

SOFTWARE REPORT

OF

ONLINE QUIZ SYSTEM



COURSE TITLE: SOFTWARE ENGINEERING LAB (CSE3112)

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Chapter [1]

Introduction

1.1 Introduction

Online Quiz are an important method of evaluating the success potential of students. This research effort the individuals under consideration were students who would be enrolling in computer courses or Technologies Registrations. A prototype of a web-based placement Quiz system is described from the standpoint of the research effort, end user, and software development. Class Marker's secure, professional web-based Quiz maker is an easy-to-use, customizable online testing solution for business, training & educational assessment with Test & Quizzes graded instantly saving our hours of paperwork. Online quiz systems are used in various educational and professional settings to assess knowledge, skills, or understanding on specific topics or subjects.

1.2 Objective

The Main Objective of Online Quiz is User-friendly systems are not only needed for the creator, but also for participants. A responsive design is an approach where the web designer wants to reach an optimal web experience for a wide range of devices. Multiple choice is the options you can use with our online Quiz system. Having more than one option is necessary to check several types of knowledge. Auto quiz publish, log in with username and password. Automatically check answers and give the result to the students.

Chapter [2]

Feasibility Study

2.1 Technical Feasibility

Assess whether the required technology and resources are available or can be acquired to implement the quiz project. Evaluate the compatibility of the chosen technology stack with the project's goals.

2.2 Operational Feasibility

Analyze if the project aligns with the organization's goals, processes, and strategies. Determine if the project can be integrated into existing systems without disruptions.

2.3 Economic Feasibility

Evaluate the cost-effectiveness of the project. Consider development costs, maintenance expenses, potential revenue generation, and return on investment.

2.4 Legal and Ethical Feasibility

Assess whether the project complies with legal and ethical standards, including data privacy laws and intellectual property rights.

2.5 Schedule Feasibility

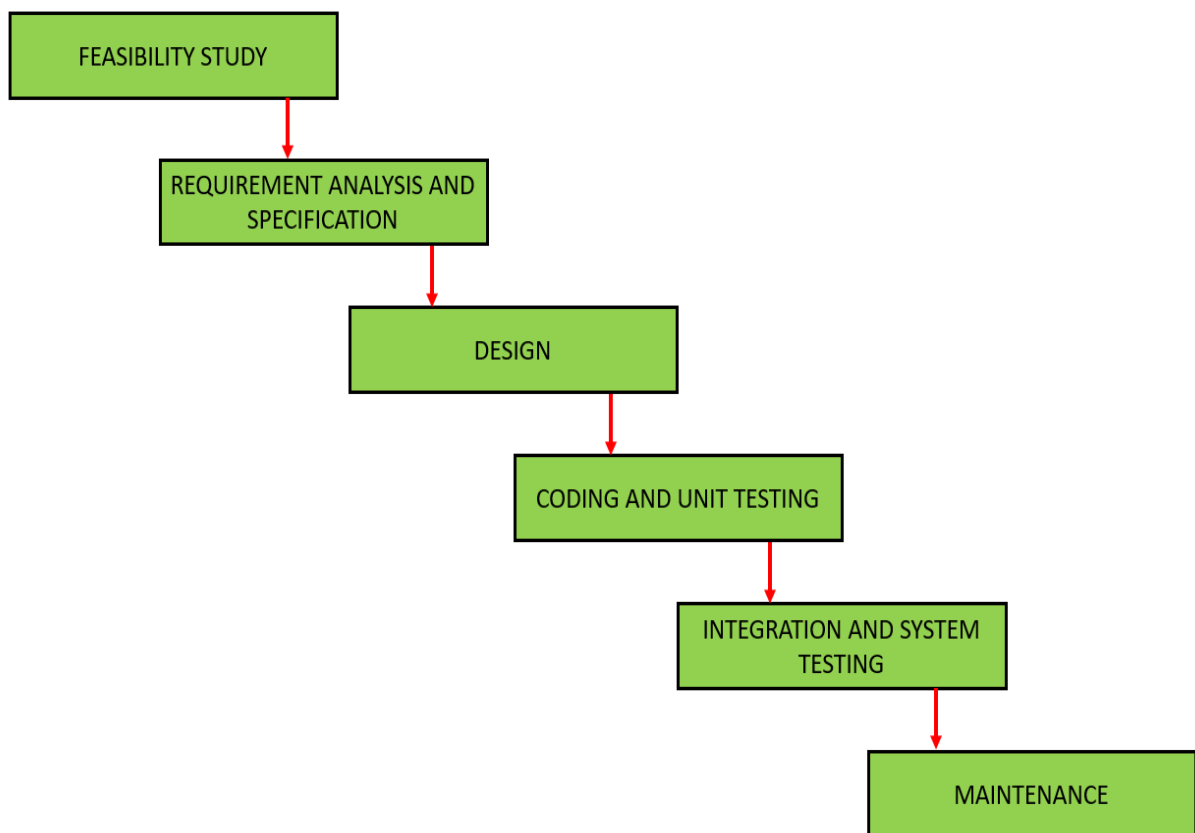
Estimate the project timeline and deadlines. Consider any time constraints and whether the project can be completed within the required timeframe.

Chapter [3]

Background Study

3.1 Software Model

The waterfall model is a sequential design process, used in software development process, in which progress is seen as flowing steadily downwards through the phases of conception, initiation, analysis, design, construction, testing and maintenance.



Block Diagram of Waterfall Model

Why Choose Waterfall Model :

Now a days we easily notice that waterfall model strong enough for most of the software industries because of its some limitation but for our purpose it is completely suitable. So here is the reasons why we choose this model except other:

- We wanted simple and easy to use model. Waterfall model is easy to use.
- Requirement for the system are very well understood, clear and fixed.
- Our product definition is stable.
- There are no ambiguous requirements in the system.
- The project is not that big.
- When an error is identified we can instantly look back to previous stage and problem is solved. So this is a more secure model for us.

Chapter [4]

Requirement analysis & Planning

4.1 Functional Requirements

- User Authentication: Users should be able to register, log in, and log out securely.
- Quiz Creation: Admins should be able to create quizzes, specifying details like quiz title, duration, number of questions, etc.
- Question Management: Admins should be able to add, edit, delete questions, and categorize them into topics or subjects.
- Quiz Taking: Users should be able to select and take quizzes, with features like timer, question navigation, and submission.
- Scoring and Feedback: The system should provide immediate feedback on quiz completion, including scores and correct answers.
- Leaderboard: Optionally, include a leaderboard to display top scorers.
- Reporting: Admins should have access to reports on quiz performance, user activity, etc.

4.2 Non-Functional Requirement

- Security: Ensure secure user authentication, data encryption, and protection against common web vulnerabilities.
- Performance: The system should handle multiple concurrent users efficiently, with minimal downtime and fast response times.
- Scalability: It should be scalable to accommodate a growing number of users and quizzes
- Usability: The user interface should be intuitive, responsive, and accessible across different devices.
- Compatibility: Ensure compatibility with various web browsers and operating systems.
- Reliability: The system should be reliable, with features like error handling, data backup, and recovery mechanisms.
- Maintainability: The system should be easy to maintain, with clear code structure, documentation, and modular design.

4.3 Planning

The planning indicates what needs to be done, which resources must be utilized, and when the project is due. In short, it's a timetable that outlines start and end dates that must be met for the project to be completed on time.

The task list and require time is given below:

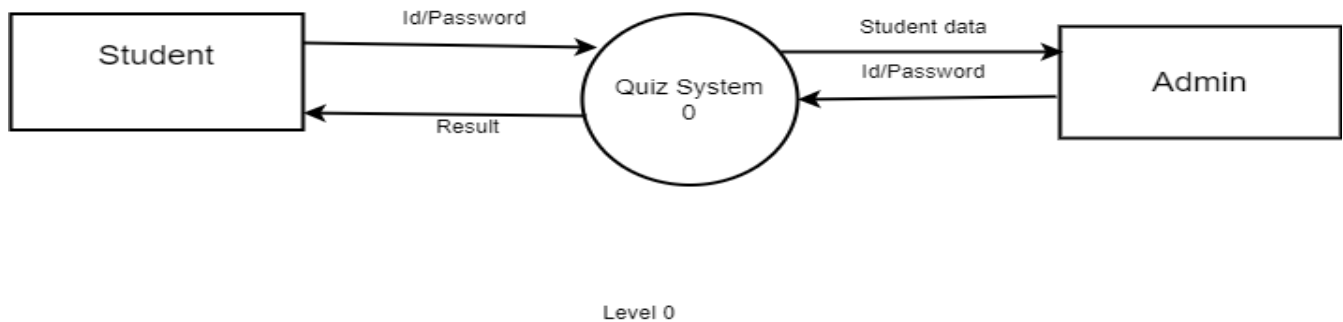
Task Name	Start Date	End Date
❖ Analysis	24-07-2023	12-08-2023
➤ Feasibility Study	24-07-2023	31-07-2023
➤ Requirement Analysis	01-08-2023	06-08-2023
➤ System Planning	07-08-2023	12-08-2023
❖ Front End	15-08-2023	25-10-2023
➤ Develop front-end	15-08-2023	20-10-2023
➤ Testing front-end	21-10-2023	30-10 -2023
❖ Back End	31-10-2023	30-11-2023
➤ Develop back-end	31-10-2023	15-11-2023
➤ Testing back-end	16-11-2023	30-11-2023

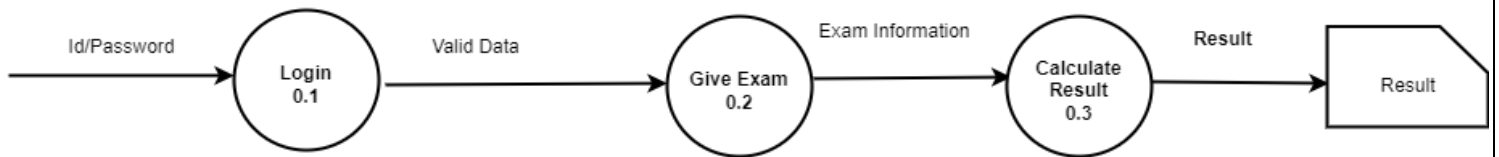
Chapter [5]

Design & Implementation

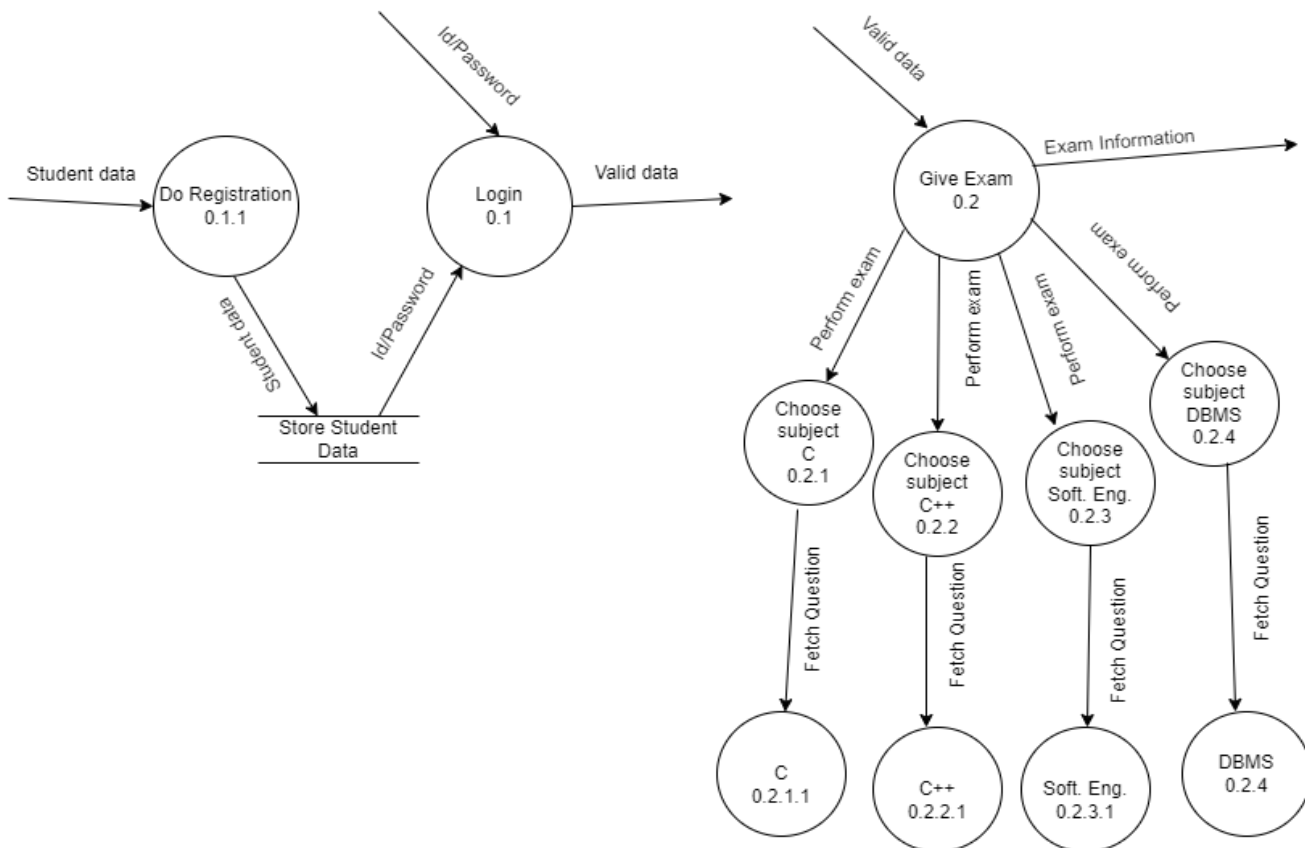
5.1 Data Flow Diagram

- The DFD (also known as the *bubble chart*) is a simple graphical formalism that can be used to represent a system in terms of the input data to the system, various processing carried out on those data, and the output data generated by the system.



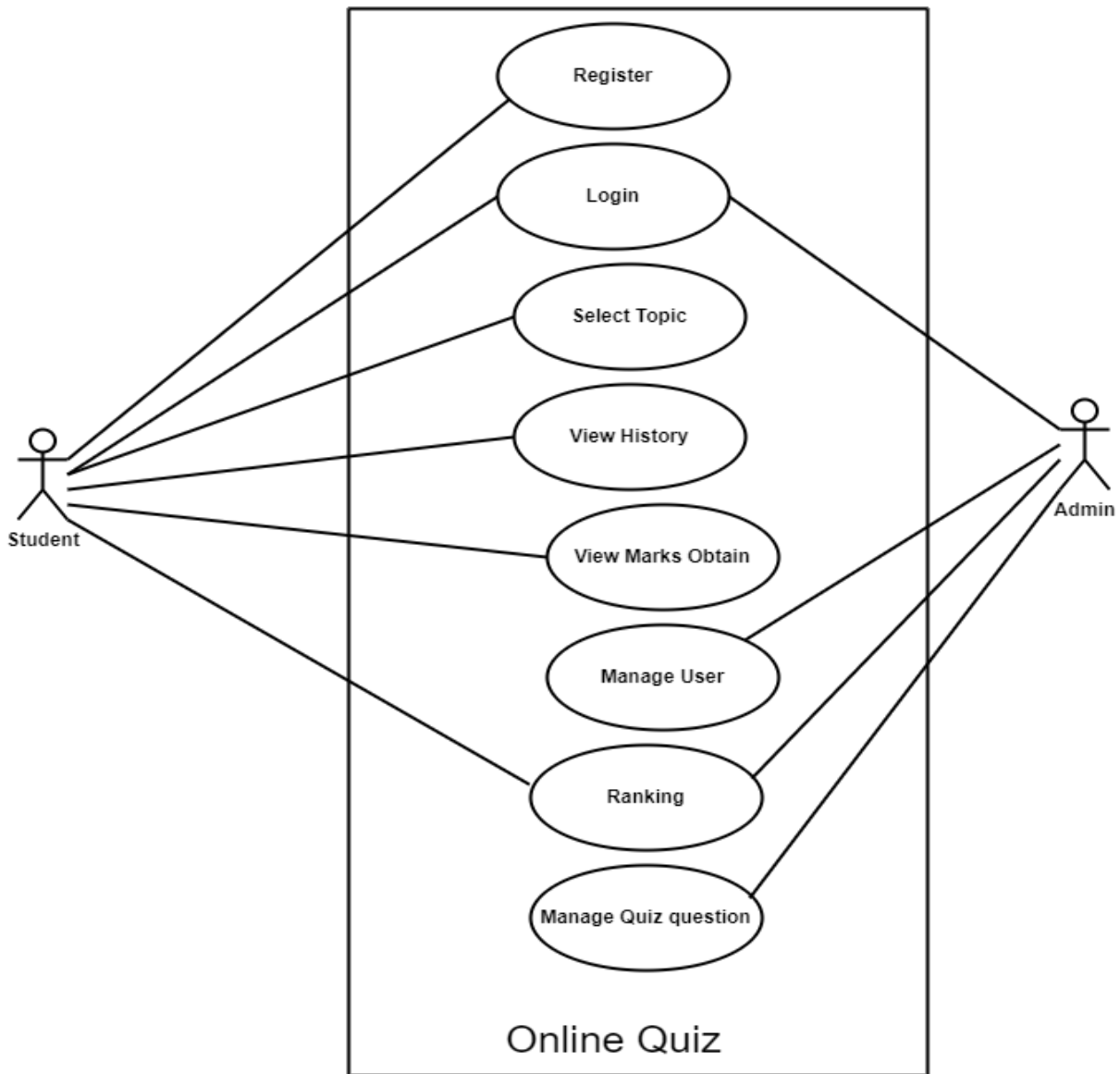


Level 1

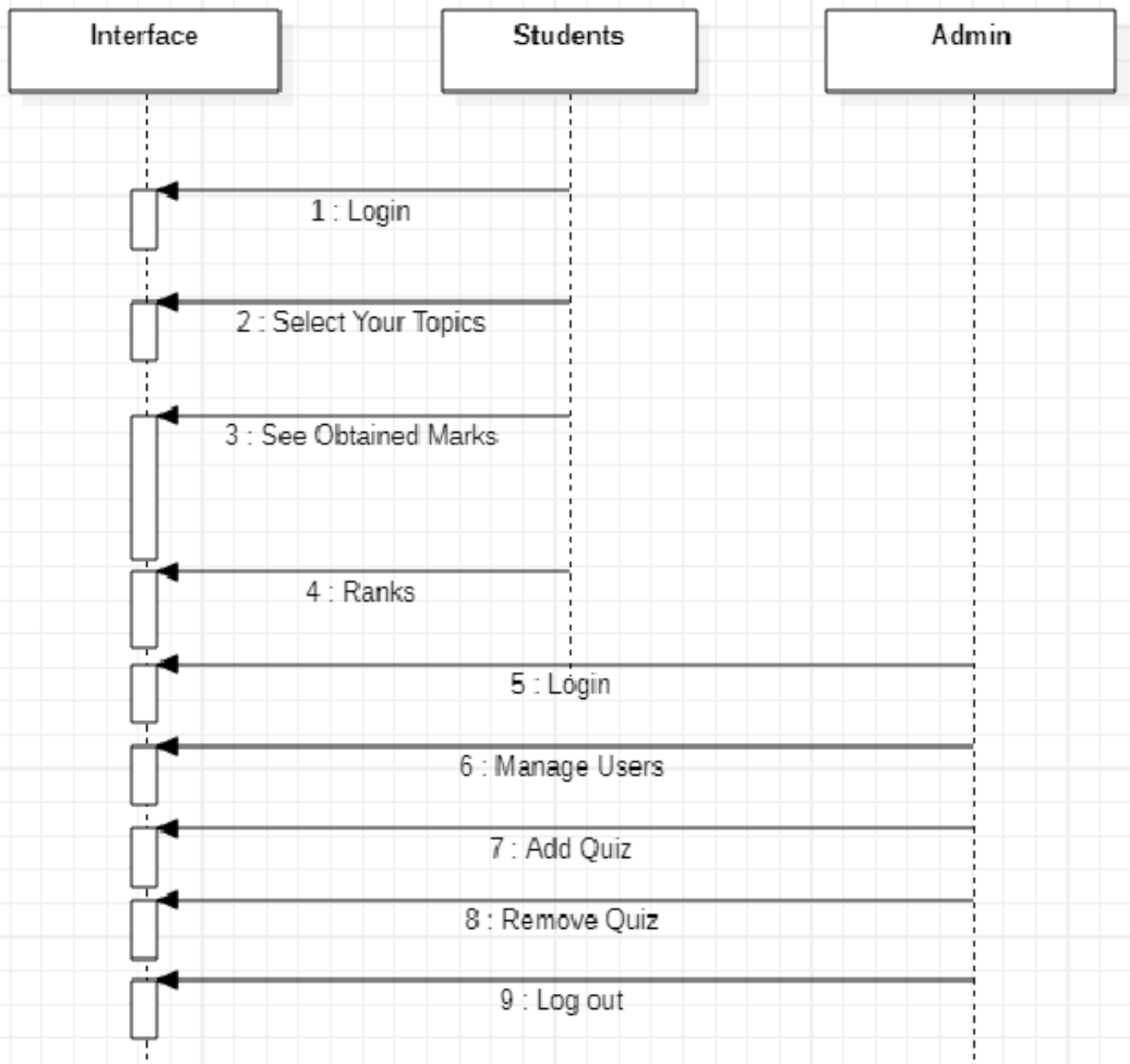


Level 2

5.2 Use Case Diagram



5.3 Sequence Diagram



5.4 Technology To Be Used

❖ Client Side

- HTML
- CSS
- Java Script
- Bootstrap
- Laragon
- Visual Studio Code
- Github

❖ Server Side

- Language
 - **PHP**
- Framework
 - **Laravel**
- Database
 - **MySQL**

HTML :

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page

CSS :

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World WideWeb, alongside HTML and JavaScript. CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts.

JavaScript :

JavaScript often abbreviated as JS, is a high-level, interpreted programming language. It is a language which is also characterized as dynamic, weakly typed, prototype-based and multi-paradigm. Alongside HTML and CSS, JavaScript is one of the three core technologies of the World WideWeb. JavaScript enables interactive web pages and thus is an essential part of web applications. The vast majority of websites use it, and all major web browsers have a dedicated JavaScript engine to execute it.

Bootstrap :

Bootstrap is a free and open-source front-end framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many web frameworks, it concerns itself with front-end development only.

Laragon :

Laragon is a lightweight and powerful local development environment for web developers. It provides a complete stack for building web applications locally on Windows systems. Laragon includes Apache or Nginx as the web server, MySQL or MariaDB as the database server, and PHP as the server-side scripting language.

Visual Studio Code :

Visual Studio Code (VS Code) is a lightweight, cross-platform source code editor developed by Microsoft. It's widely popular among developers due to its simplicity, speed, and extensive ecosystem of extensions. VS Code includes features commonly found in full-fledged IDEs, such as code navigation, refactoring, IntelliSense (code suggestions), and built-in debugging.

Github :

GitHub is a web-based hosting service for version control using Git. It is mostly used for computer code. It offers all of the distributed version control and source code management (SCM) functionality of Git as well as adding its own features. It provides access control and several collaboration features such as bugtracking, feature requests, task management, and wikis for every project.

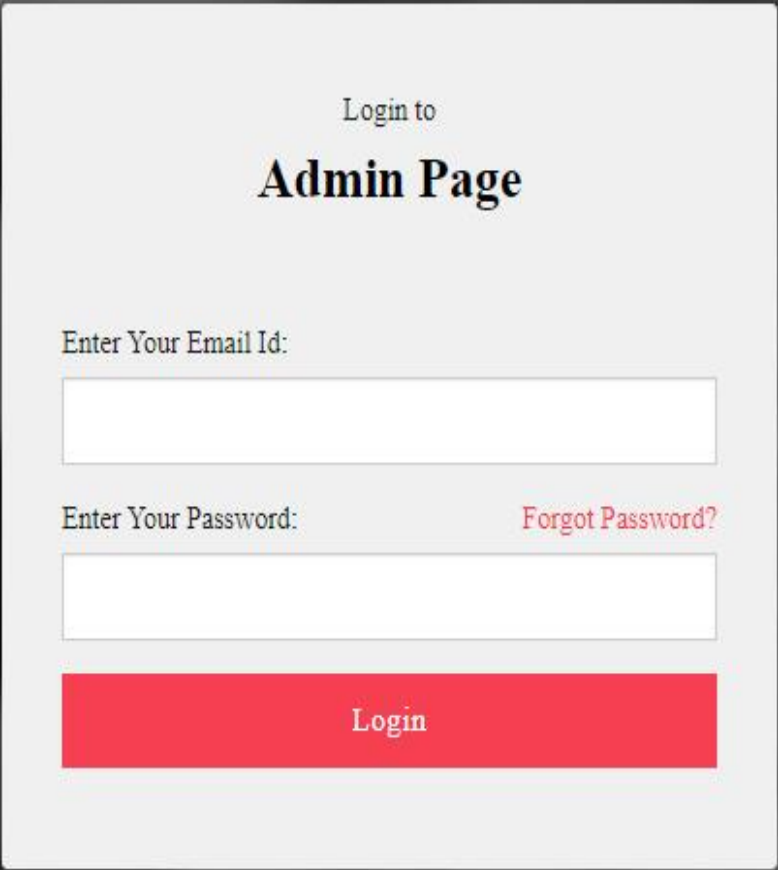
PHP :

Hypertext Preprocessor (or simply PHP) is a server-side scripting language designed for Web development, but also used as a general-purpose programming language. It was originally created by Rasmus Lerdorf in 1994,] the PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page,] but it now stands for the recursive acronym PHP: Hypertext Preprocessor.

MySQL :

MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL Workbench provides data modeling, SQL development, and comprehensive administration tools for server configuration, user administration, backup, and much more. MySQL Workbench is available on Windows, Linux and Mac OS X.

5.5 Admin Interface





The image shows a login form for an admin interface. The form is centered on a light gray background with a blurred image of people in the background. The form itself is a white rectangle with a light gray border. It contains the following elements:








- Title:** "Login to Admin Page" in a bold, black, serif font.
- Email Field:** A label "Enter Your Email Id:" followed by a white rectangular input box with a thin gray border.
- Password Field:** A label "Enter Your Password:" followed by a white rectangular input box with a thin gray border.
- Forgot Password Link:** A red text link "Forgot Password?" located to the right of the password input box.
- Login Button:** A solid red rectangular button with the word "Login" in white, centered text.

WELCOME TO Admin Page!!

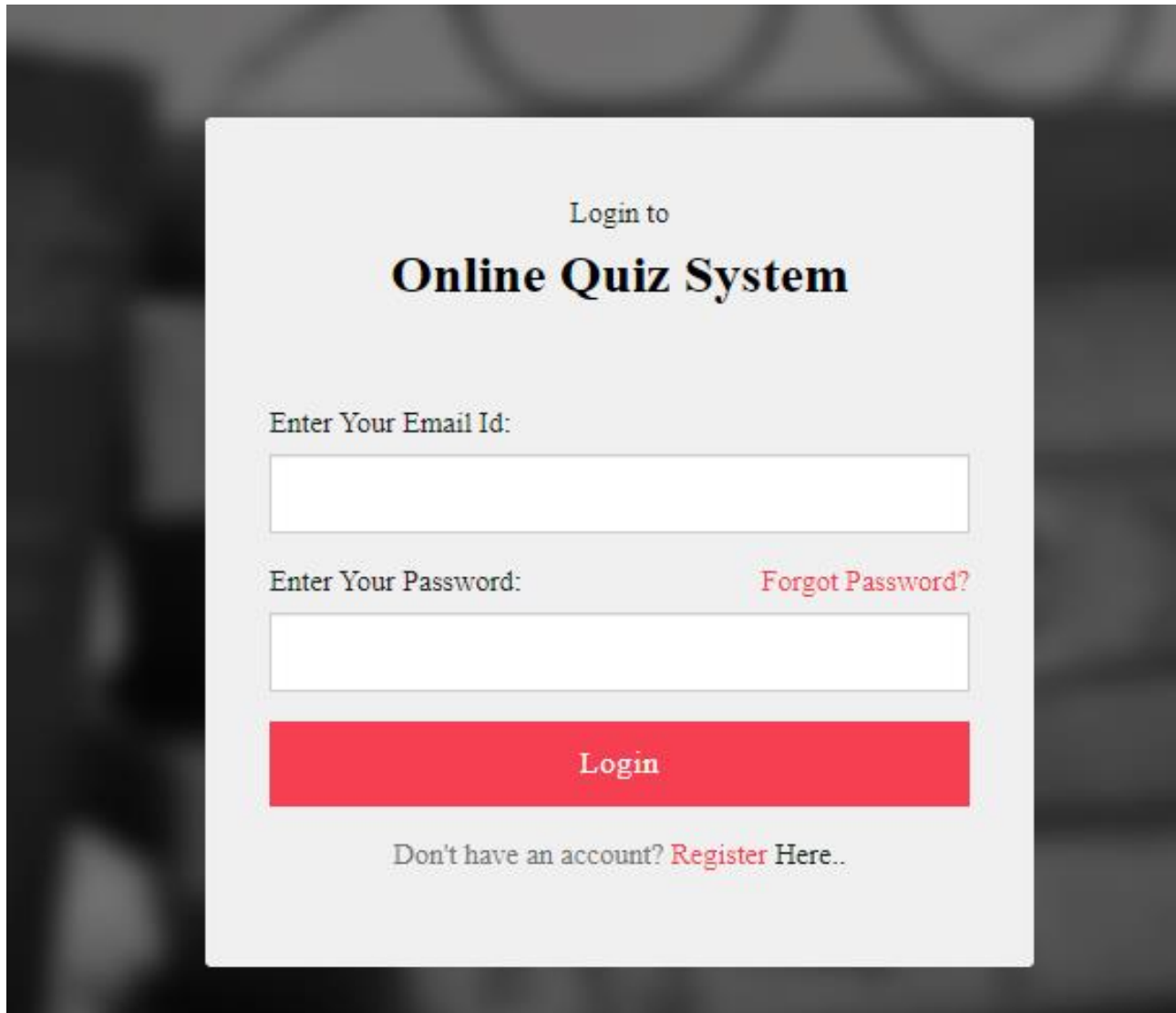
Enter Quiz Details

Submit

S.N.	Topic	Total question	Marks	Action
1	Ip Networking	10	0	 Remove
2	Php & Mysqli	10	0	 Remove

S.N.	Name	College	Email	Action
1	Sharmeen Akter	Joypurhat Government College	abc@gmail.com	
2	Bizli Khatun	Rajshahi Govt. women college	khatunbizli@gmail.com	
3	Nusrat Jannat	Chuyadanga govt. college	nusratjannat2001@gmail.com	
4	Swagatika Padhi	National Institute of Science and Technology, Berhampur	pinky@gmail.com	
5	Priyanka Pattnaik	National Institute of Science and Technology, Berhampur	priyanka@gmail.com	
6	Rojina Khatun	Rajshahi govt. college	rajina123@gmail.com	
7	Shimla Sinthia	Rajshahi Govt. college	shimlasinthia123@gmail.com	

5.6 User Interface



The image shows a login form for an 'Online Quiz System'. The form is centered on a dark, blurred background. It features a light gray rectangular container with the following elements: a title 'Login to Online Quiz System', two input fields for 'Email Id' and 'Password', a red 'Login' button, and a link to 'Register Here..'. The text 'Forgot Password?' is also present next to the password field.

Login to
Online Quiz System

Enter Your Email Id:

Enter Your Password: [Forgot Password?](#)

Login

Don't have an account? [Register Here..](#)

Register to

Online Quiz System

Enter Your Username:

Nusrat Jannat

Enter Your Email Id:

nusratjannat2001@gmail.com

Enter Your Password:

Enter Your College Name:

Chuyadanga govt. college

Register

Already have an account! [Login Here..](#)

Online Quiz System

[Home](#)

[History](#)

[Ranking](#)

[Log out](#)

S.N.	Topic	Total question	Marks	Action
1	Ip Networking	10	30	Start
2	Php & Mysqli	10	30	Start

Question 1 ::

How long is an IPv6 address?

- ☐ 32 bits
- ☐ 128 bytes
- ☐ 64 bits
- ☐ 16 bytes

S.N.	Quiz	Question Solved	Right	Wrong	Score
1	Ip Networking	10	2	8	-2

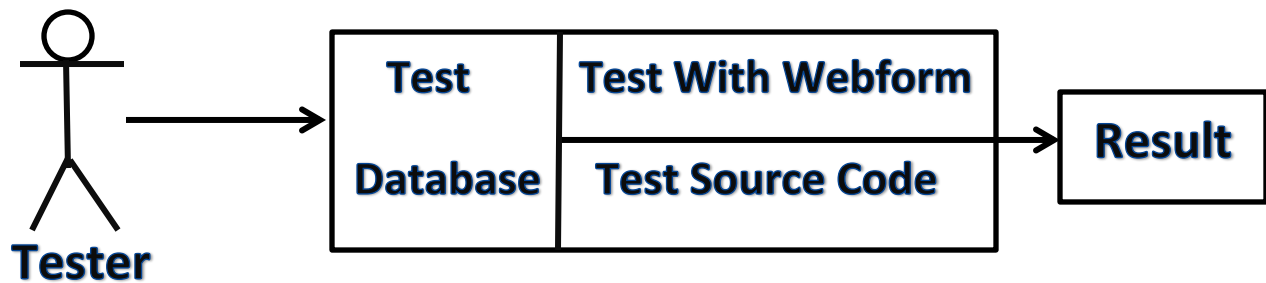
Rank	Name	Email	Score
1	Swagatika Padhi	pinky@gmail.com	30
2	Priyanka Pattnaik	priyanka@gmail.com	22
3	Shimla Sinthia	shimlasinthia123@gmail.com	11

Chapter [6]

Testing

6.1 White-Box Testing

White-box testing is a method of testing the application at the level of the source code. These test cases are derived through the use of the design techniques, data flow testing, branch testing, path testing, statement coverage and decision coverage.

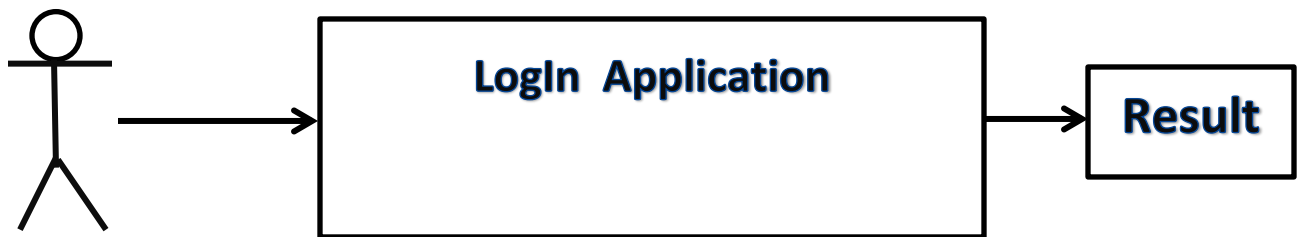


Block Diagram of White Box Testing

- This testing starts in coding phase.
- In this testing tester have knowledge about both product and coding.
- All developers of this project perform this test.
- Here project manager also hire some tester who work exactly similar project for better result.

6.2 Black-Box Testing

Black-box testing is a method of software testing that examines the functionality of an application without peering into its internal structures or workings. This testing strategy based on requirements and specifications. Here tester only check acceptable result validation.



Block Diagram of Black Box Testing

- This testing starts after coding phase.
- In this case tester have no knowledge about the internal data flow, functionality of software. But have a big knowledge about the technology of this project.
- We hire some best skilled tester for our project.

6.3 Beta & Security Testing

Beta Testing:

In software development, a beta test is the second phase of software testing in which a sampling of the intended audience tries the product out. This testing also helps to find runtime errors of a software. Here users enjoy a preliminary version of main project.

- This testing starts after software internally tested.
- Here for this purpose project manager target some mess and implement product there.
- After implementing product a team always observe and collect feedback form user.
- For this, beta testing time will be 1 month.

Security Testing: It aims at 6 basic principles as

- | | |
|--------------------|--------------------|
| 1. Confidentiality | 4. Authorization |
| 2. Integrity | 5. Availability |
| 3. Authentication | 6. Non-repudiation |

Chapter [7]

Conclusion

7.1 Expected Outcome

- Complete educative platform.
- A trustworthy web platform for online quiz.
- It reduces time and cost for both admin and user.
- It helps to hurry up to find a quiz on a topic.

We will try our level best to add more features in future in our project. For time lacking, we can't finish our software with more attractive features.

7.2 References

- www.w3schools.com/js
- getbootstrap.com
- stackoverflow.com
- www.tutorialspoint.com
- laravel.com
- www.quora.com

Signature with date_____	Signature & date_____
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