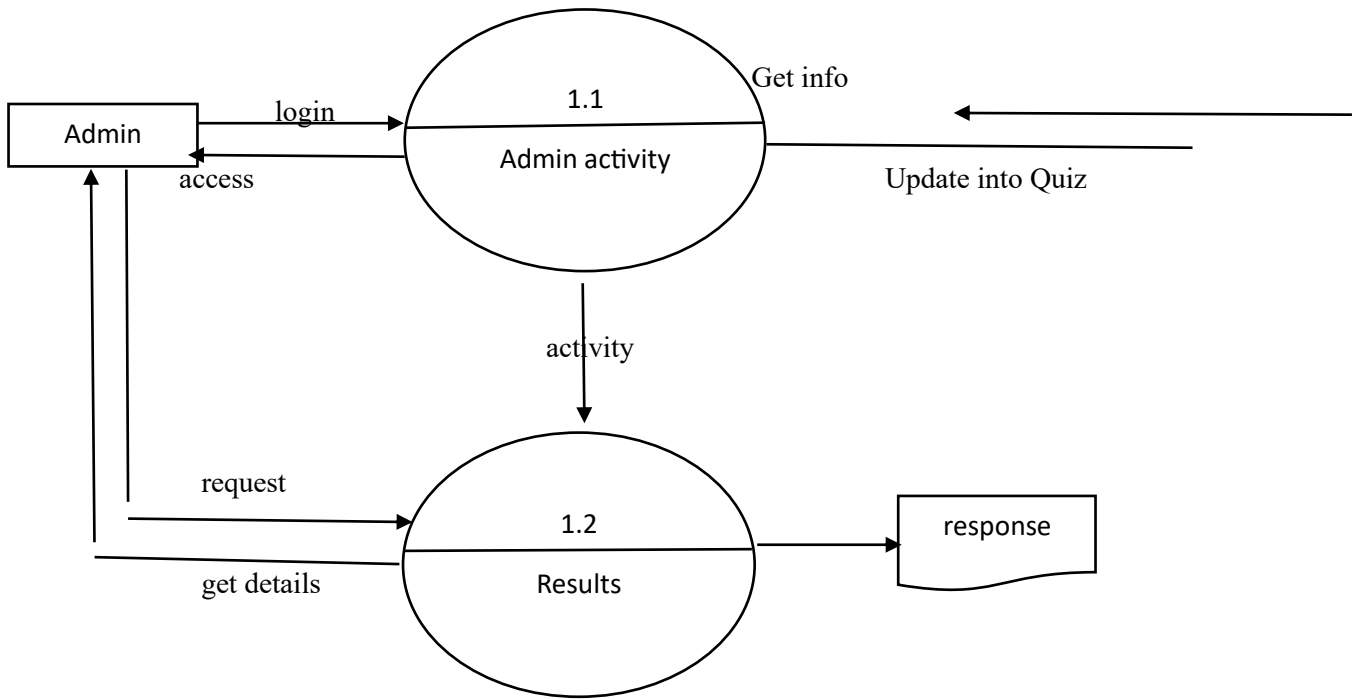
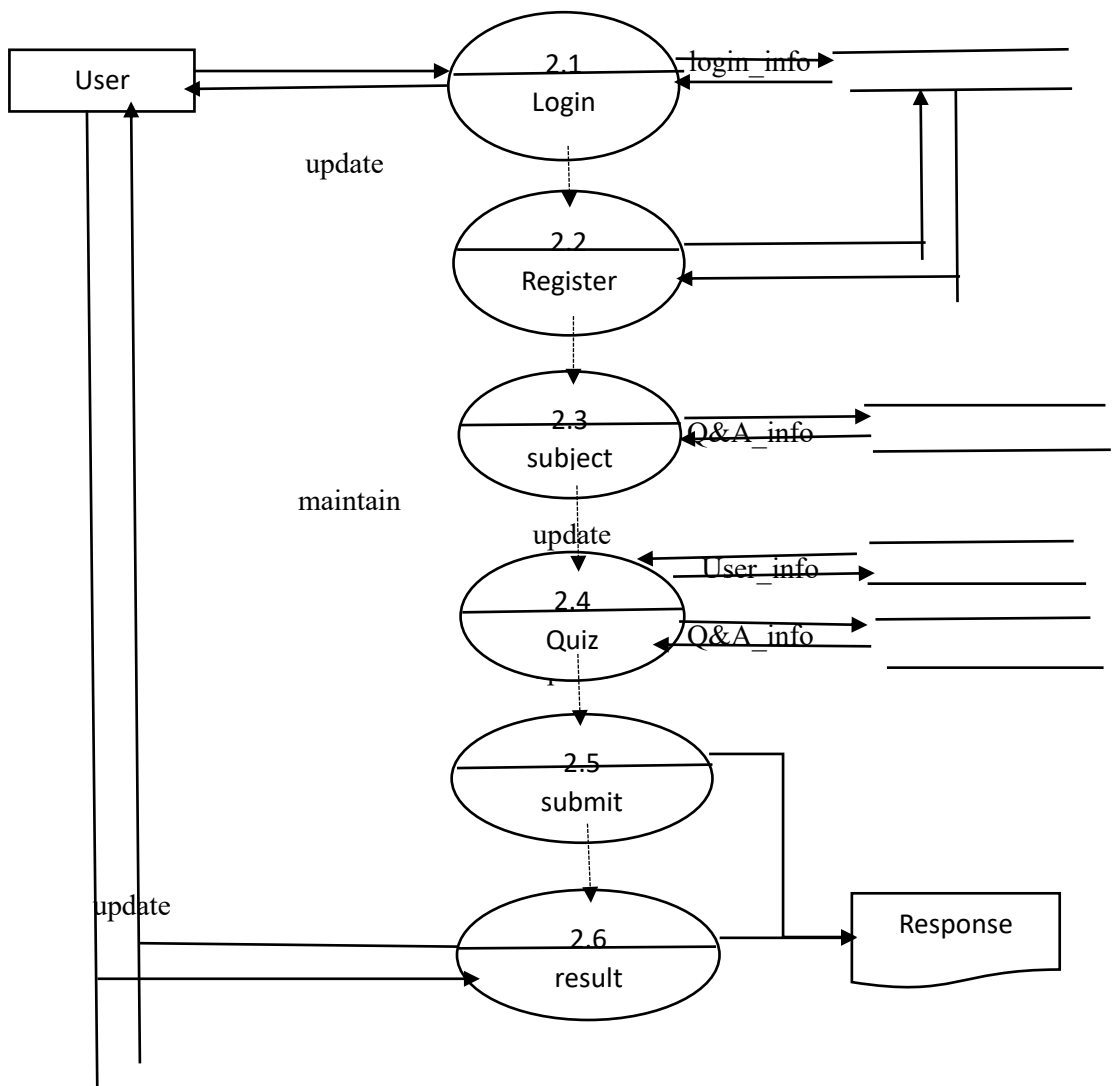


Fig: Level 1

3. Second Level DFD:-



get info

Fig: Level 2

TECHNOLOGIES

1. HTML:– HTML, short for Hyper Text Markup Language, serves as the fundamental markup language for crafting documents meant to be showcased in a web browser. It seamlessly collaborates with supplementary technologies like Cascading Style Sheets (CSS) and dynamic scripting languages such as JavaScript. HTML describes the structure of web page.

2. CSS :- CSS, short for Cascading Style Sheets, is a language for styling web documents, like HTML. It excels in separating presentation—layout, colours, and fonts—from content, enhancing accessibility and flexibility. By specifying CSS in a separate file, it enables consistent formatting across multiple pages, reducing complexity and optimizing page load speed through caching.

3. JavaScript :- JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities.

4. VS code :- Visual Studio Code is a code editor redefined and optimized for building and debugging modern web and cloud applications. Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE.

5. Array :- JavaScript Array is an object that is used to store a collection of ordered elements under a single variable. Arrays can store elements of different data types and are resizable. Array Methods in JavaScript are some built-in methods and properties that simplify operating on Arrays. Array methods and properties like array length(), unshift(), replace(), sort(), etc.

6. Node.js: Node.js is a server-side JavaScript runtime, and Express.js is a lightweight framework for building web applications with Node.js. It provides routing, middleware, and other essential features for backend development.

RESULT/OUTPUT

The image displays two screenshots of web forms. The top screenshot is a 'Login Form' with a white background and a blue border. It features a title 'Login Form' in blue, followed by two input fields: 'Enter your username...' and 'Enter your password...'. Below these fields is a blue 'Submit' button. At the bottom, there are links for 'Not Registered? Register' and 'Forgot Password? Reset'. The bottom screenshot is a 'Create a Quiz Account' form, also with a white background and blue border. It has a title 'Create a Quiz Account' in blue, followed by four input fields: 'Enter your email...', 'Enter your name...', 'Enter your username...', and 'Enter your password...'. Below these is a 'Verify your password' section with another input field 'Verify your password...'. A blue 'Register' button is positioned below the verification field. At the bottom, there are links for 'Back To Login Page' and 'Login'.

Fig: Login Page

Fig: Registration page

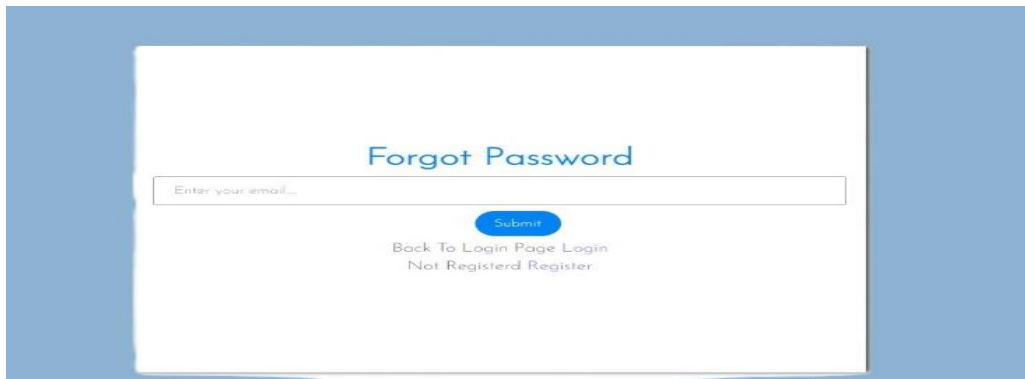


Fig: Password Rest page

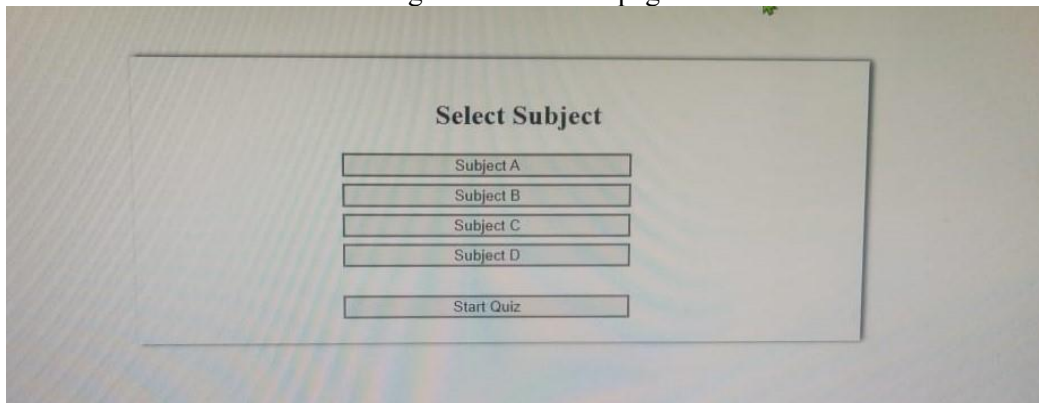


Fig: Subject page

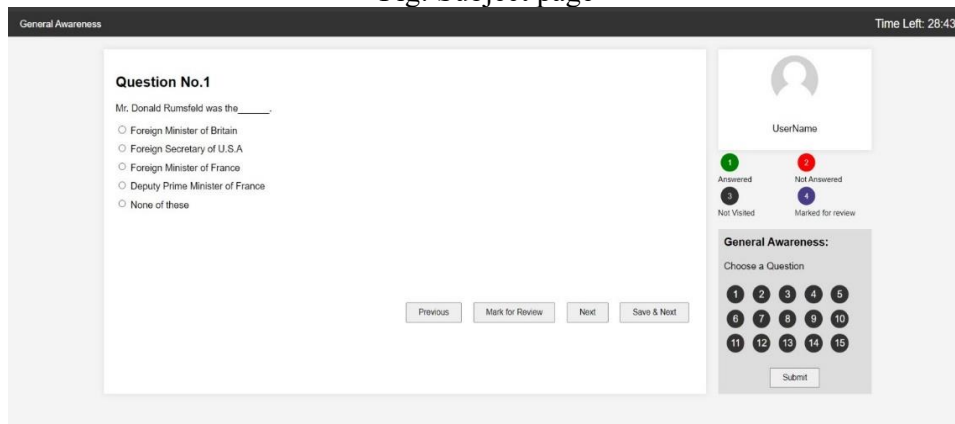


Fig: Quiz page

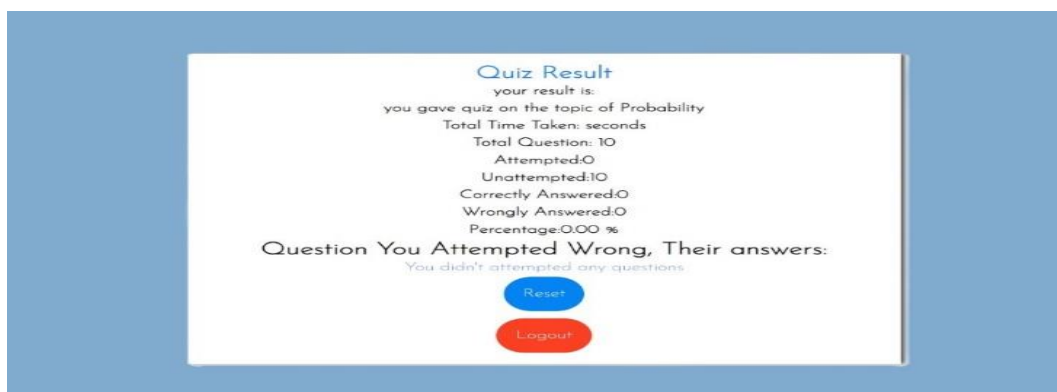


Fig: Result page

CONCLUSION

Quiz web application represents a versatile and adaptable solution for creating, distributing, and engaging with quizzes online. Whether used for educational purposes, employee training, or recreational learning, this application empowers users to unlock their potential through interactive assessment and knowledge acquisition. It can be used anywhere regardless of time since it's a web application and this application can be use any kind of learning purposes. It saves time as it gives instant results to the attempted questions. The user is capable of testing his/her knowledge and

proficiency in the subject of their choice. Admin has the privilege to choose the questions and category of subjects in the given application. The user can log in, register, give the test and get the results instantly, thereafter he/she can either log out from the application or rest to attempt more questions.

REFERENCES:

1. Quizz: Targeted crowdsourcing with a billion (potential) users, April 2014, International World Wide Web Conference (WWW 2014).
2. Performance Evaluation and Comparative Analysis of Code-Clone-Detection Techniques and Tools, March 2017, International Journal of Software Engineering and Its Applications.
3. Atenea Exams, an IMS LTI Application to Solve Scalability Problems: A Study Case(2021).
4. A Project on Online MCQ Quiz Application, December 2018.
5. Online quiz application, International Journal of Advance Research and Development 2019.