

**DigiQuiz- A Web Application**

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This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Computer Science and Engineering

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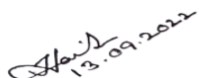
**DHAKA, BANGLADESH**

**SEPTEMBER 2022**

## APPROVAL

This Project titled “**DigiQuiz**”, submitted by Swapnil Patrick Rozario, ID No: 182-15-11364, Akash Kumar, ID No: 182-15-11494, and Nilmoy Chandra, ID No: 182-15-11740 to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on September 12, 2022.

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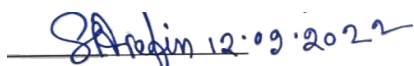
  
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We hereby declare that, this project has been done by us under the supervision of **Ms. Nusrat Jahan, Sr. Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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## **ABSTRACT**

The main goal of the project is to have an easy, safer, and best way to connect with the examination hall through the device everyone has. Modern problems require modern solutions, so now we take the examination system to the next level from our traditional style. A quiz application is a big help for both the teachers and the students. We face a lot of problems while we give the tests or quizzes physically on spot. But with the help of a quiz application, it becomes easier. Teachers can set the questions whenever they want or needed, students can attend the quiz anytime from any place. The admin can control, maintain and check everything. The enlisted courses, number of students, course engagements along with the students and etc. Students have to maintain the course fees or the quiz fees. Unauthentic users also cannot get into the system without registration. Everything can be maintained by the admin. The problems or struggling of the traditional method is not needed here by allowing the students and teachers to connect with each other through the user-friendly application. The need of this system is very clear because it is useful for the students of the coaching, admission quizzes, or for any level students who has

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# **CHAPTER 1**

## **Introduction**

### **1.1 Introduction**

In the present era of the education system, the “DigiQuiz” an online quiz platform can reduce the time of a teacher’s work to half and more easily. Technology-based online tests or quiz platforms are more effective than our traditional test or quiz systems. They are more interactive because the quiz app makes it easier. The teachers don’t have to print the question papers before the exams are held and also, they don’t have to go through the exam answer sheets again and again. With the help of the quiz app, the teachers can set the question papers only once and get the answers to the questions they set. Nowadays smartphones or computers are more effective and necessary tools for education, so the main goal of this application was to make the education system easier enabling the use of an app on the pupils' mobile devices personal computers or smartphones so that we can make the best technological solutions to maximize both education and starting to learn. Many people can say or ask if the application is accurate enough or if there is any chance of a mistake. The answer sheet is evaluated by the software very accurately.

### **1.2 Motivation**

In the voyage of the technological era, the education system is moving fast forward as well as the vast population of the world. It is possible for the teachers and the students to have dreams like where how simple can exams be taken or given, marks distributed, and all the necessary attachments can be accessed through the internet. Smartphones and computers are modern tools for education and through the previous decade, it has grown more efficiently and user-friendly also. The world is now adapting technology for educational purposes even more. The traditional way of exam giving is less easy. Nowadays 85% of students use smartphones for their educational purposes. For that reason, we are creating

an online platform application where teachers and students can connect through the app. The main goal of this application is:

- a) The user can quickly access and easily give tests.
- b) Provides a lot of tests and questions with authentic and accurate answers.
- c) Can view the courses, and manage users through the platform, marks, and payment distribution.

### **1.3 Objectives**

The objective of the proposed system is to provide significant and better information for the users about their exams. This will help the students to perform different types of quizzes and examinations. Students will perform many quizzes inside a jiffy amount and duration. As a result, students can maintain their examination schedule details and grading details. The primary features are:

- i) Login (For both students and teachers)
- ii) Log Out
- iii) User account
- iv) Update account information and maintain
- v) User feedback

#### **Admin:**

- i) Create test/quiz packages
- ii) Manage the tests
- iii) Manage the issues
- iv) Fix any problems

v) Maintain portal (for both teachers and students accounts)

### 1.3.1 Stakeholders

As for the stakeholders in the “Diu Quiz App” project, there are three types of them. Such as:

i) Students

ii) Teachers

iii) Educational Institutions / Organizations

### 1.3.2 Project Schedule

Activities	Duration (in weeks)	Total weeks
Coming up with ideas	Week 1	1
Trouble attribution	Week 1, Week 2	2
Formulation of Prerequisites	Week 1, Week 2	2
Evaluation of prerequisites	Week 2, Week 3	2
Framework	Week 4	1
Quality Control	Week 4, Week 5	2
Designing structures	Week 5	1
Quiz / Test Part	Week 6, Week 7, Week 8, Week 9	4

Student / Teacher Portion	Week 9, Week 10, Week 11, Week12, Week 13	5
Test Case	Week 5, Week 10, Week 13	3
Unit Testing	Week 14	1
Black box Testing	Week 14, Week 15	2
Program Initiate	Week 16	1

**Table 1.3.3: Release Plan**

The release schedule is listed below:

<b>Version</b>	<b>Feature</b>	<b>Date</b>
V0.1	Web-based system	01-02-2022
V0.2	Manage User, Feedback, Comment	15-08-2022

### **1.4 Expected Outcome**

The outcome of our project is to have an easy, time-saving, highly secure, and economical benefit. And for this moment all we have to do is just proceed according to the plan. So we're hoping that we will have the best outcome and also a useful online examination system for users. The exams can be found by the users easily and they can choose and give the tests on their selective courses or subjects because the technology offers the best user-friendly environment. And on the other hand, teachers can set the question papers or change the papers at any time necessary. The papers will be updated and the result also. So there

will be no such major issues and major chances of mistakes. We will offer good maintenance and a simple, enjoyable trouble-free examination system.

### **1.5 Report Layout:**

This project gradually gives a thorough overview of our system, along with any related work and concepts. We recently studied this subject to see if there was opportunity for expansion. In chapter 2, we go over the issues and problems we encounter. In chapter 3, we delve into further information regarding the three background stages. Additionally, we thoroughly go over the criteria and try to pinpoint user requirements. Chapters 4 and 5 include details on the issue we address and the methods we use to complete the project. In chapter 6, we establish a few conclusions and provide some ideas for future research.

## **CHAPTER 2**

### **Background**

#### **2.1 Introduction**

Background work is necessary for the project to be completed. In order to achieve the destined goal we have to focus and complete the background works. Access to relevant and accurate test is the most important part for quiz. Furthermore, there are a bunch of websites available, but none of them have provided a secure online quiz platform with both security and flexible quiz system. It increases the effectiveness of the system to have the users to feel safe and sound. The major goal of the application is to have a secure and time saving quiz facilities by using the automatic marks counting and result upload.

#### **2.2 Related Work**

Online based quiz website is created for educational purposes. Educators and understudies purchase them to practice and to enhance their skills by going through the MCQ examinations and tests. If any understudies want to take participate in the test or quiz, they don't need any pen or paper to fill up the MCQ. Again, they stay anywhere during exam time. Once the teacher sets the MCQ and uploads it, the system will do the rest automatically. The students will have the practice of giving MCQs through the application. By using this people will learn about online quizzes. People will be able to know the importance of online-based educational learning and methods. With the help of this website 40-50 students or candidates can be active at a time and can participate in the quiz. They can have access of multiple quizzes at the same time. All the reports and results will be saved for further use. Educational corruption will be gone if people are interested to use this type of online-based learning or quiz website.

#### **2.3 Comparative Study**

The online Examination System is a technology that simplifies examination activities. This is a cost-effective system. It converts the traditional pen and paper-based exams to online



and paperless mode. When we go through a manual examination system, we face some difficulties during the tests, answering the questions and processing the result. Also, filtering the records is very much difficult. In a manual examination system, the chances of losing the records of the results are high. We've researched the websites and opportunities before the very beginning of the project. Again, manually searching the records is also a tough task. This system is very difficult to handle and it takes a lot of time and effort. On the other hand, the online examination system is very much easy to use. Candidates can attend the quizzes from anywhere using any mobile, PC, or laptop. This paper describes the main function of the system, analyzes the auto-generating test paper algorithm, and also discusses the security of the system.

## **2.4 Scope of the Problems**

The scope of this project is very much broad in terms of manual taking quizzes. This website can be used by any educational institutions, coaching or even the admission students and the job searching people can also get benefit from it. It can be used anywhere and anytime. It is very much easy to use and handle. Examiners can schedule a quiz or exam without remaining active during that time. This system is very much secure and accurate. There is no need for A manual examiner. An administrator can edit or delete anything. They can change the password, accept any candidate, and create a test. They can limit the time of the exam period. They can also randomize the questions and set negative marks for wrong answers. Students can request for registration. When the registration is complete, they can log in into the system. They can edit their user information. They can also select the quiz and get notified after the result after finishing the quiz.

## **2.5 Challenges**

An online examination system might be hard to manage because this is almost a new system and most of people are unaware of it. But these problems can be solved. Some of these problems are discussed below:

### **1. Internet Connectivity:**

This is a huge problem in rural and remote areas in our country. When a student attends the exam, he needs better internet connectivity for the smooth flow and execution of the online exam.

## **2. Server Maintenance:**

We have to check and figure out the performance of the server regularly.

## **3. The Question Validation:**

We have to face the validity of the questions regularly before the quizzes.

## **4. Maintain the quiz:**

We have to see the quizzes are going through properly or not. Otherwise, it is a life-or-death situation us.

## **5. Keep Records and Maintain Salary:**

The teachers will have their salary in the portal and also maintain the records.

## CHAPTER 3

### REQUIREMENTS SPECIFICATION

#### 3.1 Business Process Model

The tasks in this section must be finished in order to produce the intended results. As we are aware business process modeling is the illustrated demonstration of an agency's functions process. To do this, a variety of trigonometric functions approaches are typically used.

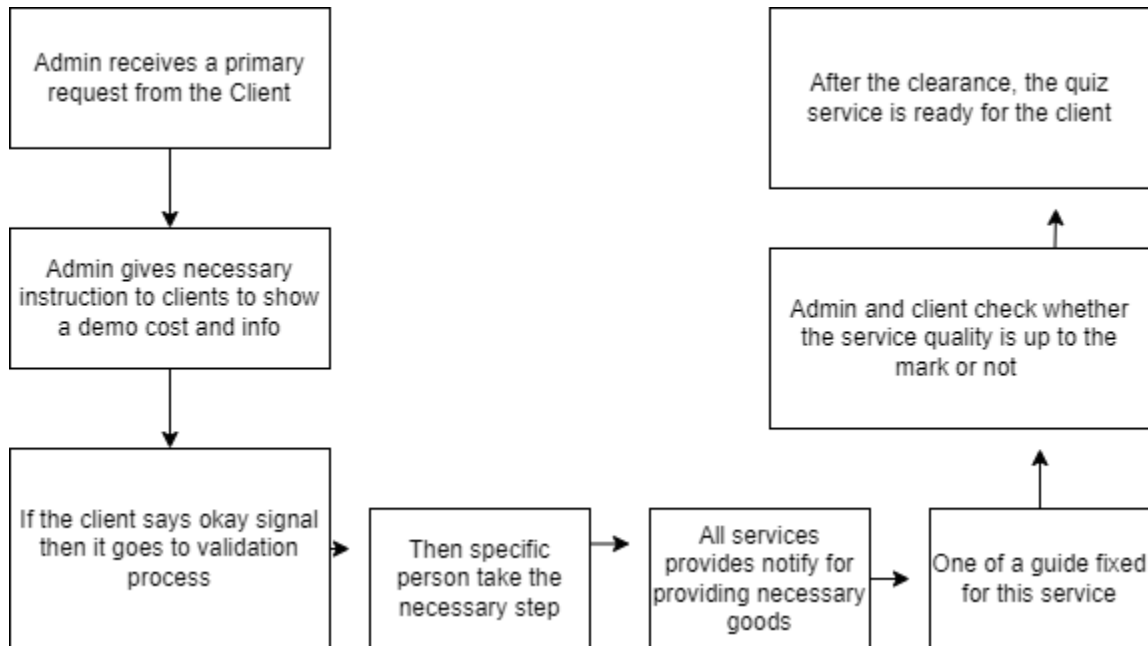


Figure 3.1.1 Business Process Modeling

#### 3.2 Collection and Analysis of Requirements

Requirements are needed for modified products and specifications are examined in the real foundation. We have to gather and specify the requirements in order to do a required analysis. In other words, requirements are gathered in various methods such as surveys,

user observations, interviews, and document research. These are the criteria that are enlisted in such certain areas.

### 3.3 Use Case Modeling and Description

To collect the system requirement, we have to use the use case diagram. Use case diagrams are basically used to describe the requirements of a project graphically. Here are the actors:

- i) Student
- ii) Teacher
- iii) Admin

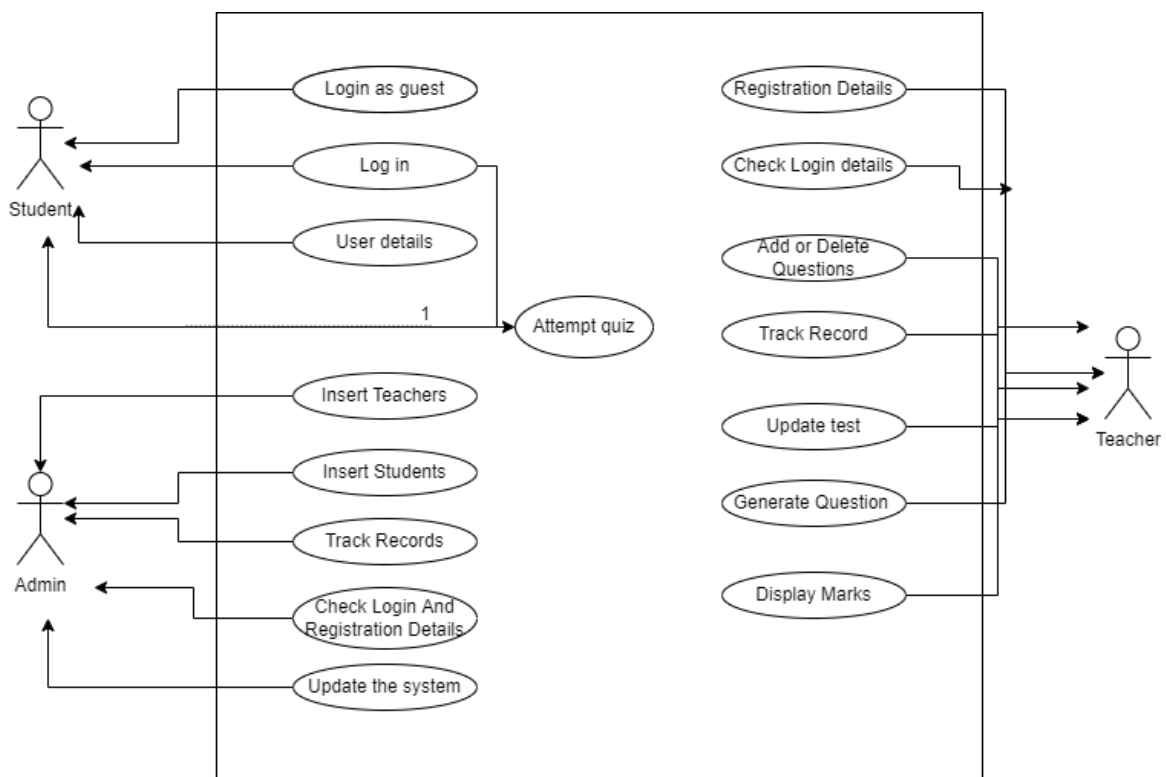


Figure 3.3.2: Use Case Modeling for Student, Teacher and Admin

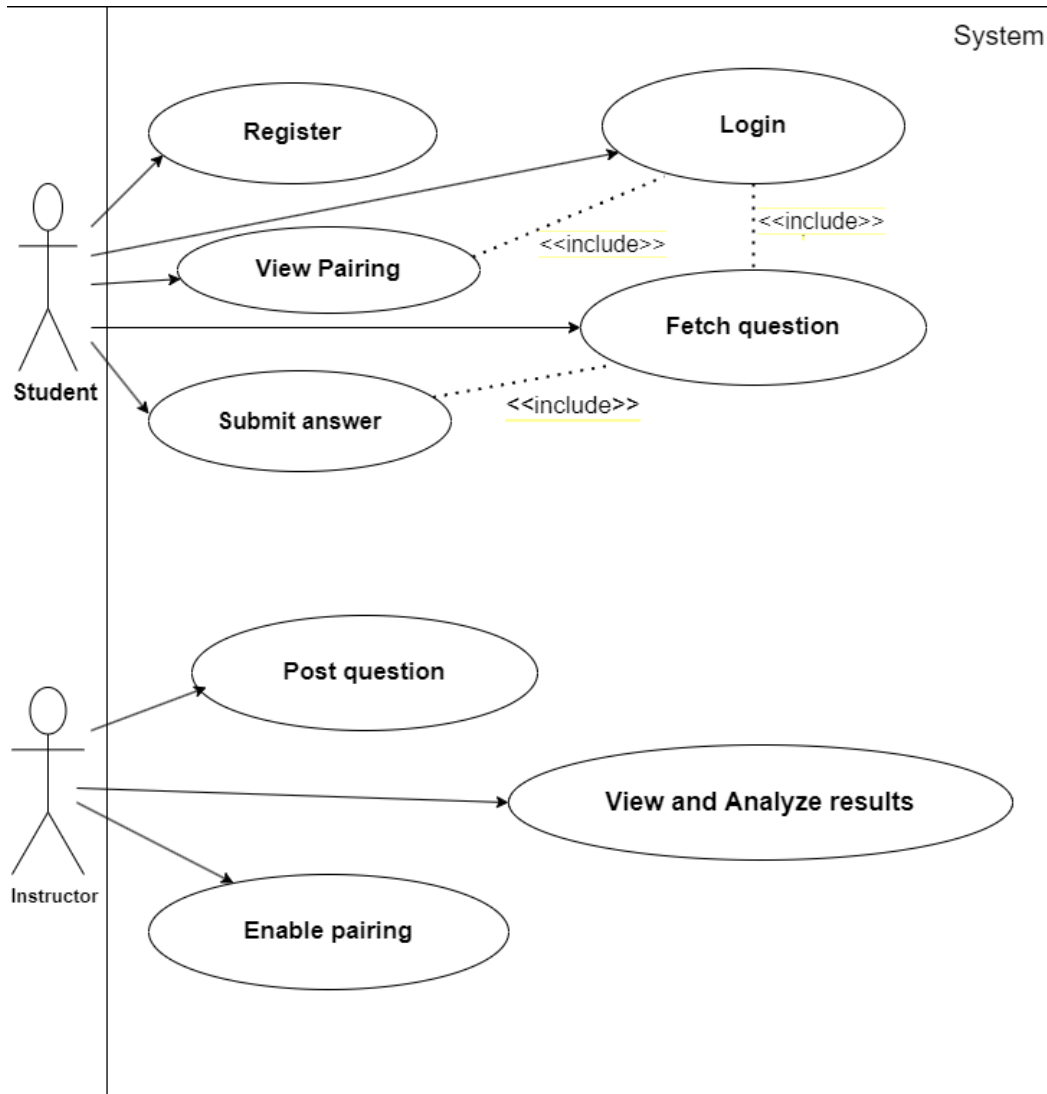


Figure 3.3.3: Use case Diagram

Table 3.3.3: Use case description of User

Use case number	1
Use case	Identity and access management
Goal	A user can register with the system, log in, and read their profile, attempt quizzes and marvel on their quiz marks.
Achievement of the goal	User has successfully registered and joins in, they can access their profile, attempt the quizzes and see their marks.
Failed end condition	User did not register.
Principal actor	User

This table describes the use case model of the manage account. It has the details about the signup, login, logout, viewing profile and etc. The conditions of the use case model and the main goal.

Table 3.3.4: Use case description of User (Admin)

Secondary Actor	Admin	
Description / Main Success Scenario	Step	Action
	1.1	User explore the system
	1.2	Press on sign up
	1.3	Enter full Name, email, mobile number, password & add picture
	1.4	To make an account, click the button account create
	2.1	Select "sign in"
	2.2	Put your email and password in
	2.3	To log into the system, click Sign In
	3.1	Select "view profile"
	3.2	Viewed profiles
	4.1	Click on tour quizzes
	4.2	Appear quiz subjects
	5.1	Click for attempt
	5.2	Quiz starts
	6.1	Administration is notified.
	6.2	View the quiz history of students
	7.1	select "Contract us"
Different Runs	User is unable to log onto the system, access their account, or make any attempts.	

Table 3.3.5: Use case description of Admin

<b>Use case number</b>	<b>2</b>	
Use case	Control user	
Goal	Administrators can access the system, view user profiles, and approve or reject the users quiz	
Success end condition	Admin logs into the system successfully, views the user profile, and approves or rejects the quiz	
Failed end condition	Administrator was unable to view user profiles or approve/cancel the quiz	
Primary actor	Admin	
Description / Main Success Scenario	Step	Action
	1.1	Admin browse the system
	1.2	Click on admin login
	1.3	Username and password are required
	1.4	select "sign in"
	2.1	Register on the system
	2.2	Select User Details
	2.3	Check out the user profile



	3.1	Click on manage quiz
	4.1	Ask for quiz list
	4.2	Approve/cancel the quiz using contact form
	5.1	Attempt Successfully approved/canceled using mail
Different Flows	The user cannot access the system	

Table 3.3.6: Use case description of Teacher

<b>Use case number</b>	<b>3</b>
Use case	Oversee User
Goal	Teacher can access the system and view students account and accept/reject the students quiz
achievement of the goal	Teacher having logged in to the system successfully, view students and approve/cancel the quiz
End condition that fails	Teacher unable to approve or reject the quiz after a failed login to the system and user profile view
Primary actor	Teacher

Description / Main	Step	Activity
Success Scenario	1.1	Teacher search the system
	1.2	Click on Teacher login
	1.3	There must be a username and password
	1.4	select "sign in"
	2.1	Register on the system.
	2.2	Click on students details
	2.3	View the students details
	3.1	Click on manage or create quiz
	4.1	Ask for quiz list
	4.2	Use the contact form to accept or reject the quiz

### 3.4 Logical Data Model

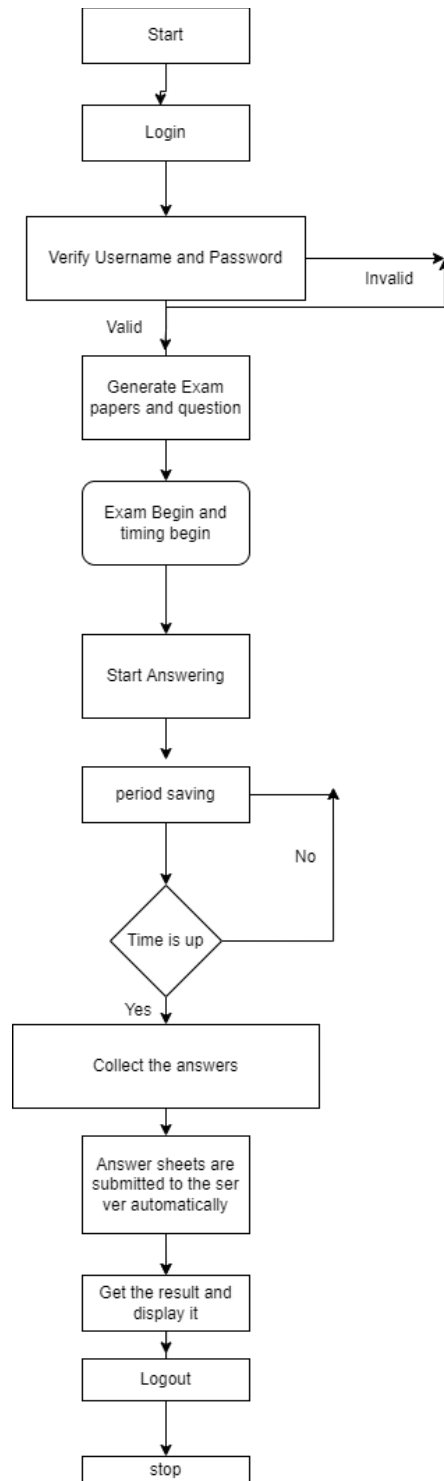


Figure 3.4.1: Flowchart of the Case Process

### 3.5 Design Requirements

Here we see the establishing procedure of a systems structure, components, modules, interfaces, and data to satisfy the perfect application. This part is called System design. Here's the system design of our application which has been displayed and includes an architectural design. The working method of the web application is given below

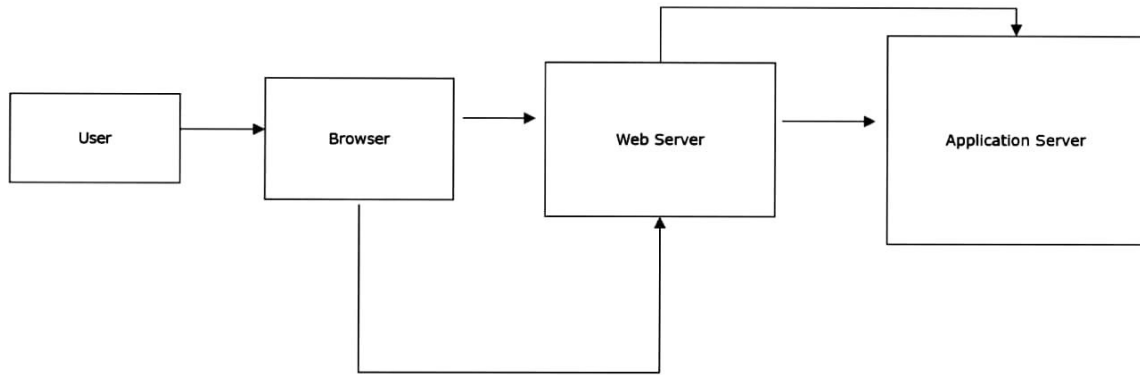


Figure 3.5.1: Working Method

# CHAPTER 4

## DESIGN SPECIFICATION

### 4.1 Front-end Design

The system has been made utilizing different types of devices plus part of our precious technologies. It is powered by an online application. The tools are listed below which are used for creating this software:

- HTML5
- CSS3
- JavaScript
- Bootstrap 4
- jQuery

### 4.2 Back-end Design

Nowadays There seem to be numerous choices out there available for accessing the determined job and deciding on the finest web developing to build a internet resource framework for educational institute is also very tricky.

Since they've used it recently on a venture or because they are more familiar with it, programmer should select an infrastructure and syntax. Before embarking on a new software system, programmers must evaluate whichever programming and infrastructure are the best fits for particular targeted goods. We choose to employ the Python-based project mainly to its reliability, rapid progress, durability, variation, and service (Django). Designers deployed MySQL database management utilities for the backend of our application. The MVC approach is used by Python's Django framework to link the presentation layer and database server. We intend to shortly employ NoSQL database strategies in our development. The specifics of the tools and technology are shown in Table 4.2.1.

Table 4.2.1 Tools and Technology

<b>Equipment &amp; Engineering</b>	<b>Version</b>	<b>Released Date</b>
Python	3.9	April 04, 2021
Django	3.0.4	April 1, 2019
MySQL	8.0	April 25, 2019
PyCharm	2021.3	July 28, 2021

### **4.3 Interaction Design and UX**

#### **DESIGN**

Since the system is web-based, we must use HTML5, CSS, Bootstrap, JavaScript, and JQuery to run it as a web application. Consequently, in our judgment, they should perfectly design a web-based system.

#### **COMPLETION**

This web application will make the quizzes easy and simple to attempt for the students. When appropriate, all area will be maintained.

#### **PROJECT DELIVERABLES**

After all the project is in development sector in the late period but the software must accept the changes that it needs. The goal is to delivering the software as quickly as possible. The delivery of the project will reflect the result of the improvements, how the services are occupied, are they better or not advantages from the reduction of the risks. The deliverables are reflected upon this factors.

#### **RESOURCE ALLOCATION**

Every project has a strategy to produce the perfect software that implies the best performance. Hence the resource allocation is taken step by step of the software planning process.

#### **4.4 Implementation Requirements**

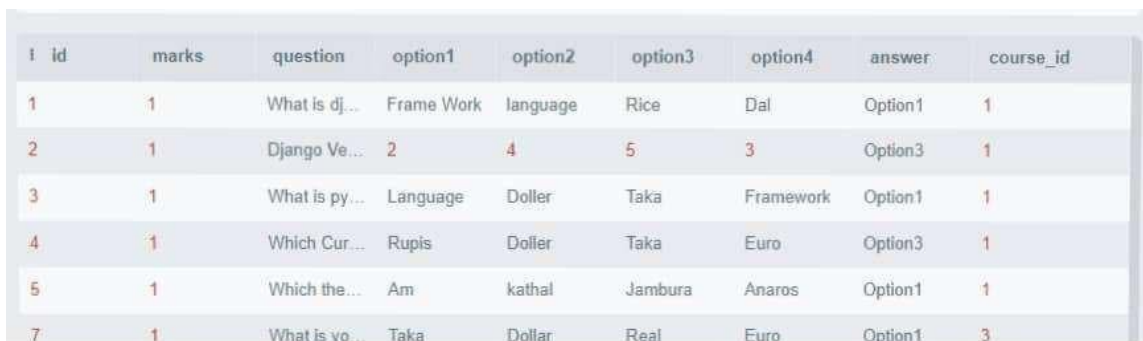
The effort shows the result of the best modified product to fulfill the quiz requirements by analyzing the system. Though they occur at the early stage of processing of the designing the software. Therefore, when it comes to study the software or documenting, verifying or managing the requirements, a requirement analyst must maintain and take the potential requirements to compete with various stakeholders.

## CHAPTER 5

### IMPLEMENTATION AND TESTING

#### 5.1 Implementation of Database

The implementation of the determined application is a must-be work to reach the destined goal. Though there are lots of characteristic in the systems background database and we're using MySQL workbench tool as the data handler.



i	id	marks	question	option1	option2	option3	option4	answer	course_id
1	1	1	What is dj...	Frame Work	language	Rice	Dal	Option1	1
2	1	1	Django Ve...	2	4	5	3	Option3	1
3	1	1	What is py...	Language	Doller	Taka	Framework	Option1	1
4	1	1	Which Cur...	Rupis	Doller	Taka	Euro	Option3	1
5	1	1	Which the...	Am	kathal	Jambura	Anaros	Option1	1
7	1	1	What is yo...	Taka	Dollar	Real	Euro	Option1	3

Figure 5.1.1: The database table of the DigiQuiz

#### 5.2 Implementation of front-end Design

##### Homepage

To be using the system for better good A person must have to face the home page of our project. There is login / sign up instruction for the user. The portal has links for signing up and logging in.



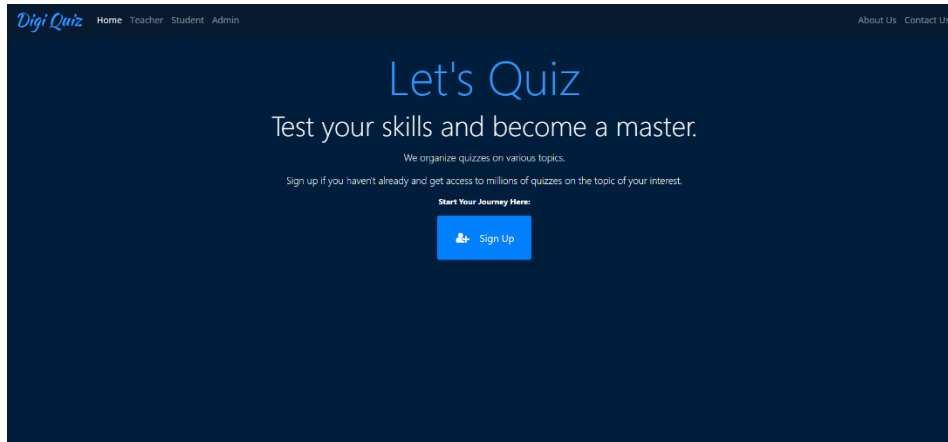


Figure 5.2.1: Pix of Homepage Login

This is the Teacher's interface of login or signup. The user(teacher) will be greeted here to input the valid information for the process.

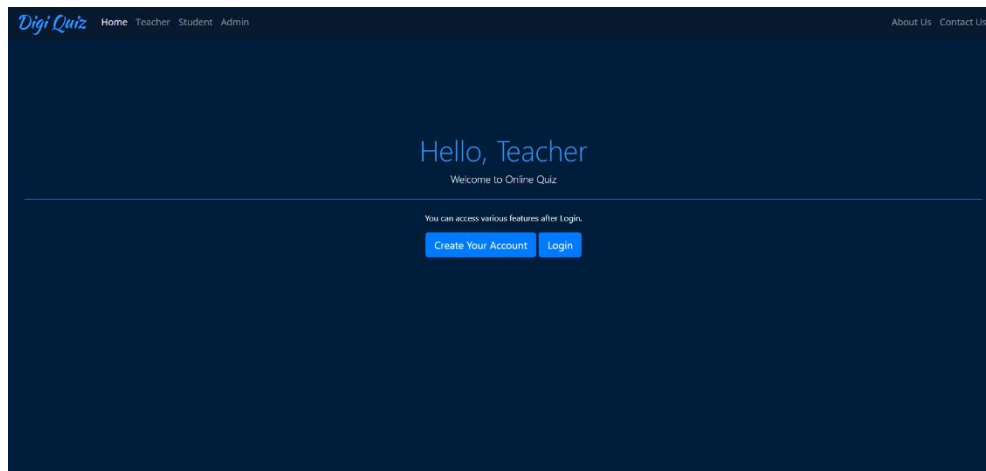


Figure 5.2.2: Screenshot of Homepage For Teacher

This is the same interface as the teacher's interface but the user who will have to use it are the students.

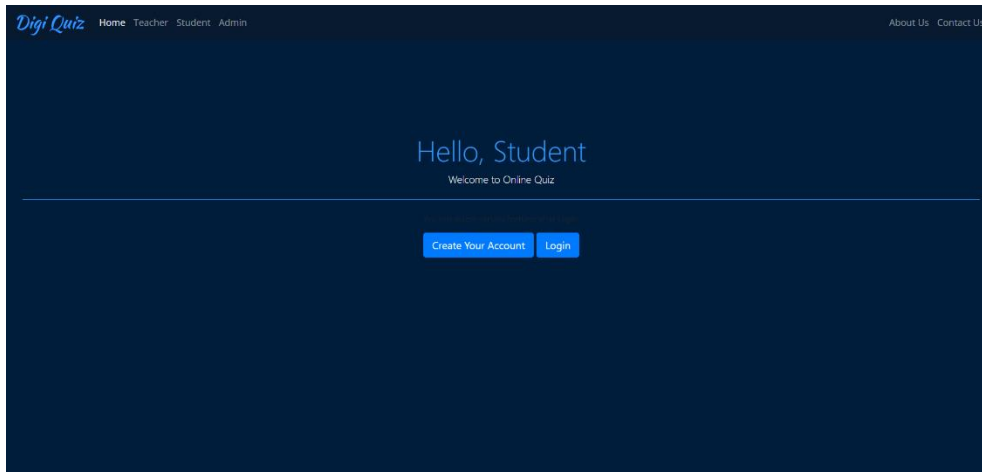


Figure 5.2.3: Screenshot of Homepage for Student

### **Admin Login**

The admin also has to login to maintain the website properly.

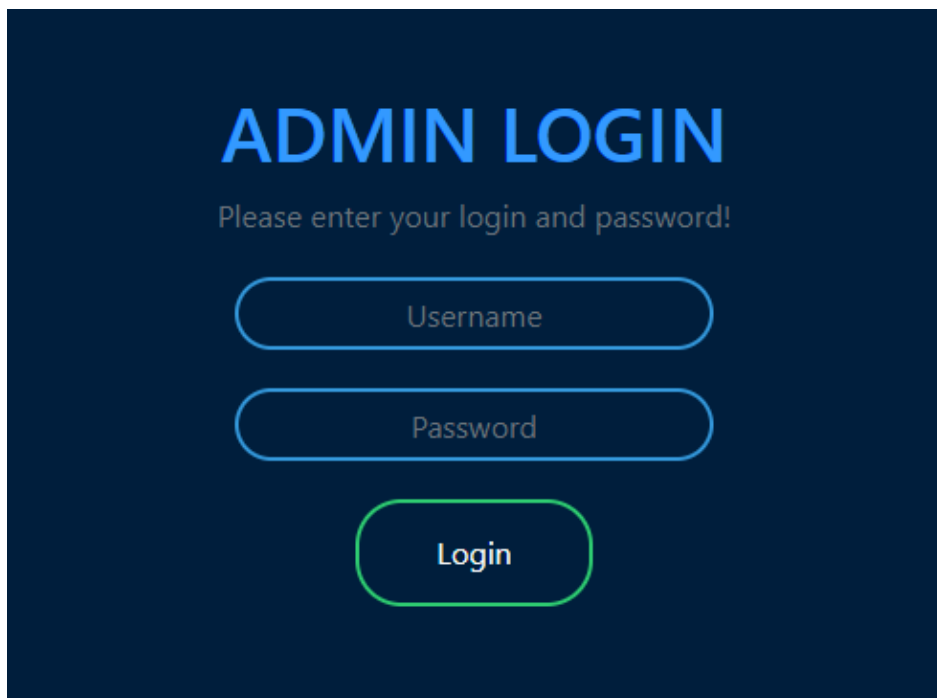


Figure 5.2.4: Screenshot of Admin Login

## About Us

One such page includes information about the application and the holding institution.

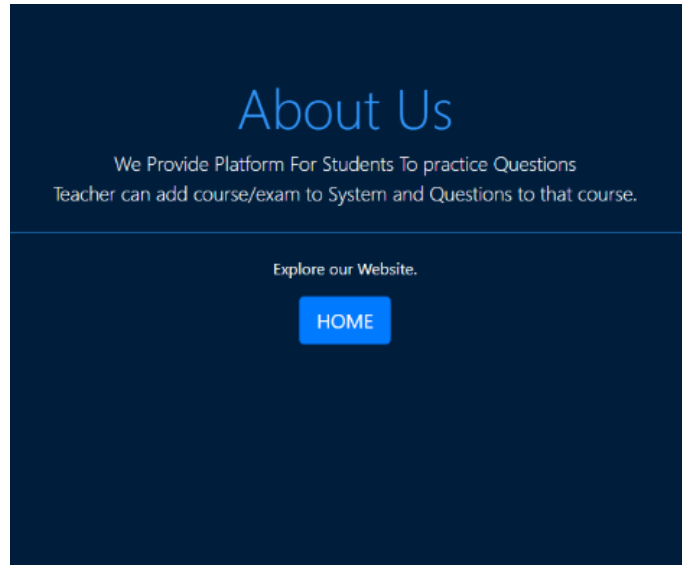


Figure 5.2.5: About Us interface

## Contract us

The user can get in touch with the appropriate person if they have any questions.

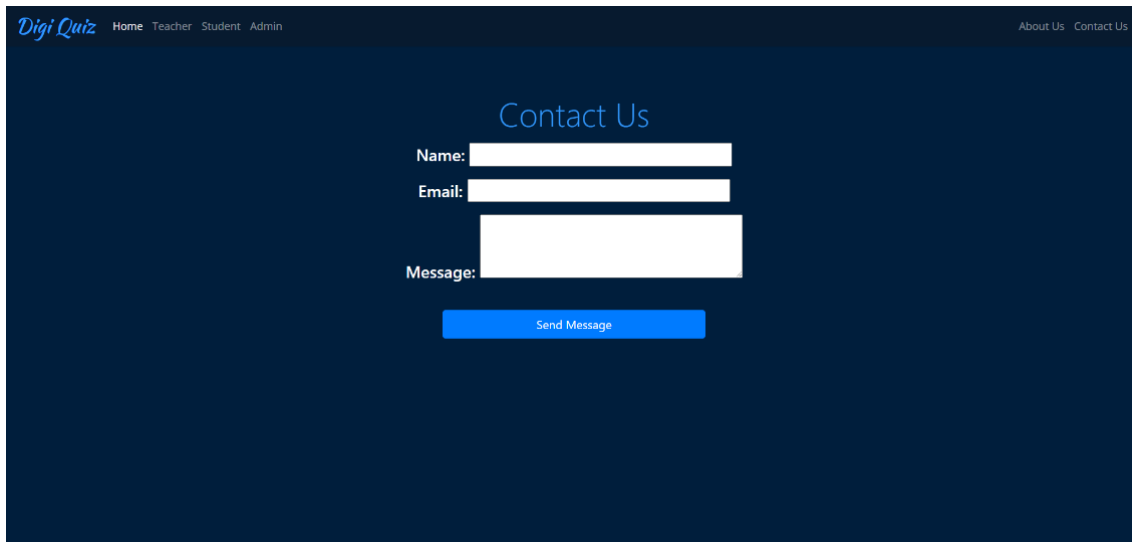


Figure 5.2.6: Contact Us

## Registration

Teacher's registration page has to be accurate with the valid information.

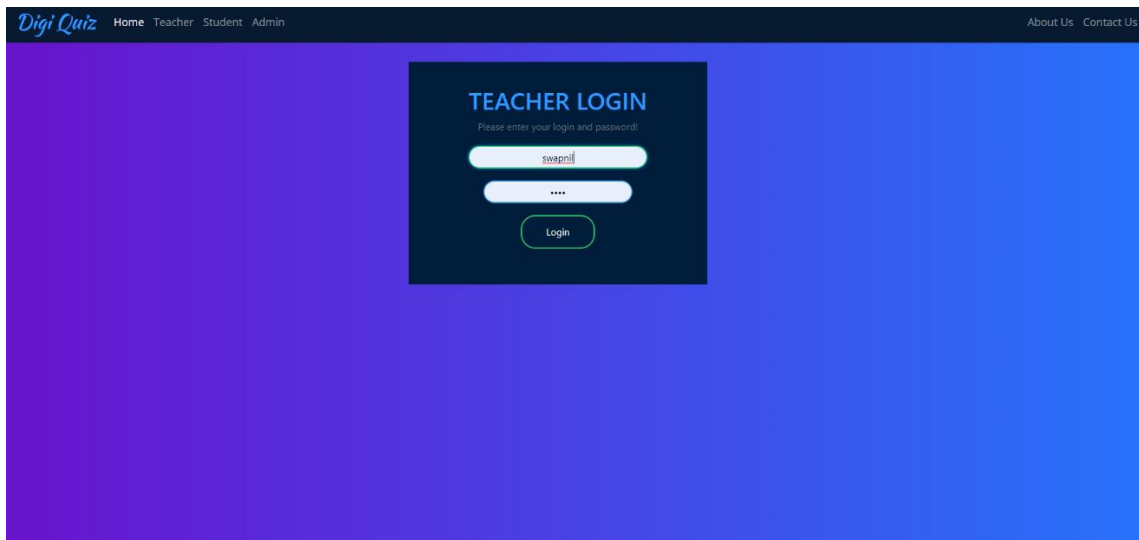


The screenshot shows a 'TEACHER SIGNUP' form on a dark blue background. The form contains several input fields: 'Username' (with 'pratik' entered), 'Password', 'First Name' (with 'First Name' entered), 'Last Name' (with 'Last Name' entered), 'Mobile', and 'Address' (with 'Address' entered). There is also a 'Profile Picture' section with a 'Choose File' button and the text 'No file chosen'. A 'Sign Up' button is located at the bottom left of the form.

Figure 5.2.7: Screenshot of Teacher Sign up

## Teacher Login

Here is the login page for the teachers. After the signup, login will appear all time for the same teacher profile.

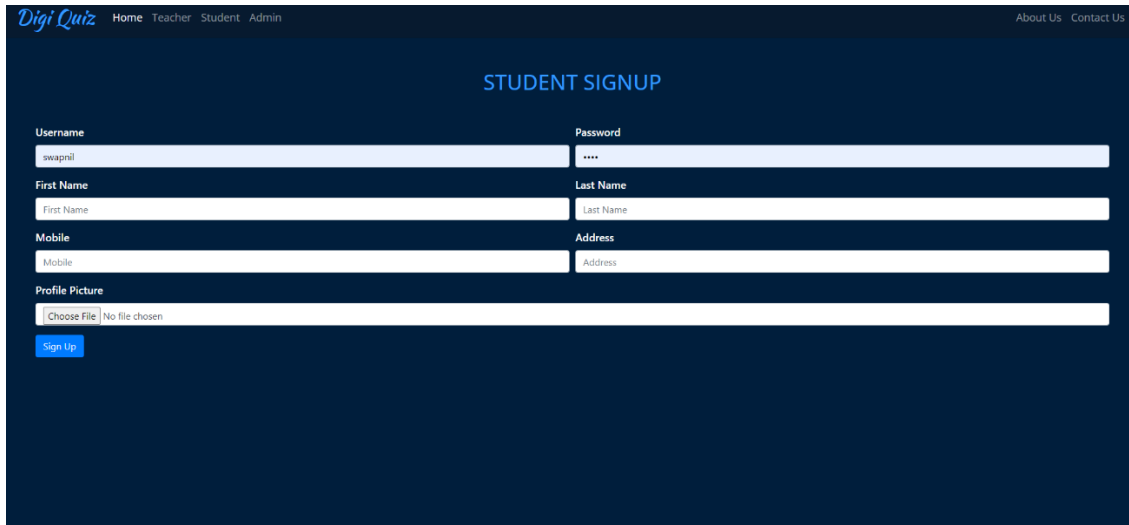


The screenshot shows the 'TEACHER LOGIN' page. At the top, there is a navigation bar with 'Digi Quiz' and links for 'Home', 'Teacher', 'Student', and 'Admin'. On the right side of the navigation bar, there are links for 'About Us' and 'Contact Us'. The main content area has a blue gradient background. In the center, there is a dark blue box containing the 'TEACHER LOGIN' title, the instruction 'Please enter your login and password:', two input fields (the first contains 'swapnil' and the second contains '\*\*\*\*'), and a 'Login' button.

Figure 5.2.8: Teacher Login

## Student Sign up

Here is the login page for the students. After the signup, login will appear all time for the same student profile.



5.2.9: Screenshot of Student Sign up

## Student Login

Here is the student login portion. With the valid data a student can log in to the application.

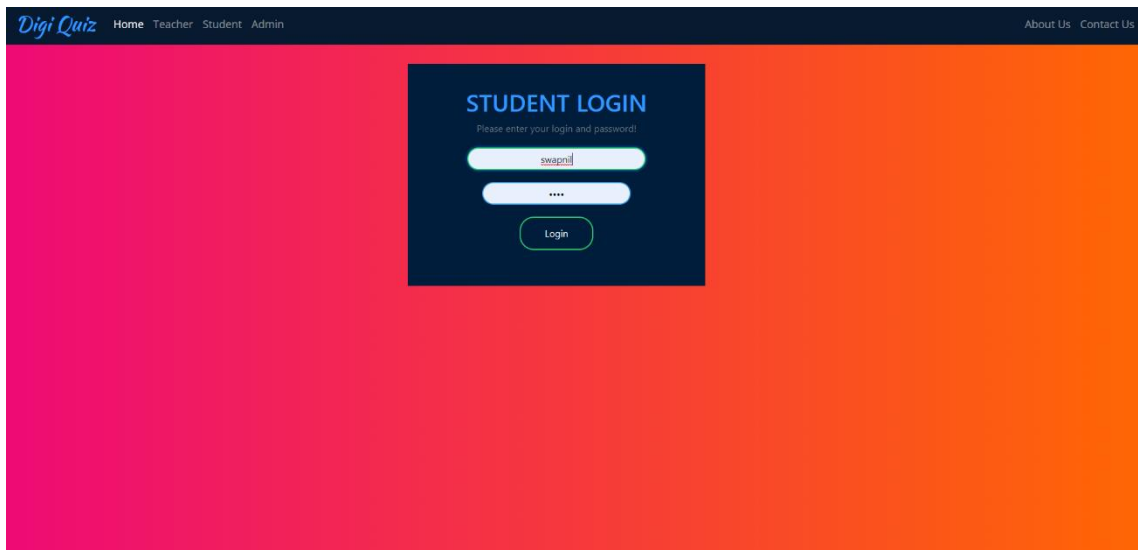


Figure 5.2.10: Screenshot of Student Login

## Admin Interface

Here is the glance of the admin interface. This is how it looks like and the options of an admin is available on the interface.

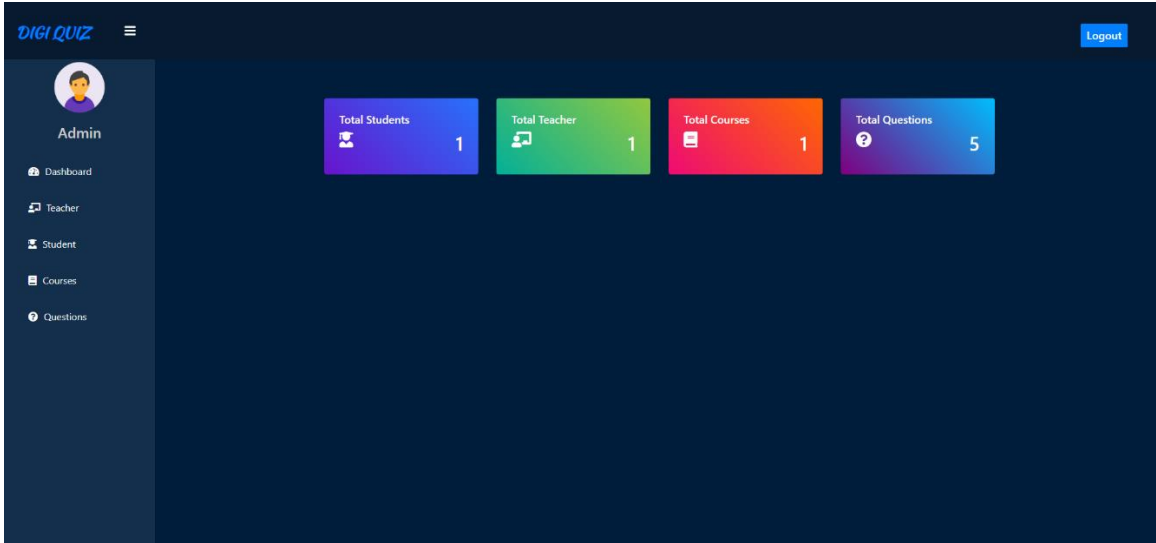


Figure 5.2.11: Screenshot of Admin Interface

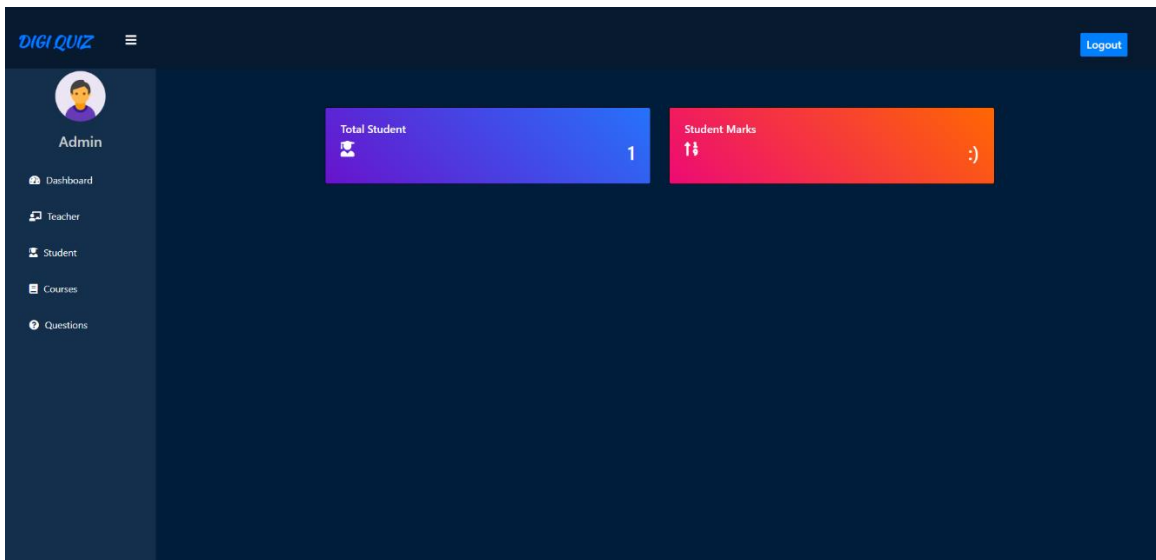


Figure 5.2.12: Screenshot of Admin Interface II

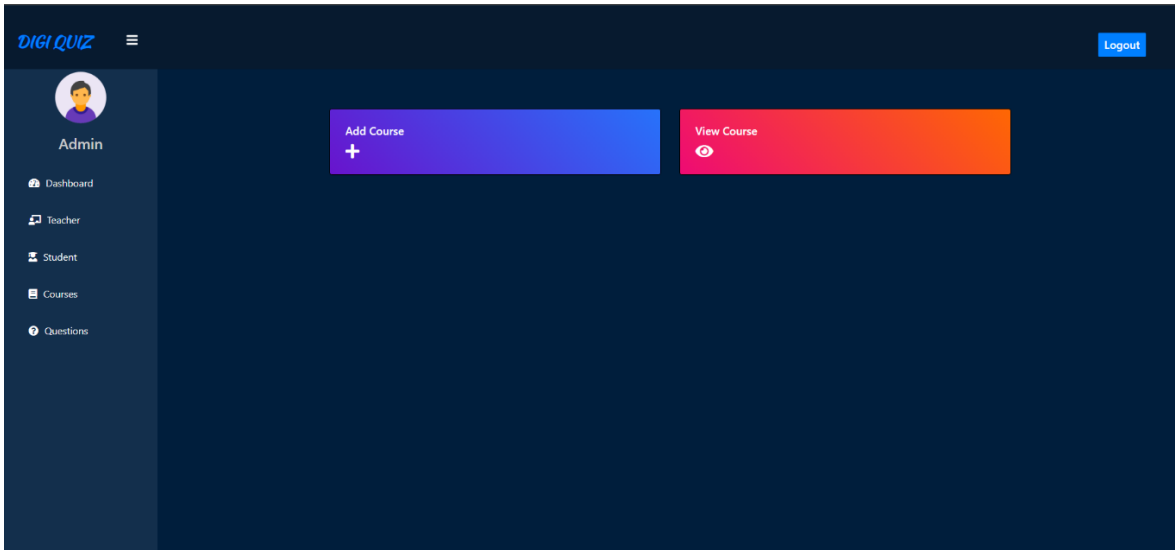


Figure 5.2.13: Screenshot of Admin Interface III

## Teacher Interface

Here is the glance of how the teacher interface looks like.

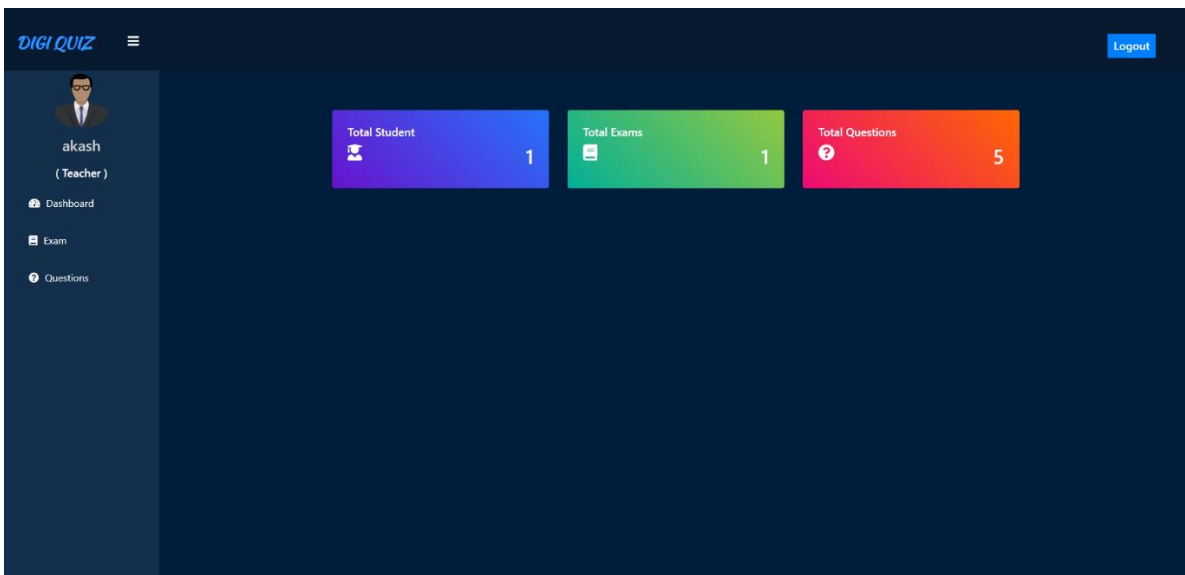


Figure 5.2.14: Screenshot of Teacher Interface

## Student Interface

Here is the outlook of the main users interface. The students will be having an interface like this after a successful login.

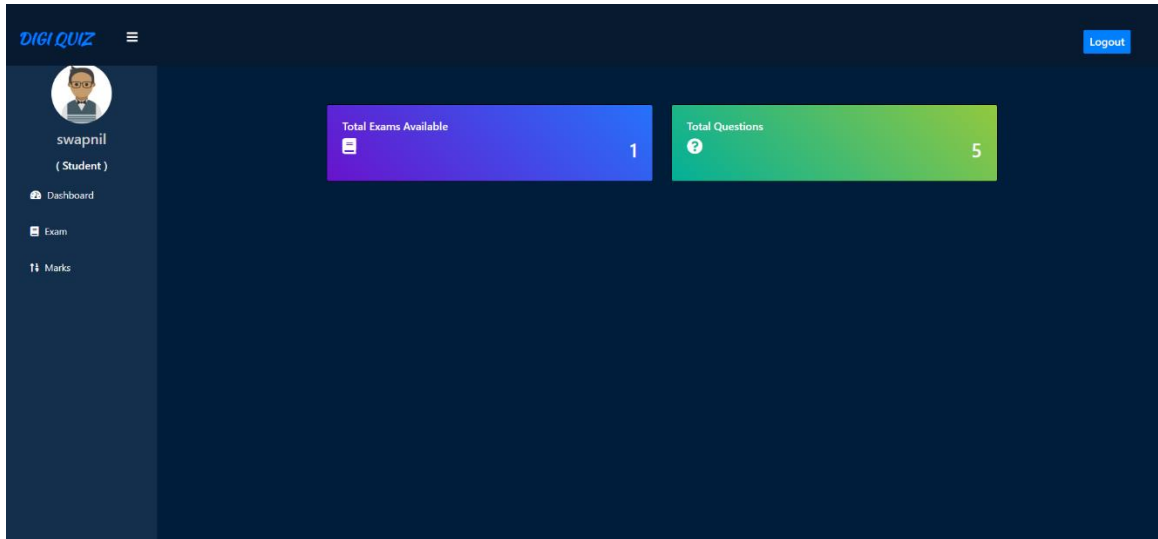


Figure 5.2.15: Student Interface

## Quiz Demo (Student)

In this part of the interface a student will have quiz test like the demo quiz on the screenshot's taken. A multiple choice question test is the fastest way to take a quiz.

Before starting a quiz the rules will be showed to the user as it helps about how to attempt the quiz correctly.





Figure 5.2.16: Screenshot of Demo Quiz

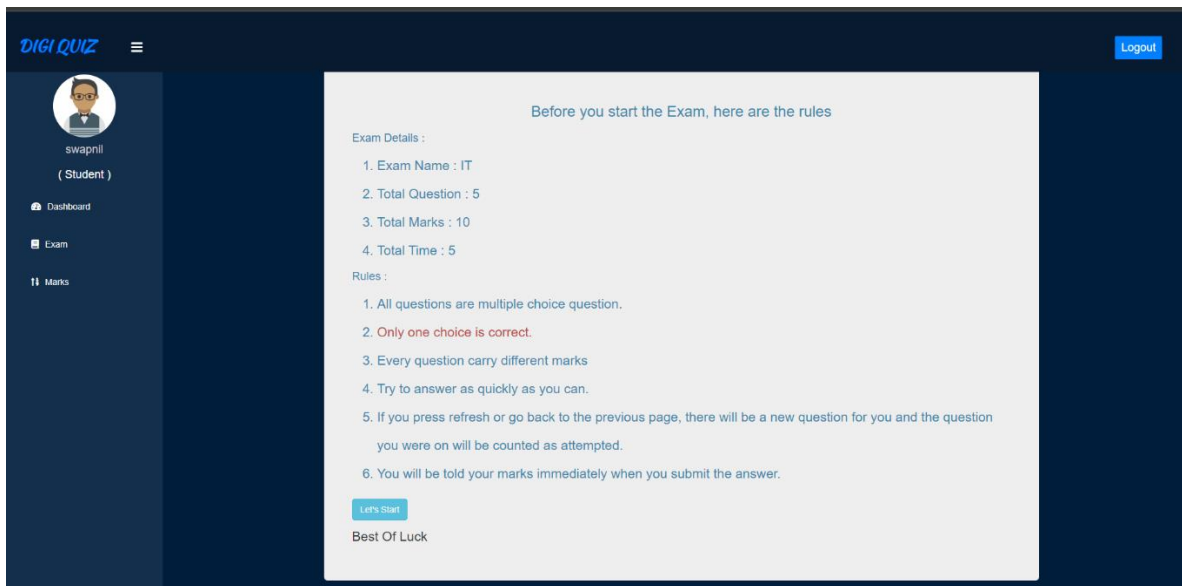


Figure 5.2.17: Screenshot of Quiz Rules

## Admin Check-in

On this page the admin visits the check-in portal. With this interface the admin checks the available teachers, how many have requested to be registered and the salary of the active and registered teachers.

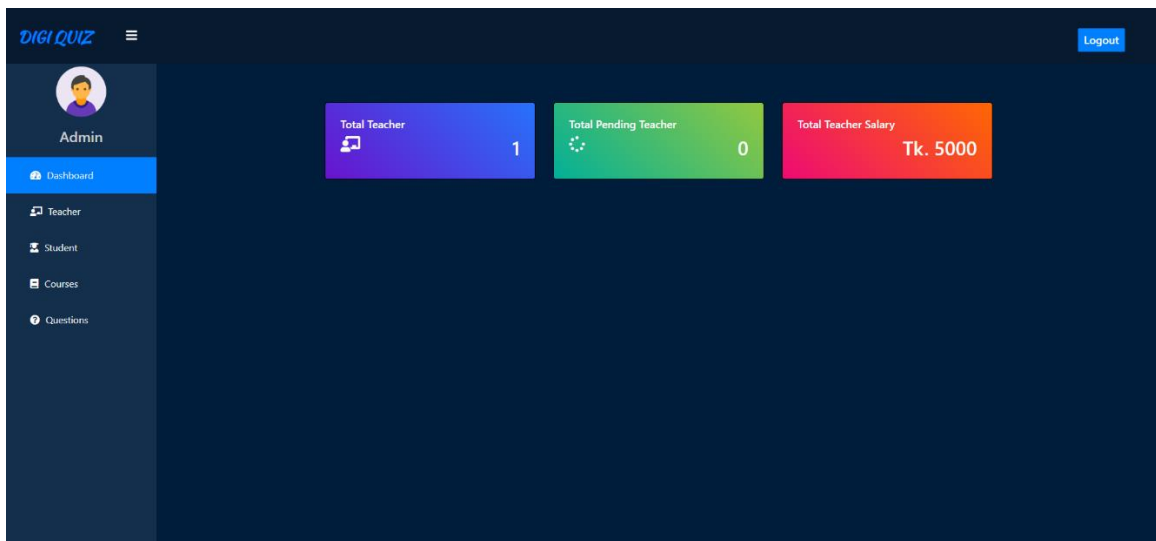


Figure 5.2.18: Admin Check-in

## 5.3 Implementation of Interactions

The modern age has given many tools for making the life easier for us. Given us the technologies that we need to survive on the modern day to day life. It has given the exam methods easier and quicker also. The MCQ based quiz application will save both time and loosen the hardship of the people which is exclusive. This system is used for online based examinations. Students can log in and perform individual exams. This system will consume less time than the existing system and it is more efficient. The result will be very accurate and the result will be displayed immediately too. Also, the result will be stored in the

database. This system is very secure and there are no chances of question paper leakage. This system is very user-friendly and easy to use.

#### 5.4 Testing Implementation

To examine the parameters and the accessibility functions within this system we have to set a new test set and also develop it furthermore. Each of the attributes plus options contain unique attributes. Exporting or altering existing functions Testing features added to an existing system is commonly known as module evaluation. We must create a kind of test set which is easier, secure, trustworthy and both efficient and effective. Testing is an important part of the project which determines the functions of a system are correct or not.

**Table 5.4.1 Testing Features**

<b>Features</b>	<b>Priority</b>	<b>Description</b>
Login	L	The user should access the system upon a successful login.
Logout	L	After logging out, the session needs to be ended.
Register	L	To access the system, a user must first register.
Posting quiz	L	Administrators have the ability to post tests.
Independent investigation	H	Students may ask about quiz.
View Applied teacher	M	Applying teacher is visible to admin.
Comment	M	User can remark on quiz.
Send Message	M	Students can send message to admin.

Approve as teacher	H	Admin can approve teacher
Remove Account	M	Any account may also be terminated either by administrators.

Here, L = Low Priority, M = Medium Priority, H = High Priority.

### 5.4.2 Testing Strategy

Testing strategy is the core center of testing process. Testing techniques includes testing objects, testing methods, and using all of the resources. It brings the quality of a of the project to its brim of the development cycle. Testing process depends on the type of function needs the testing, several methods are used here. User acceptability testing gets carried by the system.

### 5.4.3 Test approach

As a tester of the system, we have to choose a strategy to complete the process. There are two primary test methods which are both necessary and important.

- Automation Testing:** Testing software has made the whole software life cycle more effective and efficient by automating the use of the application. The technique involves the analyst putting their existing scripts and software into action to test the application which are relatable.

- Manual Testing:** To make sure that the software is working well, manual testing is needed to involve here. Utilizing the functions and operation of the application in a same way at end user. Here tester has to run the tests manually on the program in order to achieve the best outcome.

### 5.4.4 Black Box Testing

Using a black box offers one of the most known testing method when the observer is unfamiliar with the construction or design of the product undergoing analyzed. The known fact is that these tests are might be whether it is operational or not, here monitoring that is

operational is more prevalent. The software application looks to the observer to be a black box without any windows, hence the method's name.

#### **5.4.5 Equivalent Class Partition**

Equivalent domain or also known as EP is black-box based testing method. It is an very useful starting testing technique. In this method only from one partition of the condition gets tested from each partition. This happens by the presumption of the conditions inside a partition. Even if there happens to be any checking, there is no use because of the assumption of all the conditions are true if one condition in the partition is genuine.

#### **5.4.6 Boundary Value Analysis**

Measurement of border values is a method of black box schematic diagram to test the cases which are used in software. It is used to check whether is it defects the input at the domains edge.

#### **5.4.7 White Box Testing**

When the evaluators had zero knowledge of internal architecture or mechanisms, but in white box the architecture is completely known by the tester. It is also known that programming knowledge is frequently possessed by white box examiners, but it's usual as always. Different levels of white box verification exists such as:

- A module test
- Authenticity Inspects
- Framework evaluations

#### **5.4.8 Pass/ Fail Criteria**

Basically, a pass or fail criterion is tested, declared and technicians who conduct detailed performance. They select the insert information which is true or false while they prepare the roll standard. The working data are to be considered as the passed one, meanwhile those failing criteria are the leftover statistics. The pass/fail criteria of this system are given below:

- A judgment must consistently pass precisely in order to be called a pass condition.
- A fail criterion will be the system collapse threshold.
- Failure will be viewed as not reaching anticipated results.

Table 5.4.8.1: Testing Schedule

<b>Test Phase</b>	<b>Time</b>
Creation of a test plan	1 week
Testing guidelines	3 weeks
A unit test	In the course of development
Confirming the use case	2 weeks
Test of user interface	1 week
Load test	1 week
Publish for production	1 week

### **5.4.9 Testing Environment**

Technicians must set up the evaluation infrastructure before executing a test case using the necessary gears and software. Network setup is required often to execute the test plan.

Here are some important areas:

- Test data
- Operating system
- Browser
- Database server
- Network
- Project documentation.
- Machinery running a server operating system.

## 5.5 Test Results and Reports

An instance case is the bunch of conditions under which an evaluator has to access the system being tested completely. He/she has to find the issues and correct them according to the circumstances. Here in the process there might lie some risks of having holes or defects, and the validation checks will aid in determining them and even so makes easier to correct them. Though monitoring at 100% isn't really conceivable.

I must therefore carefully select the prototype. Below is a prototype for this system

Table 5.5.1: Login Scenario

Test case#1	Test case Name: Login
System: Online Quiz	Subsystem: N/A
Designed By: Akash Kumar	Designed date: 24/06/22
Executed By: Akash Kumar	Executed date:
Shortly Described: Authentication and permission are required by the system so that a registered user can access the application.	
Pre-conditions:  * Login should always be signed up.  * Redirected to the login page.  * Suppose the email is “akashkumar@gmail.com” and password is “123456”	

Table 5.5.2: Test case scenario 1

Step	Email	Password	Expected result	Actual result	Pass/Fail	Comment
1	akashkumar@gmail	123456	Invalid	As expected	pass	
2		123456	Email blank	As expected	pass	
3	akashkumar@gmail.com		Password blank	As expected	pass	
4	akashkumar@gmail.com	123456	Successful	As expected	pass	
Post-condition: The user will be taken to the dashboard and given a success message.						



Table 5.5.3: Register Scenario

Test case #2	Test case Name: Register
System: Alumni Portal	Subsystem: N/A
Designed By: Nilmoy Chandra	Designed date:
Executed By: Nilmoy Chandra	Executed date:
Concise description: An individual may sign up using their username and password.	
<p>Pre-conditions:</p> <ul style="list-style-type: none"> <li>* The client should be on the signup.</li> <li>* Format for a valid username and password.</li> <li>* Suppose the email is “pithu@gmail.com” and password is “123456”</li> </ul>	

Table 5.5.4: Test Case Scenario 2

Step	Email	Password	Expected result	Actual result	Pass/Fail	Comment
1	pithu@gmail.com	123456	Invalid	As expected,	pass	
2		123456	Email blank	As expected,	pass	
3	pithu@gmail.com		Password blank	As expected,	pass	
4	pithu@gmail.com	123456	Successful	As expected,	pass	
<p>Post-condition: The individual will get a success notification, register, and be forwarded to the center console.</p>						

## CHAPTER 6

### CONCLUSION AND FUTURE SCOPE

#### 6.1 Discussion

The genesis of this venture according to the consumers' requirements in it, with significant effort, and enduring and also with tenacity. The journey begins using a crude illustration of concepts and analyzing essential prerequisites that we need. But eventually on the field it was bit easier than the expectation we had. After that when the database design is complete, it appears to be simpler. The interface which is created is more comprise and straight forward, after finishing it, we started to work on the back-end logic of the system. The development procedure ends here. All this process or work is to ensuring the quality of the project.

#### 6.2 Conclusion

DigiQuiz web application is a new way to use as an online tool for giving exams online. The usefulness is high enough to overcome many physical obstacles, such as if any student is sick or ill for a few days and the exam is knocking at the door. He will not have to worry about going out and participating in the exam physically. He/she can now join the exam from home with the desired device in his palms. And as for the teachers, they will not have to be in the exam hall because now they can set the papers from anywhere, from any time to take the desired exam. It'll make the education system easier and more enjoyable for both the students and for the teachers. And if there are any criteria going on for example if any pandemic situation arrives again like past 2 years it'll be the most efficient tool for the education system. We have discovered a whilst collaborating on this project, design a development strategy.

### **6.3 Scope for the further development**

The scope of this project is very much broad in terms of manual taking exams. This website can be used by any educational institution. It can be used anywhere and anytime. It is very much easy to use and handle. Examiners can schedule a quiz or exam without remaining active during that time. This system is very much secure and accurate. There is no need for a manual examiner. The administrator can edit or delete anything. They can change the password, accept any candidate, and create a test. They can limit the time of the exam period. They can also randomize the questions and set negative marks for wrong answers. Students can request registration. When the registration is complete, they can log in to the system. They can edit their user information. They can also select the test and print the result after finishing the examination or quiz.

### **6.4 Future Work**

There would be a pleasant approach for professors to position at the beginning how well each student has absorbed in class with the help of this application, additionally, pupils are attentive, enabling them to evaluate what they have learnt in class right away, incorporating the idea of e - learning platform as well, boosting learning by interacting with other students. Such system has the capability to strengthen the conventional Classroom Command Center by extending and enhancing the current System. The upcoming work might consist of:

- A component in the system will allow the Professor to provide immediate comments/reviews based on their responses to the participants.
- Classifying the queries according to categories or modules allowing the educator to choose from past inquiries based on curricula.
- An educator countdown mechanism that allots duration based on how challenging the query is.
- Added support for additional operating systems.

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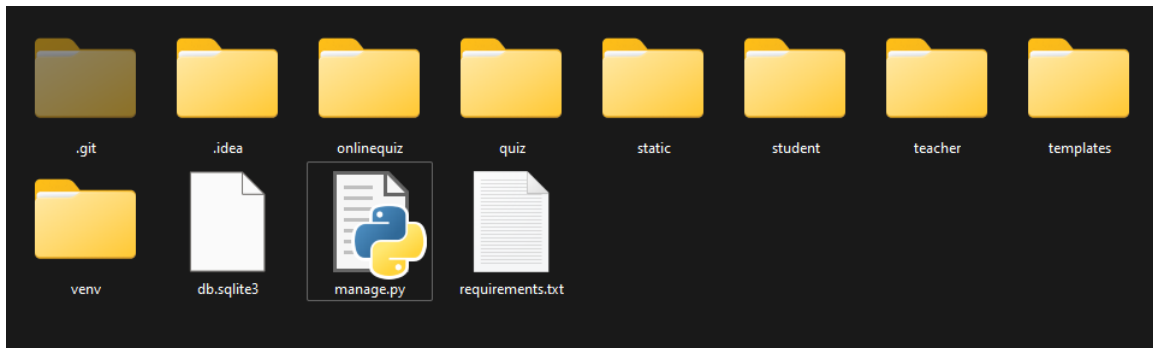
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## APPENDICES

### Appendix: A Project Reflection



R.1: Step-by-Step Construction of a Project