

**DESIGN AND DEVELOPMENT OF WEB APPLICATION:  
AUTOMATED QUIZ MANAGEMENT SYSTEM**

**BY**

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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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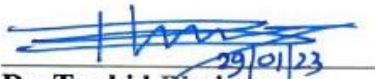
**DAFFODIL INTERNATIONAL UNIVERSITY  
DHAKA, BANGLADESH**

**26 JANUARY 20**

## APPROVAL

This Project titled “**AUTOMATED QUIZ MANAGEMENT SYSTEM**”, submitted by **SYED RIAJUL HAQUE ROHAN ID:191-15-12713** and **MYMONA AFJEN SYMA ID:191-15-12778** 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 26<sup>th</sup> January 2023.

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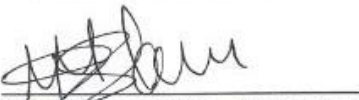
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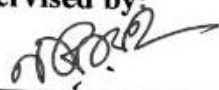
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## Declaration

We hereby declare that, this project has been done by us under the supervision of **Mr. Narayan Ranjan Chakraborty, Associate Professor**, 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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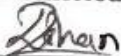
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## **ABSTRACT**

Automated Quiz Management System will fulfill the necessities of the institutes to habits the tests in online. They do no longer have to go to any software program developer to make a separate website for being capable to behavior assessments online. If any authority or any institution hire our system, they just maintain the admin panel to add course teachers for particular and the teachers will arrange a quiz in the system. Student simply have to register on the web page and enroll any of courses which the student wants to appear in exam of particular course. Students can appear examination besides without going to any bodily destination. They can view the end result at the identical time. Thus, the reason of the web page is to grant a device that saves the efforts and time of each the institutes and the students. Online quiz Web application System is a net software that establishes a community between the institutes and the students. Institutes add teacher and teachers enter on the web page the questions they desire in the exam. These questions are displayed as a take a look at to the eligible enrolled students. The solutions enter via the students are then evaluated and their result is calculated and saved. The result of the student is accessed by teacher of that course. The system will automatically give a result if the student pass or not. Online quiz web application affords the platform however does now not at once take part in, or is it concerned in any assessments conducted. Questions are posted now not by using the site, however through the assigned teachers of the site.

## TABLE OF CONTENTS

<b>CONTENTS</b>	<b>PAGE</b>
Board of Examiners .....	i
Declaration .....	ii
Acknowledgements .....	iii
Abstract .....	iv
LIST OF FIGURES .....	viii
LIST OF TABLES .....	ix
<b>CHAPTER 1: INTRODUCTION .....</b>	<b>1-3</b>
1.1 Introduction .....	1
1.2 Motivation .....	1
1.3 Objectives .....	1
1.4 Expected Outcome.....	2
1.5 Project Management and Finance.....	2
1.6 Report Layout.....	3
<b>CHAPTER 2: BACKGROUND.....</b>	<b>4-6</b>
2.1 Preliminaries/Terminologies .....	4
2.2 Related Works .....	4
2.3 Comparative Analysis.....	4

2.4 Scope of the Problem.....	5
2.5 Challenges .....	5
2.5.1 Development Purpose.....	6
2.5.2 Working Purpose .....	6
<b>CHAPTER 3: REQUIREMENT SPECIFICATION .....</b>	<b>7-16</b>
3.1 Business Processing Model .....	7
3.2 Requirement Collection and Analysis .....	8
3.3 Use Case Modeling and Description.....	10
3.4 Logical Data Model .....	16
3.5 Design Requirement .....	16
<b>CHAPTER 4: DESIGN SPECIFICATION.....</b>	<b>18-33</b>
4.1 Front-End Design .....	18
4.2 Back-End design.....	22
4.3 Interaction Design and User Experience (UX).....	23
4.5 Implementation Requirements.....	33
<b>Chapter 5: IMPLEMENTATION AND TESTING.....</b>	<b>34-38</b>
5.1 Implementation of database.....	34
5.2 Implementation of Front-End Design.....	34
5.3 Test implementation .....	34
5.3.1 Required Test .....	35
5.3.2 Unit testing .....	36

5.3.3 Validation testing : .....	37
5.3.4 Compatibility testing: .....	37
5.4 Test result report.....	38
<b>CHAPTER 6: IMPACT ON SOCIETY,ENVIRONMENT AND SUSTAINABILITY .....</b>	<b>40-41</b>
6.1 Impact on society.....	40
6.2 Impact on Environment .....	40
6.3 Ethical Aspects .....	40
6.4 Sustainability Plan .....	41
<b>CHAPTER 7: CONCLUTION AND FUTURE SCOPE.....</b>	<b>42-42</b>
7.1 Discussion and Conclusion.....	42
7.2 Scope for Further Development .....	43
<b>REFERENCE.....</b>	<b>44</b>



## LIST OF FIGURES

Figure 3.1: Business Process Model .....	9
Figure 3.2: Use Case Model Diagram.....	11
Figure 4.3: home Page .....	18
Figure 4.4: Expert's page.....	19
Figure 4.5: Courses Page .....	19
Figure 4.6: Log in / Register page .....	20
Figure 4.7:Admin Dashboard.....	21
Figure 4.8: Teacher's Dashboard.....	21
Figure 4.9: Student Dashboard Page.....	22
Figure 4.10: Back-End Database page.....	23
Figure4.11: Registration Page.....	24
Figure 4.12: Log In page.....	25
Figure 4.13: Course Add page .....	26
Figure 4.14: Teacher's Dashboard.....	27
Figure 4.15:Quiz Creating Page.....	27
Figure 4.16: MCQ & written Question Adding page .....	28
Figure 4.17: MCQ question adding page.....	28
Figure 4.18: Student Dashboard .....	29
Figure 4.19: Attempt Exam Page.....	30
Figure 4.20:Exam Page.....	30
Figure 4.21:After exam, result page .....	31
Figure 4.22:Result Sheet.....	31
Figure 4.23: Student's obtained marks page.....	32
Figure 4.24: Marks,attendance Page from Teacher .....	32
Figure 4.25: SSL Commarz Page.....	33
Figure 5.26: Validation Testing For Attempting Quiz.....	36
Figure 5.27: Validation Tasting for Attempting Quiz .....	37

## LIST OF TABLES

<b>TABLES</b>	<b>PAGE</b>
Table 3.1: Use case of data recording.....	12
Table 3.2: Use case of Financial management.....	12
Table 3.3: Use case of Inspection .....	13
Table 3.4: Use case of add batch, Teacher ,add course and details .....	13
Table 3.5: Use case of upload course and details .....	13
Table 3.6: Use case of user's information .....	14
Table 3.7: Use case of upload question or mcq .....	14
Table 3.8: Use case of Attempting quiz.....	15
Table 3.9: Use case of Quiz Result.....	15
Table 3.10: Logical Data Model .....	16
Table 5.1: Unit Testing .....	36
Table 5.2: Validation Testing .....	37
Table 5.3: Compatibility testing .....	38
Table 5.4: Test Result .....	38

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Automated Quiz Management System is being launched due to the fact a need for a vacation spot that is beneficial for each institute and students. With this site, institutes hire our system and add their offered courses in standard price. And then they host online exams. Students can provide exams and view their results by enrolling their courses. This website is an attempt to cast off the manual exam administration system's problems.

### 1.2 Motivation

Online quiz system fulfills the necessities of the institutes to conduct the exam online. They do no longer have to go institution physically or not to go any software program developer to make a separate website online for being in a position to behavior assessments online. They simply have to get system and register teachers on the website online and enter the question for exam. Student not need to go the institution for attending examination. Here time and money both will save for both student and teachers. Students can supply examination besides the want of going to any bodily destination. They can view the end result at the identical time which is more effective for a student specially job examination candidate or admission test examinee. Thus, the reason of the web page is to grant a device that saves the efforts and time of each the institutes and the students.

### 1.3 Objectives

The goal and scope of my Project Online Quiz System is to record the small print various things to do of user. It will simplify the task and limit the paper work. During implementation every consumer will be given appropriate education to suit their precise needs. Specific support will additionally be provided at key factors within the tutorial calendar. Training will be provided on a well-timed basis and you will be trained as the new is Online Quiz System rolled out to your region of responsibility. At the moment we

are in the very early stages" so it is tough to put a specific time on the training!" however we will keep human beings informed as plans are developed. The device is very user pleasant and it is anticipated that features of the system will be effortlessly accessed by administrators" academics" institutional students and applicants. Hence the management device for the institute management has been designed to do away with all the deficiency from which the present system is suffering and to ensure. Allow all teachers and students to create extra than one examination with exclusive way by creating variant questions in variant courses. The information saved in the server of the Institution and our online exam system, making co-operation between them. To deal with On-line System in a handy way and an environment friendly mannered. Create robust and secrete statistics base that permit for any connection in a secret way, to forestall any outdoor or internal attacks. Specify a privilege for every character to enable every man or woman use this device to create his very own exam. And have an entire manipulate on his exam. To make preparation better for job exams for job examinee. To make better preparation for university admission test examinee.

#### **1.4 Expected Outcome**

User can strive any type of quiz from the given list. Result of the quiz tried by the consumer will be displayed. User can know his/her degree of knowledge in the modern-day situation. As we are making an online web application for institutions, teachers and students, this will be able to reduce time lose, paper use, physical existence in institution. It will able to justify the capacity of a student's current knowledge in that particular course.

#### **1.5 Project Management and Finance**

This is the planning and organizing the challenge which executes the work in time and within budget. Employees, finances, applied sciences and creative work are the section of the process which may be a onetime initiative or continuous operation. Project administration is connected with professions such as engineering and construction, as nicely as information technological know-how (IT). Because these fields are involved with a problematic set of components which thought to be completed and built-in in a specific equipped way to produce a functional product. As we comprehend that the project is a Quiz

Web Application, an internet site for institution of taking examination which is for job applicants, admission take a look at examinee or any institutional purpose the place the work of front end, back-end and the database which will be construct for professional motive. Here finance or fund from the system hiring management. Every fund will applied for developers, marketing, training, upgrade, update and so on sectors. A large domain and better hosting for 24/7 support is a great issue. All those stuffs funded by contracted system hiring management.

### **1.6 Report Layout**

The report of the project contains seven-chapter. Those are Introduction, Background, Requirement Specification, Design Specification, Implementation and Testing, Impact on Society, Environment and Sustainability, Conclusion and Future Scope. First chapter there are the topics Introduction, Motivation, Objectives, Expected Outcomes, Project management and Finance, Report Layout. Second chapter we have entered Preliminaries/Terminologies, Related work, Comparative Analysis, Scope of the Problem and Challenges. In the third chapter we have discussed Business Processing Model, Requirement Collection and Analysis, Use Case Modeling and Description, Logical Data Model and Design Requirement. In the fifth chapter we discuss Implementation of Database, Implementation of Front-end Design, Testing Implementation, Test Results and Reports. In the sixth chapter we have entered our project's Impact on Society, Impact on Environment, Ethical Aspects and Sustainability plan. In the seventh chapter we have entered Discussion and Conclusion and the Scope for Further developmen

## **CHAPTER 2**

### **BACKGROUND**

#### **2.1 Preliminaries/Terminologies**

As our project is online quiz system, it will be an online education platform where there been many users also have organizations. So, we created three vendors for administration, teacher and student. In this project we use Larval blade template for design and PHP as back-end programming language [1].

The terminologies used as follows:

PHP

HTML, CSS

JAVA Script

Laravel 9 (blade template)

Apache server

MySQL database

#### **2.2 Related Works**

There are some other online quiz application systems in Bangladesh or others country system but some difference and update functionalities in our system. Because in this project we have worked for making the quiz system updated, more user friendly and most reliable for the users. Here are some others top online quiz application system websites are given below:

- Uttoron. Link – ([Uttoron](#))
- Quiz maker . Link – ([SurveyMonkey: The World's Most Popular Free Online Survey Tool](#))
- Quizack . Link – ([Web Application Quiz Online | Quizack](#))
- Testportal . Link – ([Testportal: Online assessment platform | Create your own tests](#))
- Qzz . Link – ([Create Online Quizzes That Drive Revenue · Qzzr \(now part of Riddle quizmaker\)](#))
- Woories . Link – ([Quiz Maker – Create Free Online Quiz – Woorise](#))
- 

#### **2.3 Comparative Analysis**

Our “Quiz” management site is higher than preceding variations as most of the online examination web sites supply facility to solely one institute to preserve the tests. They are static and are related with a unique institute or test. Online “Quiz” is an internet site that can be used by way of more than one institutes. Any institute that chooses to habits the examination can register on the site. Online examination is an evaluation that use community connection or web in its process. Individuals and college, university or any institute’s students should signal in on an evaluation application or internet hyperlink by way of getting into their username and password. Then they pick the direction that will be examined and the student begin answering the questions that is proven on the screen. After they have completed the examination, the student taking the examination have to click on a submit button that would require ending the examination process. After submitting student get result in the meantime. So comparatively our system is giving most reliable, flexible user-friendly system in the online platform.

#### **2.4 Scope of the Problem**

The internet site to habits online examination is online quiz system. This internet site affords facility to institutes to habits on line tests with the aid of supplying a special identity to every institute. The institute or registered teachers from the institute presents questions alongside with high quality and terrible marks. Institute additionally enters the courses which they offering and students from registered students. All the data entered can be later edited via the institute. In flip college students can login with their user’s name and password to provide the assessments and can view their end result then and there. Institutes can additionally view the end result of their students. This online quiz internet site reduces the guide work, retaining accuracy, growing effectivity and saving time. Also, institutes want now not go to enhance a new software program every time, rather they simply register and habits a test. For students, it saves time of going to some distance away facilities and additionally they can view their end result then and there. Student can get their result sheet at a time of submitting answers. Creating a better platform with the conduct of institute, teacher and student and reducing pan paper’s use and also reducing time is the major scop of our project.

#### **2.5 Challenges**

We have faced some challenges to complete this project. There are two types of challenges while working on this project. They are 1. Development purposes and 2. Working purposes.

### **2.5.1 Development Purpose**

For building up this venture or project we have to research Larval, PHP, JAVA script, MySQL. It was once a terrific project for us to research these and make this project. Here Larval is used for the framework and as a programming language we use PHP. For databases we use MySQL [2]. Maintaining and designing database is a great challenge. At the commencing Laravel framework and PHP language used to be completely new for us so it used to be a super mission for us to expect this component and additionally get interrupted in the step of working. Being focused on the performance of the developing system, availability, reliability, usability of the system is the most challenging for development [3].

### **2.5.2 Working Purpose**

In our project making interaction with the institutions, students and teachers are the challenges of working purpose. Information technology's era is running now where the importance of automation every single thing getting priority. The site will lead to the automation of the examination system. Moreover, developing it as far better than the previous such websites is the most effective challenging matter for us. Making more user friendly comparatively others also a challenge for us and we hope we could overcome all of those challenges.



## **CHAPTER 3**

### **REQUIREMENT SPECIFICATION**

#### **3.1 Business Processing Model**

Economic evaluation is the most frequently used evaluating the effectiveness of proposed system, extra commonly recognized as Benefit analysis. The Benefit analysis is to decide benefits and financial savings which are expected from candidate device and compare them with cost. If the advantages are more than the cost, then choice is made to design and put in effort the system. The cost and advantages may be direct or oblique and tangible or intangible. That is the business process model. In below there given descriptive business process model.

A website, on-line quiz system is to be designed to conduct online tests. Existing different online examination systems this website ought to not be just for the students; instead it need to also provides facility to Institutes to host online Exams/Tests. This will help institutes as:

There will be no need to get new software every time to host an online test.

Comparatively other online websites, it will assist students by:

- Saving the extra time of going to far away Exam Centre.
- Students want not wait for their results so our system will provide result in the time of completing exam.
- Reduce pen and paper use.
- At a time teacher can take many courses exam or any different time.

Moreover our “Quiz” website will remove the flaws of current Manual Systems like:

- Reducing the manual labor (Decreases Overheads).
- Avoiding Mistakes Due To Human Error (Accurate).
- Will Increase Efficiency and Save Time.
- Will Allow Neat Handling Of Data Rather Than Error Prone Records.
- User like teacher or student will register themselves with a unique login name and

- password as their chois.
- They will enter exam small print like number of questions, +ve and -ve marks, total marks, taken time.
  - Teacher or Institutes will be able to view the college students list along with their respective results [8].

Also for students:

- They should be in a position to login with their email and password.
- Students should be able to attend the exam as per the details entered by respective institutes or according to their enrolled courses.
- Also they ought to be able to view their score after test finishes.
- If already given the take a look at then they should just be able to view their scores.
- Site viewer can take visit to get feel about the system when browsing and how the online tests are conducted [8].

Here in figure No : 3.1 is presenting the business process model of our proposed system.

### **3.2 Requirement Collection and Analysis**

- **Software Requirements**
  - Visual Studio: Visual studio is an IDE .It gives tools for code writing, editing, debugging, testing.
  - XAMPP: The software XAMPP which provides MySQL database, Apache web server and Perl. Here we use XAMPP for Apache server and MySQL database [4].
- **Hardware Requirements:**
  - Operating System: Windows
  - Computer configuration: As any configuration computer.
  - A supported printer that print result sheet.

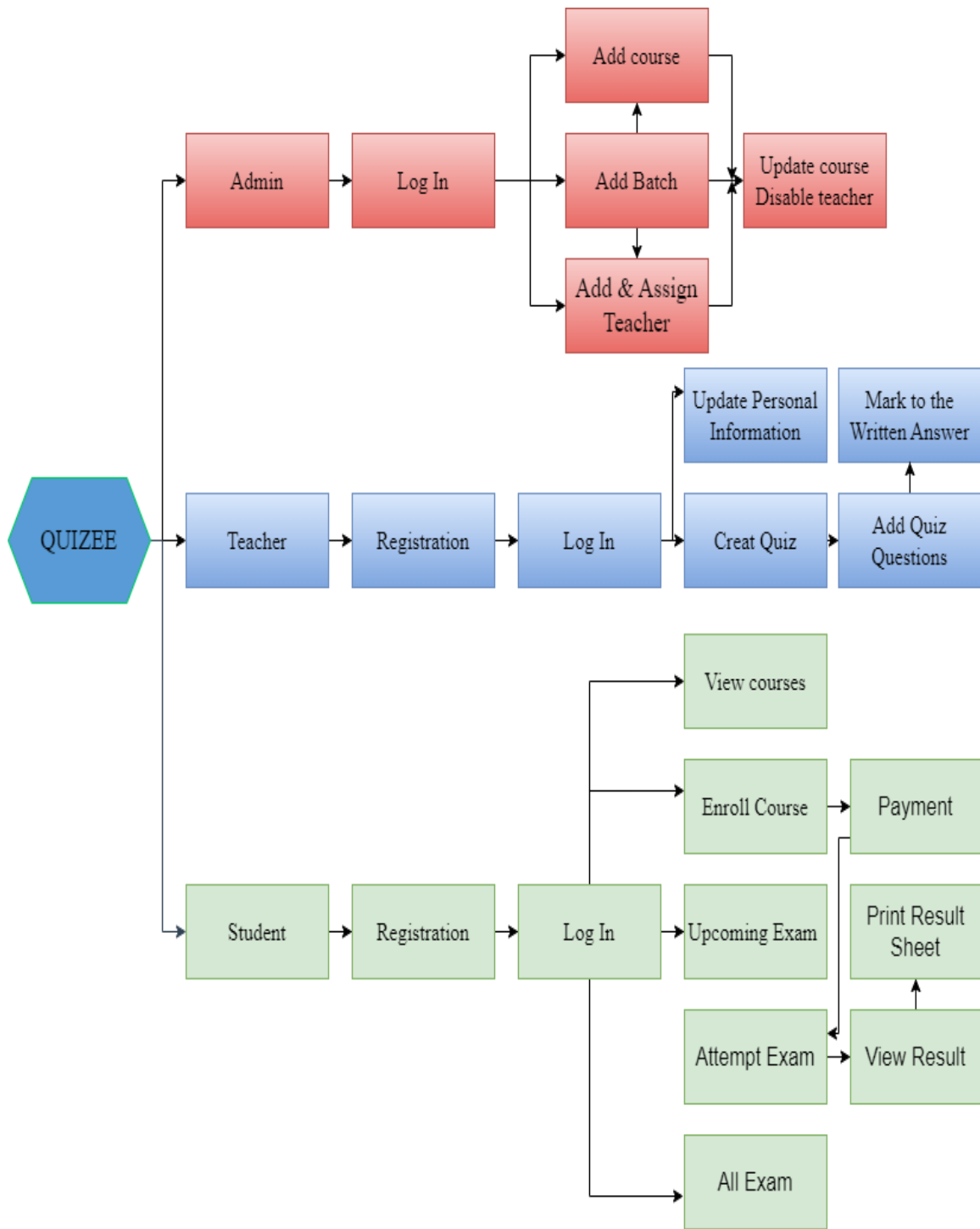


Figure 3.1: Business Process Model

➤ **Performance Requirements:**

Performance is the major requirement which depends on better domain and hosting.

Numerical necessities will include:

- More than 200 terminals will be supported at a time
- Text facts will be supported.
- In the time of enrollment payment all transaction will be completed within few seconds.

### **3.3 Use Case Modeling and Description**

Use case model, Called a graphical description of the proposed functionality of a new system. It describes system analysis to identify, clarify and organize system requirements.

Figure 3.2 shows the use case model of our proposed web application .

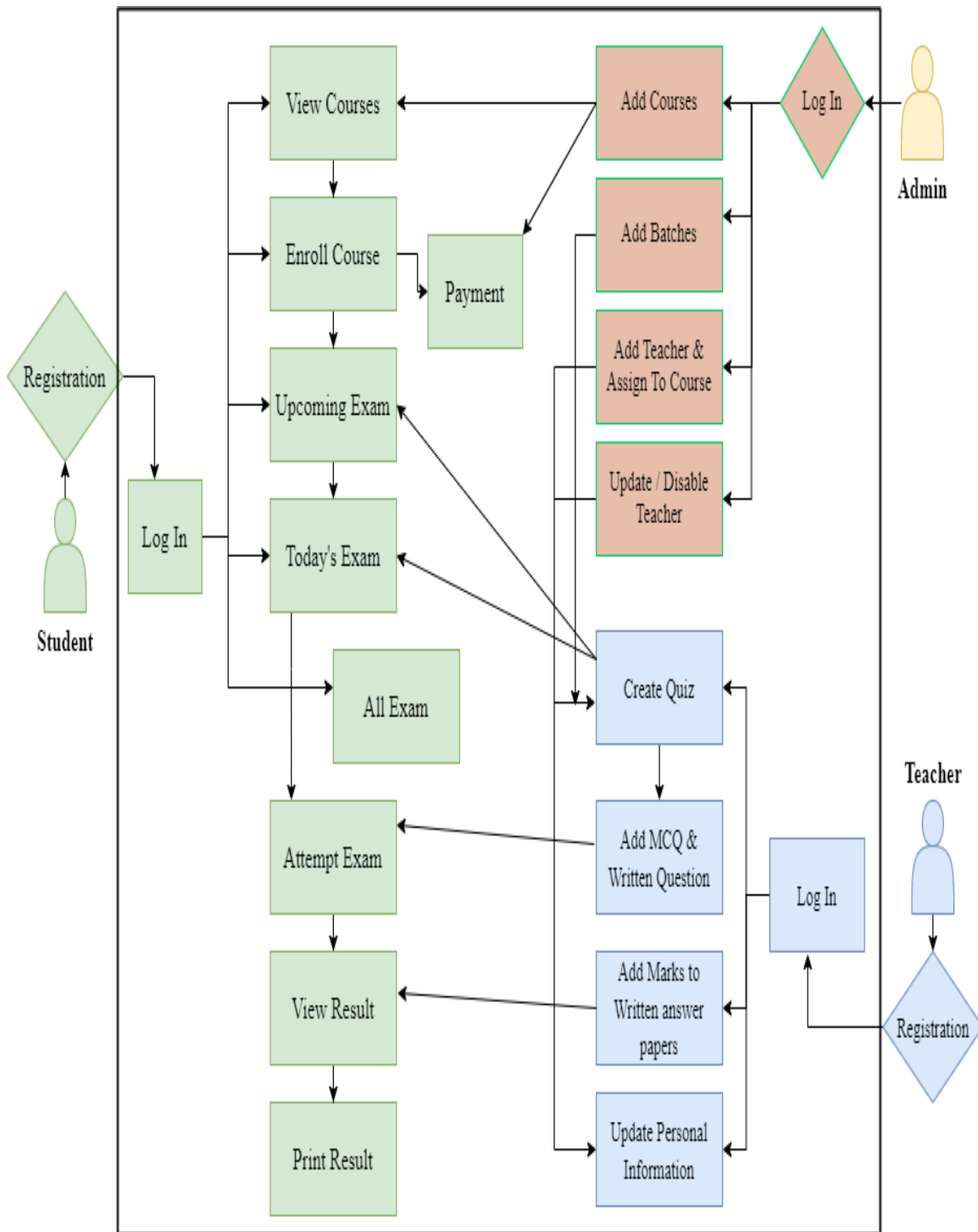


Figure 3.2: Use Case Model Diagram

**Use case details:**

Here, the admin can record the data and also can update and remove data.

Table 3.1: Use case of data recording

Use Case Name	Record Data
Use Case Details	Collection of data of students and teachers and make the data secure.
Pre-condition	Login
Actor	Admin
Post- Condition	Have to add courses and enable teachers registration.

Here, admin can control the financial work and also ensure the payment of student's enrollment.

Table 3.2: Use case of Financial management

Use Case Name	Financial Management
Use Case Details	Collect the payment from student's course enroll payment and provide it to the vendor
Pre-condition	Login
Actor	Admin
Post- Condition	Ensure course existence

Here the admin can inspect the all over view of our system and it's work, Course add, Teacher assign, Course assign and so on works of the system .

Table 3.3: Use case of Inspection

Use Case Name	Inspection
Use Case Details	Inspect about courses offered by the institution and enrollment of student.
Pre-condition	Login
Actor	Admin
Post- Condition	

Here, admin can check their course teachers and enrolled students and can add batch teacher and course teacher in the record or system.

Table 3.4: Use case of add batch, Teacher ,add course and details

Use Case Name	Add batch, batch teacher, course teacher ,Add courses
Use Case Details	To continue the updated batch, batch teachers in the system and interacting students. Also offered courses added by admin.
Pre-condition	Log in
Actor	Admin
Post- Condition	

Here, the Teacher section who can create quiz according to his/her assigned courses and assigned batches.

Table 3.5: Use case of upload course and details

Use Case Name	Create quiz set time and date
Use Case Details	Teacher can create quiz according to his/her assigned courses and batches. They add date, time, batches.

Pre-condition	Log in
Actor	Teacher
Post- Condition	Assigned to the course and batch

Here, the Teachers and students view their profile page and can update their information.

Table 3.6: Use case of user's information

Use Case Name	View and Update Profile
Use Case Details	Teacher and student can view and update their profile
Pre-condition	Registration
Actor	Teacher and Student
Post- Condition	Login

Here, the teacher can add question for the arranged quiz for a particular course.

Table 3.7: Use case of upload question or mcq

Use Case Name	Add question to arranged quiz by teacher
Use Case Details	Teacher can create quiz and add question for the particular courses which he/she will assigned.
Pre-condition	Log in
Actor	Teacher
Post- Condition	Assigned in the particular course and created a quiz.

Here student can attempt to the quiz if he/she enrolled the course.



Table 3.8: Use case of Attempting quiz

Use Case Name	Attempting quiz according to the enrolled course
Use Case Details	Student should enroll the course and can attempt the quiz arranged by the course teacher.
Pre-condition	Log in
Actor	Student
Post- Condition	Enrolled in the course

Here, student get their result according to their quiz performance.

Table 3.9: Use case of Quiz Result

Use Case Name	Student get the result of their quiz after finishing the attempted quiz. Also can print their result sheet.
Use Case Details	Student should attempt the quiz arranged by the course teacher and have to answer.
Pre-condition	Log in
Actor	Student
Post- Condition	Enrolled in the course and attempted in the course

### 3.4 Logical Data Model

Table 3.10: Logical Data Model

Admin	Teacher	Student	Course	MCQ question	Written Question	Result
Name	Name	Name	Course	Mcq	Add	Show
Email	Email	Email	Course	question	written	result
Password	Phone	Phone	details	Mcq	pdf or	Show
Record	Number	Number	Enrollment	options	text	mcq
data	Adress	Password	fee	Correct	question	correct
	Password	Enroll		answer		answer
	Assigned	course				Show
	course					wrong
						answer

There are seventeen (17) tables needed to design the database of our project. The most usable and highlighted tables are Admin, Teacher, Student, courses, Mcq question, Mcq answer, Written question, Written answer sheet, Result. The attributes of the tables are name, email, password, record data for Admin, name, email, phone number, password, selling history for Vendor, name, email, phone number, password All the tables are independent. Here we design our database for the information of teacher, student, course, result of quiz and other related tables.

### 3.5 Design Requirement

In the purpose of design two thing have to keep in mind .

#### 1.Functional requirement

here we have used listed programming languages to increase this system:

- HTML5
- CSS3
- JavaScript
- JQuery

- Bootstrap5
- MySQL
- PHP

## 2. Non functional requirement

Those are the quality requirement that shows how it has to do in the time of design and development.

- **Performance :** No. of terminals to be supported is structured on the server that we will use at the time of deployment.
- **Availability:** Online Examination website has 24\*7 availability. It can be accessed for 24 hours a day. Students can take examination solely in the course of the formerly distributed time slots, on the other hand any one can open website online whenever to get right of entry to different information. Institution can add courses anytime and student can register for the examination anytime [8].
- **Reliability:** Have to ensure that the application performs with required precision. The quiz System developed must be exception dependable and tightly closed so that statistics about any questions etc. is no longer leaked earlier than the genuine examination is held [8].
- **Usability:** The Quiz system ought to be consumer pleasant and need to require least effort to operate. The hosted server used need to supply offerings like session administration to hold periods in the application.
- **Portability:** The quiz system is made the usage of HTML, PHP, Java script etc. which are platform impartial and can be transported to different servers with minimal effort [8].
- **Flexibility:** This effort required to adjust operational program.

# CHAPTER 4

## DESIGN SPESIFICATION

### 4.1 Front-End Design

Front-end design shows the user interface of a system how it look like to user. Front-end should be user friendly then a system will find the success of development. It's also called "User Interface". User interface should be responsive in all format mobile, tab and computer. In our system we have devided our design into four (4) part according to our users.

- Home page
- Team
- Courses
- Log in / Register
- Home page: Here is the interface where a new user can find all the information, options and instructions to use the system.

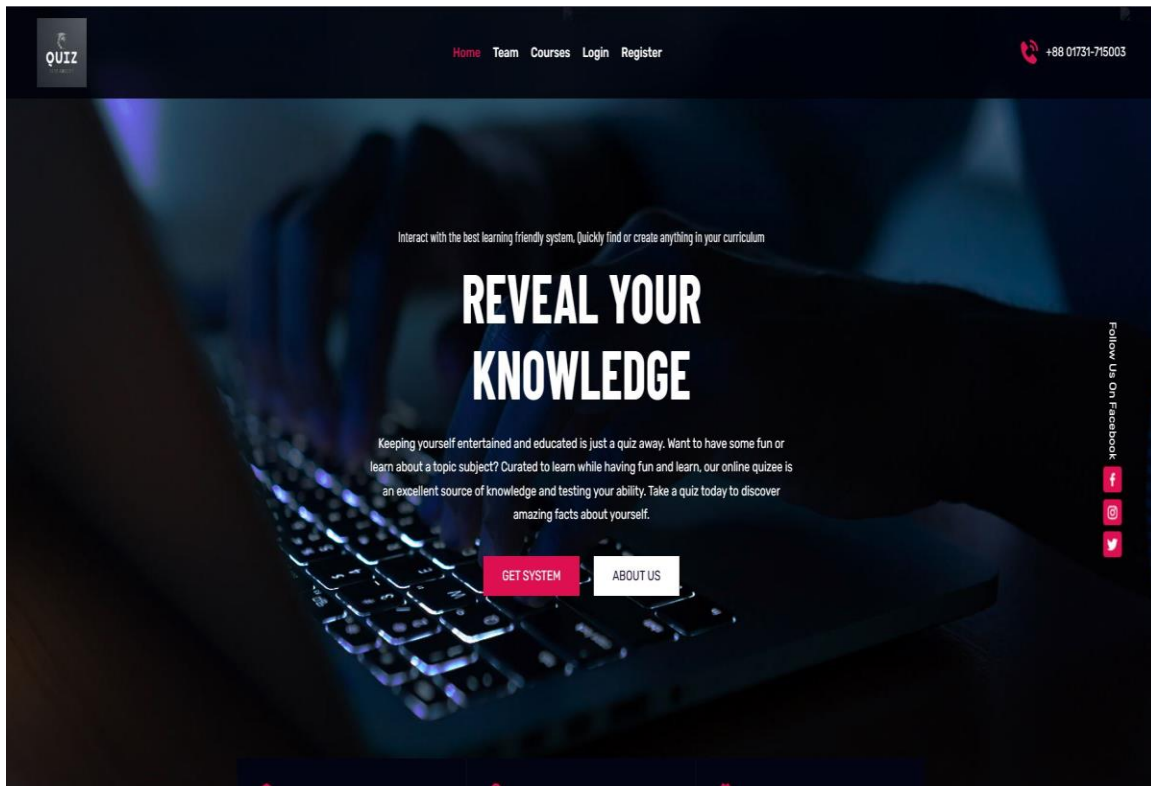


Figure 4.3: home Page

- Team: This page show about the experts of the system, Show the teachers details .

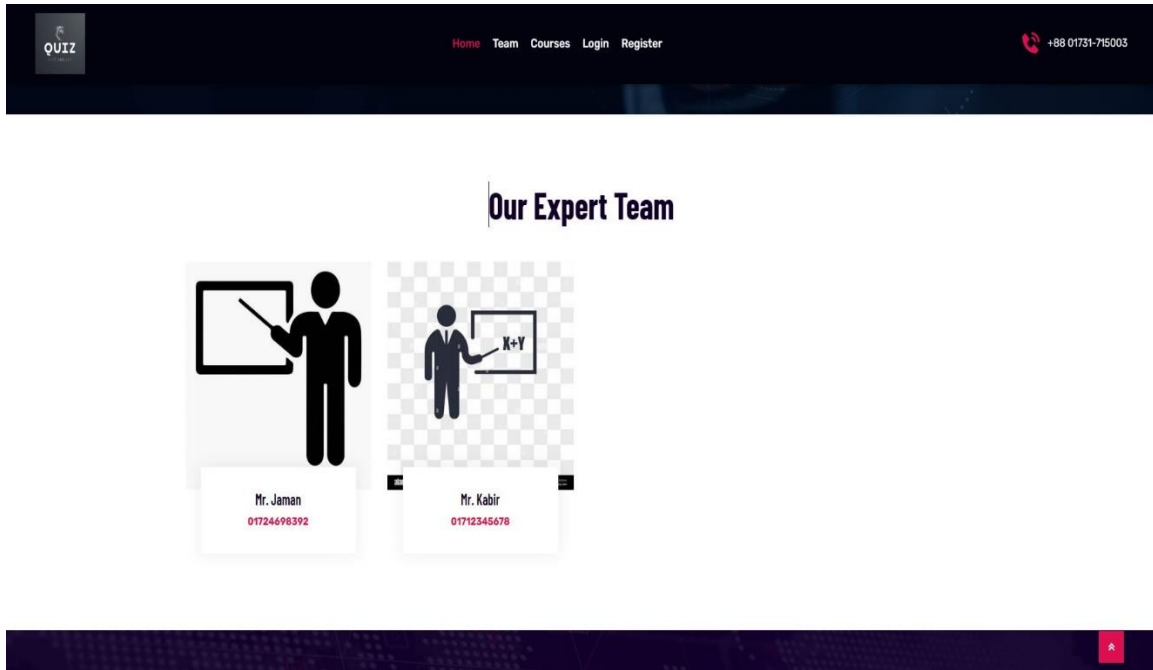


Figure 4.4: Expert's page

- Courses: This part show 's about what type of courses ae offering by the institute.

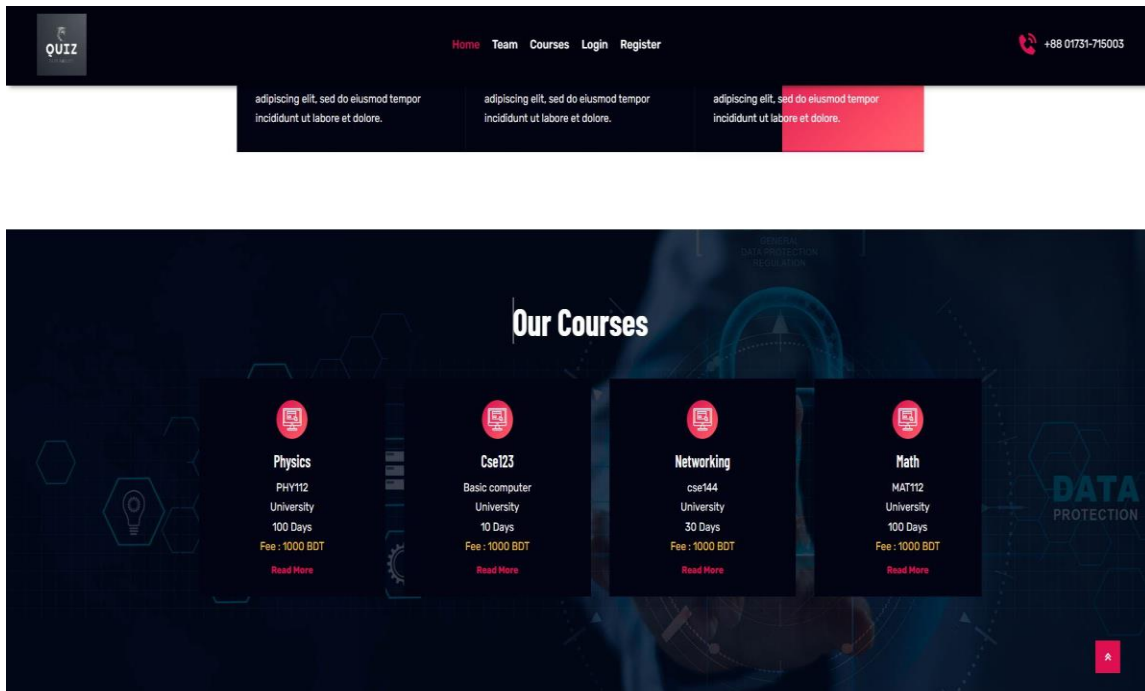



Figure 4.5: Courses Page

- Log in /Register: In this page first of all student or teacher both have to register to

get access in the system. After registration user have to log in with his/her registered user email and password .



New here?  
Signing up is easy. It only takes a few steps

User Name

User Email

User Phone

Register As

User Password  
 Male  Female

User Password

[SIGN UP](#)

Already have an account? [Login](#)

Want to go back to our website ? [Back](#)

Figure 4.6: Log in / Register page

Admin: Now we will see the design of admin page.

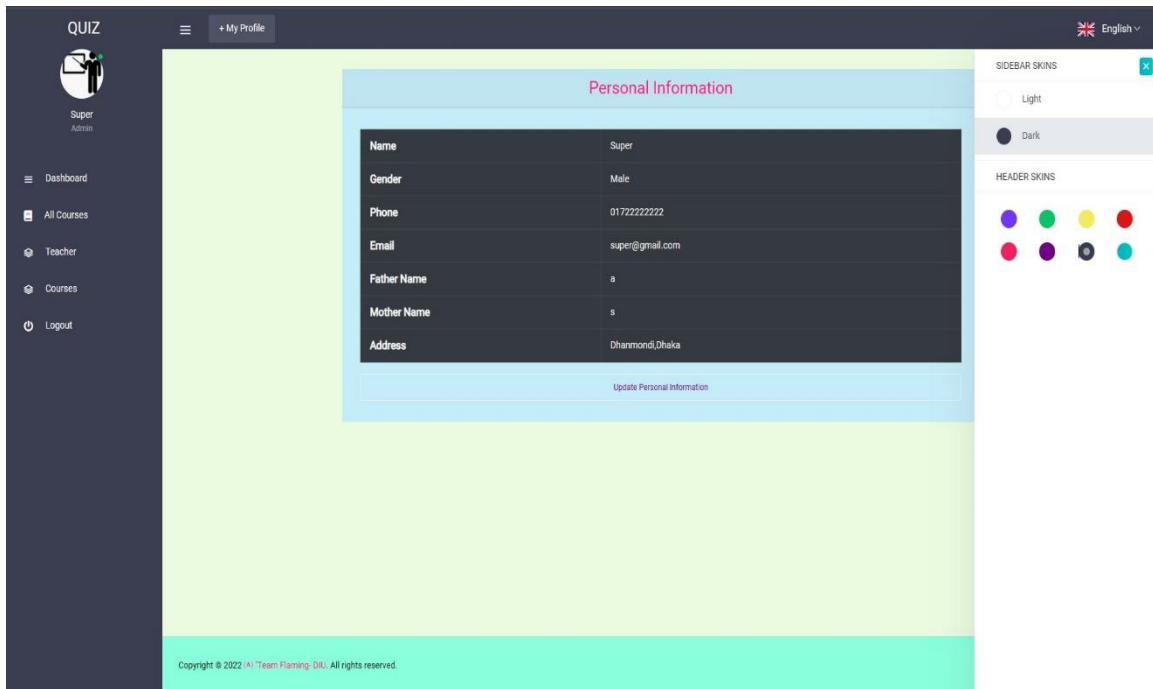


Figure 4.7:Admin Dashboard

Teacher : This page is for teacher.

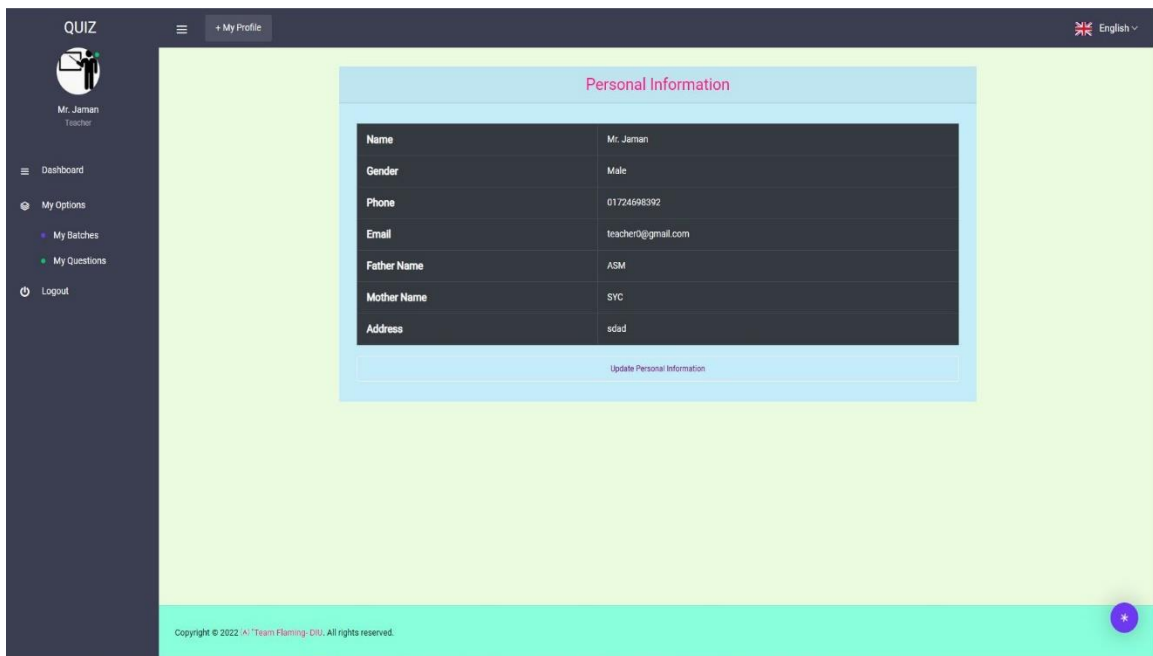


Figure 4.8: Teacher's Dashboard

Student : Student page is for instruction to students to use the system properly. Here every

component is too understandable to use.

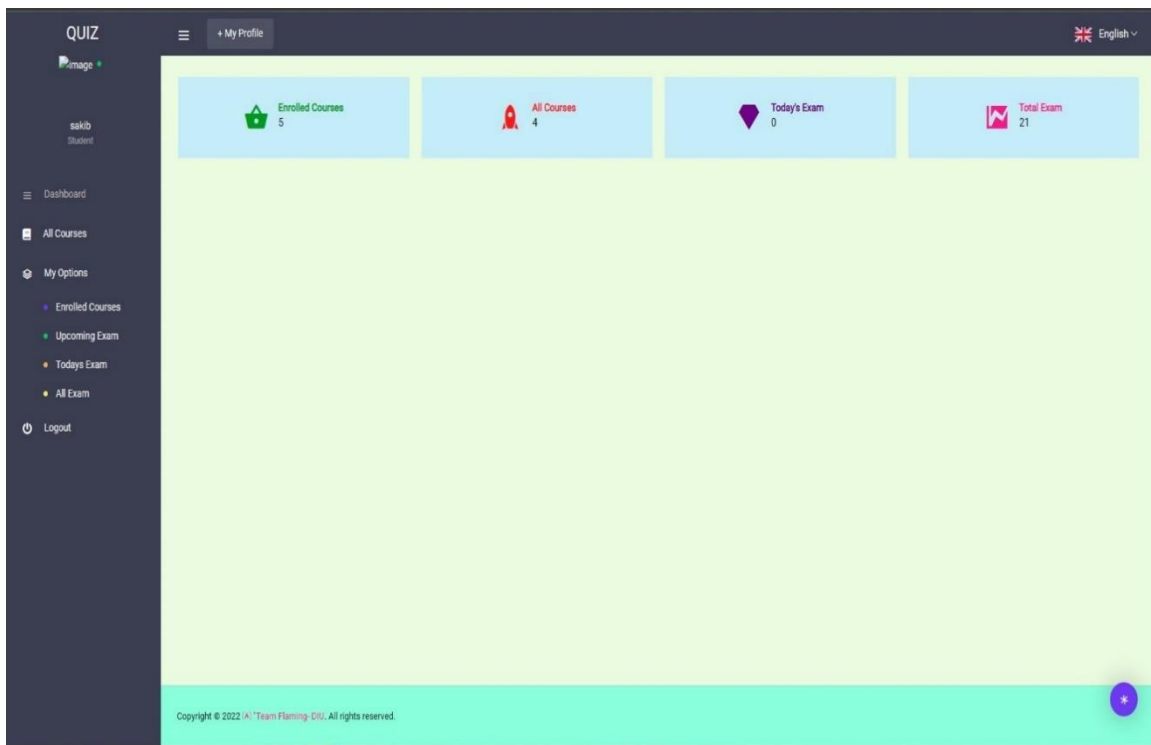


Figure 4.9: Student Dashboard Page

## 4.2 Back-End design

There are two side of a development project. 1.client side 2. Server side. Back-end design is in server side and also the programming languages which are used to develop the project is back-design. For any development project Back-end is a section which is performed with the sensitively designed by the developer. This side is not visible to user and administrator. It can be code or a software running on a server to serve the client's desire. For example a user requested to create an account on our system with his/her information, so his/her supplied facts will go to the server to take a look at it for his/her registered information. So, the back-end checked the records and allowed user to the account. Database is additionally a phase of the back-end. Here we use a MySQL database. To connect database we used Apache server. Also all row code, frame work customization code ,authentication programming languages are the back-end property. A smart database design is mandatory for a good project's output. Here I've added our database design which is the major back-end part of a project [4] [5] [6].



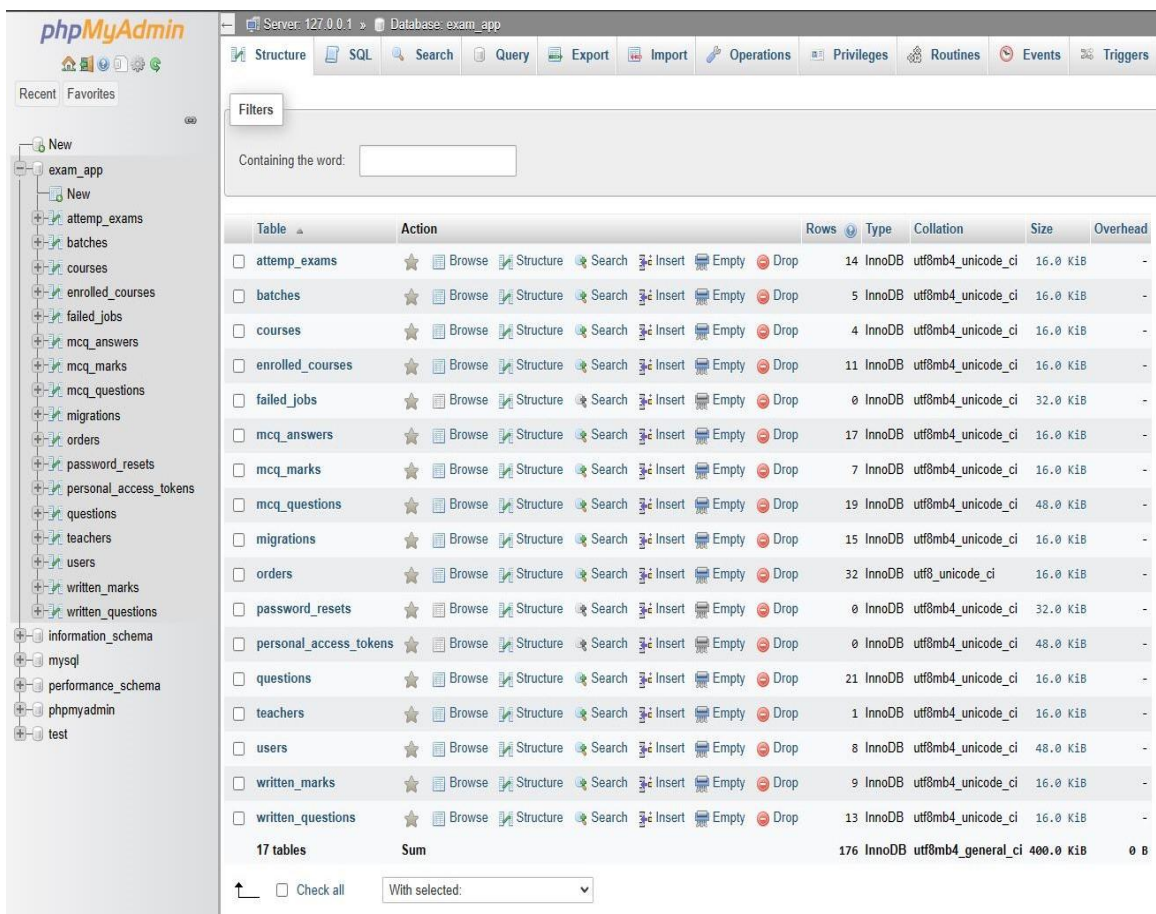


Figure 4.10: Back-End Database page

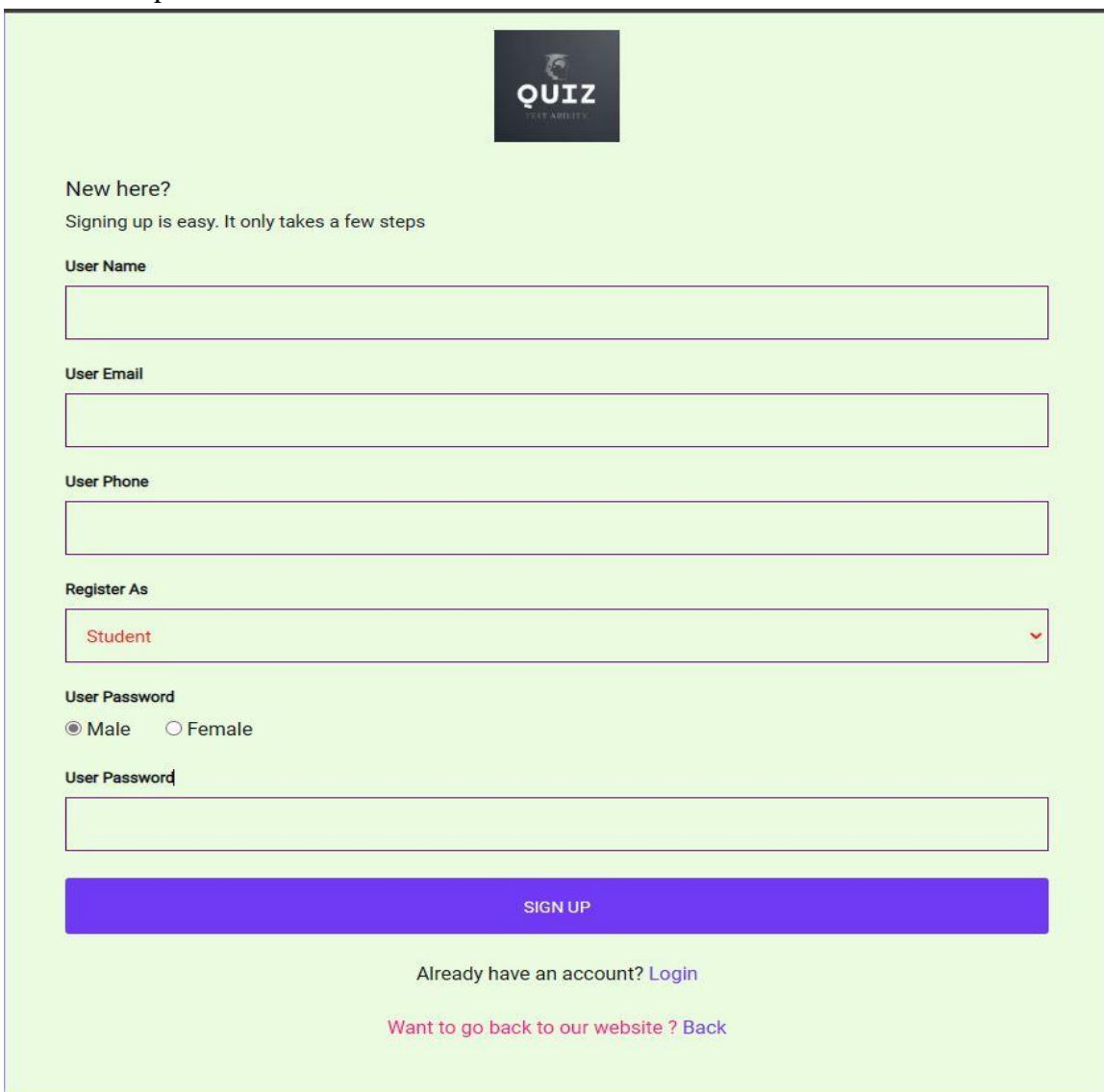
Here is my database which the major part of my back-end property. Here I've taken 17 data table for several purpose. Those are 1. Attempt\_exam, 2. Batches, 3. Courses, 4. Enrolled\_courses, 5. Failed\_jobs, 6. Mcq-answers, 7. Mcq\_marks, 8. Mcq\_questions, 9. Migrations, 10. Orders, 11. Password\_reset, 12. Personal\_access\_tokens, 13. Questions, 14. Teachers, 15. Users, 16. Written\_marks, 17. written\_questions. In all table contains different data which are entered in the time of system use [4] [9].

### 4.3 Interaction Design and User Experience (UX)

For a web application Interaction design means client side view or design which make a website or application user friendly to use. This design make the use experience better. For this we made our site user friendly, good outlook and easy steps so that user can use our

system in a very easy way. In the time of design we designed our system's options understandable. There is no conflict or confusion to use the system for user. We have three types of user.(1) Admin,(2) Teacher, (3) Student.

- ❖ When any of them want to use the system must complete the registration. To complete the registration firstly user have to input their name, then user email, phone number, types of user student or teacher, then have to give a password as wish and click to sign up. By clicking sign up the process of registration will complete.



The image shows a registration page for a system named 'QUIZ'. At the top center is a dark square logo with the word 'QUIZ' in white and 'TEST ABILITY' in smaller text below it. Below the logo, the text 'New here?' is followed by 'Signing up is easy. It only takes a few steps'. The form contains several input fields: 'User Name', 'User Email', and 'User Phone', each with a corresponding text box. Below these is a 'Register As' dropdown menu with 'Student' selected. There are two radio buttons for 'User Password' with 'Male' selected. A final 'User Password' text box is present. A large blue 'SIGN UP' button is at the bottom of the form. Below the button, there are two links: 'Already have an account? Login' and 'Want to go back to our website ? Back'.

Figure4.11: Registration Page

- ❖ This is Login page. The user who have registered by completing their registration they can login with their registered email and password by filling up the email and password field. Note: Admin’s email and password is given by the developer using sql query.
- 

QUIZ  
TEST ABILITIES

Hello! let's get started.  
Sign in to continue.

Enter Email  
student@gmail.com

Enter Password  
.....

SIGN IN

Don't have an account? [Create](#)

Figure 4.12: Log In page

Now time to use the system for different user. Firstly we see the admin's page.

- ❖ Admin have to login to use the system. Admin's email and password will given by system administrator. Then admin will see the dashboard. He can add new courses and batches against the courses.

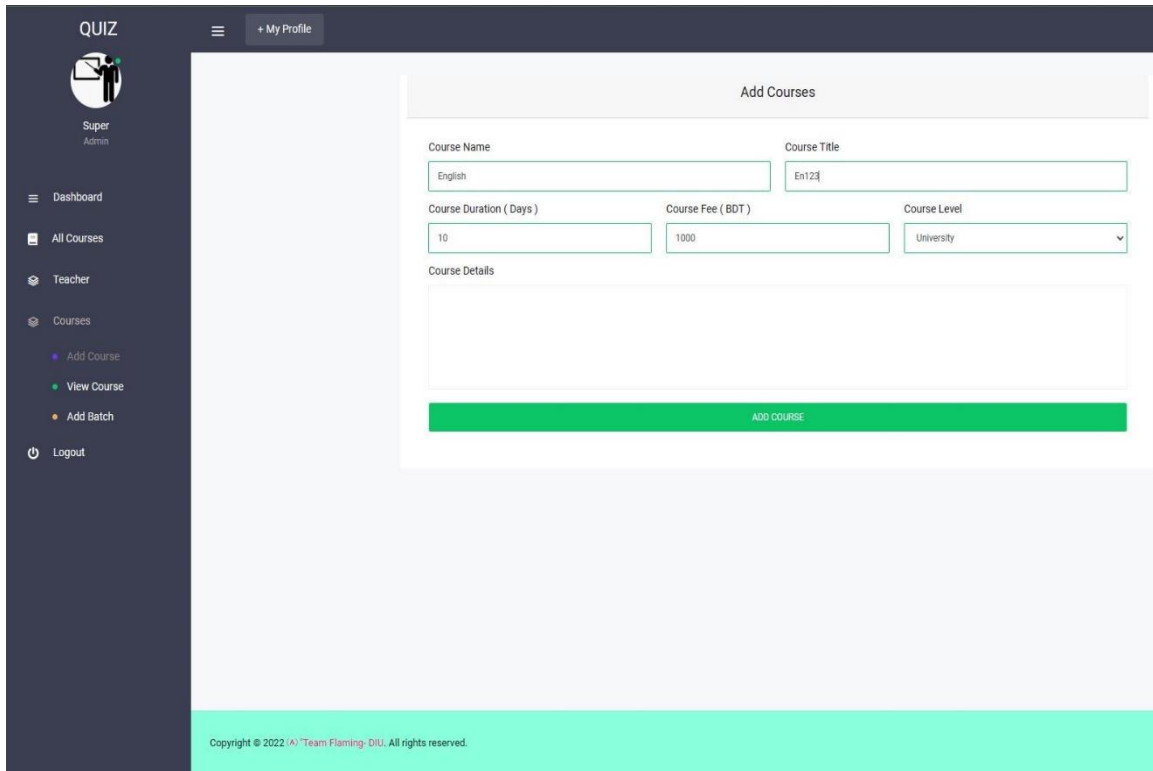


Figure 4.13: Course Add page

Now we see teacher's page after log in.

- ❖ Teacher can log in by his/her user email and password. After log in he/she will see the teacher's dashboard. Where first of all they have to complete their personal information to use the system. When they complete their personal information admin will verify the details of the teacher. If the Information are okay then admin will make the teacher's action active.

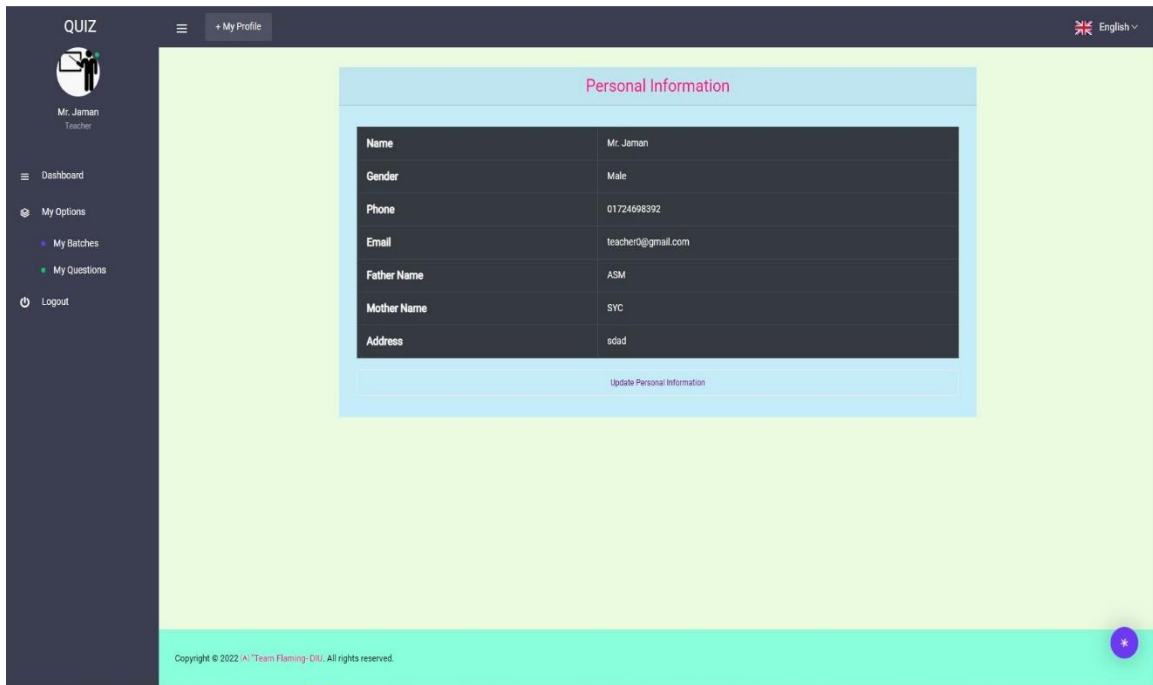


Figure 4.14: Teacher’s Dashboard

- ❖ After that admin will assign the teacher in a particular course and subject. When teacher will assigned in a course by admin then he will be able to create quiz.

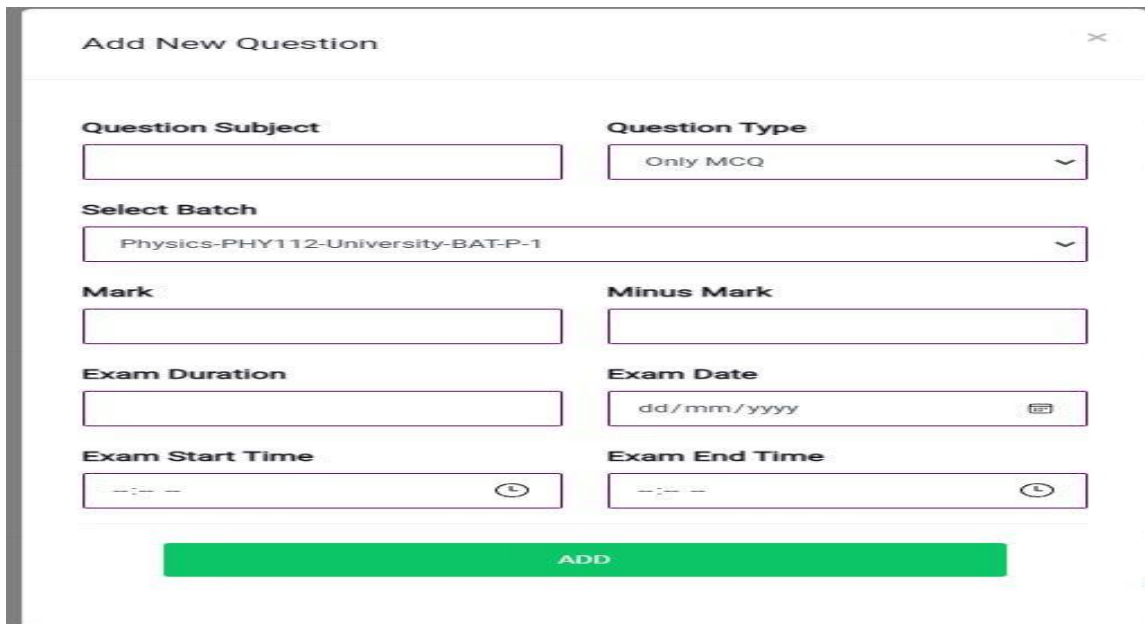


Figure 4.15: Quiz Creating Page

- ❖ After creating quiz teacher able to add quiz question in quiz place. Teacher can add mcq question ,written question or both mcq and written question also.

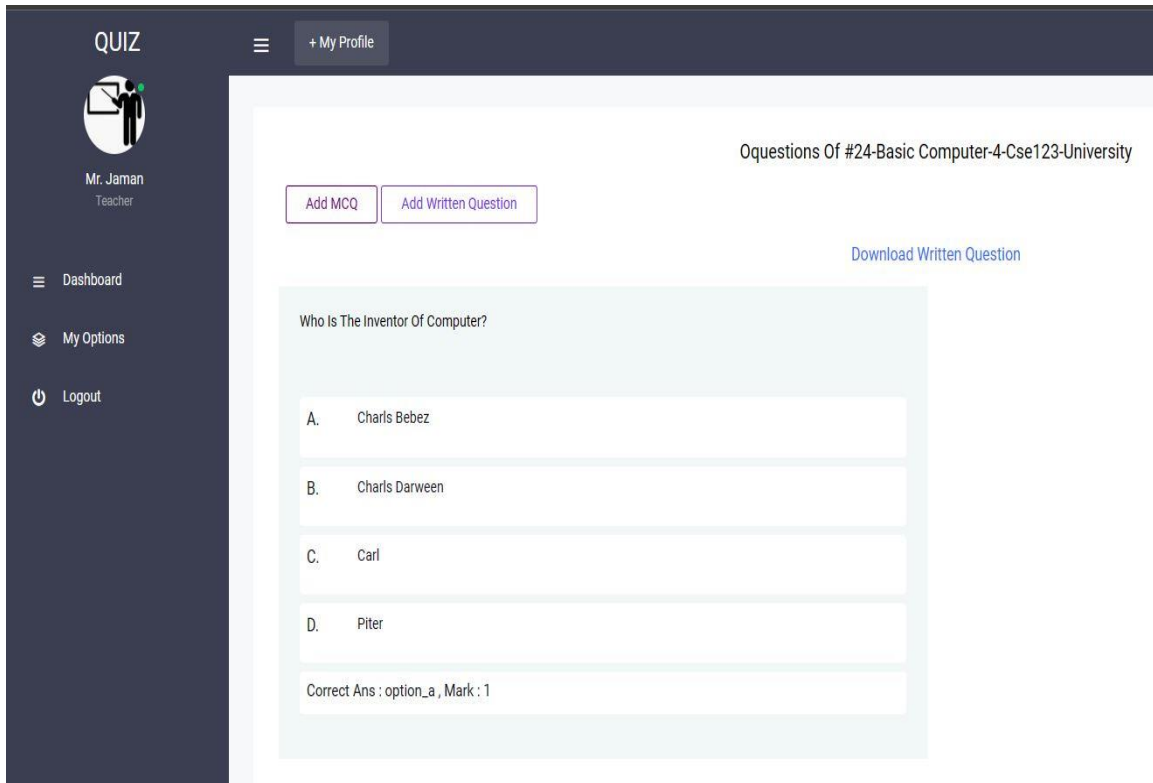


Figure 4.16: MCQ & written Question Adding page

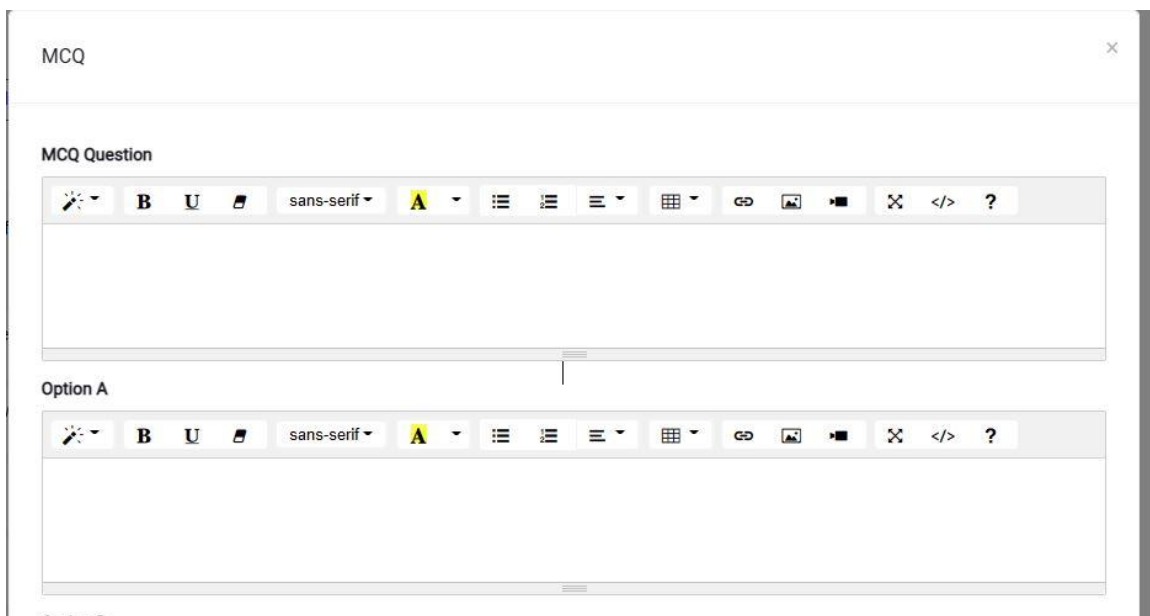


Figure 4.17: MCQ question adding page

- ❖ Now come to student panel where student have to login first as Fig 4.10 shown. After Login student can see his/her dashboard where contain some options. He can update his personal information. In his dashboard he can see 1.Total courses,2. Enrolled courses 3. Today's exam 4. Total attempted exams.

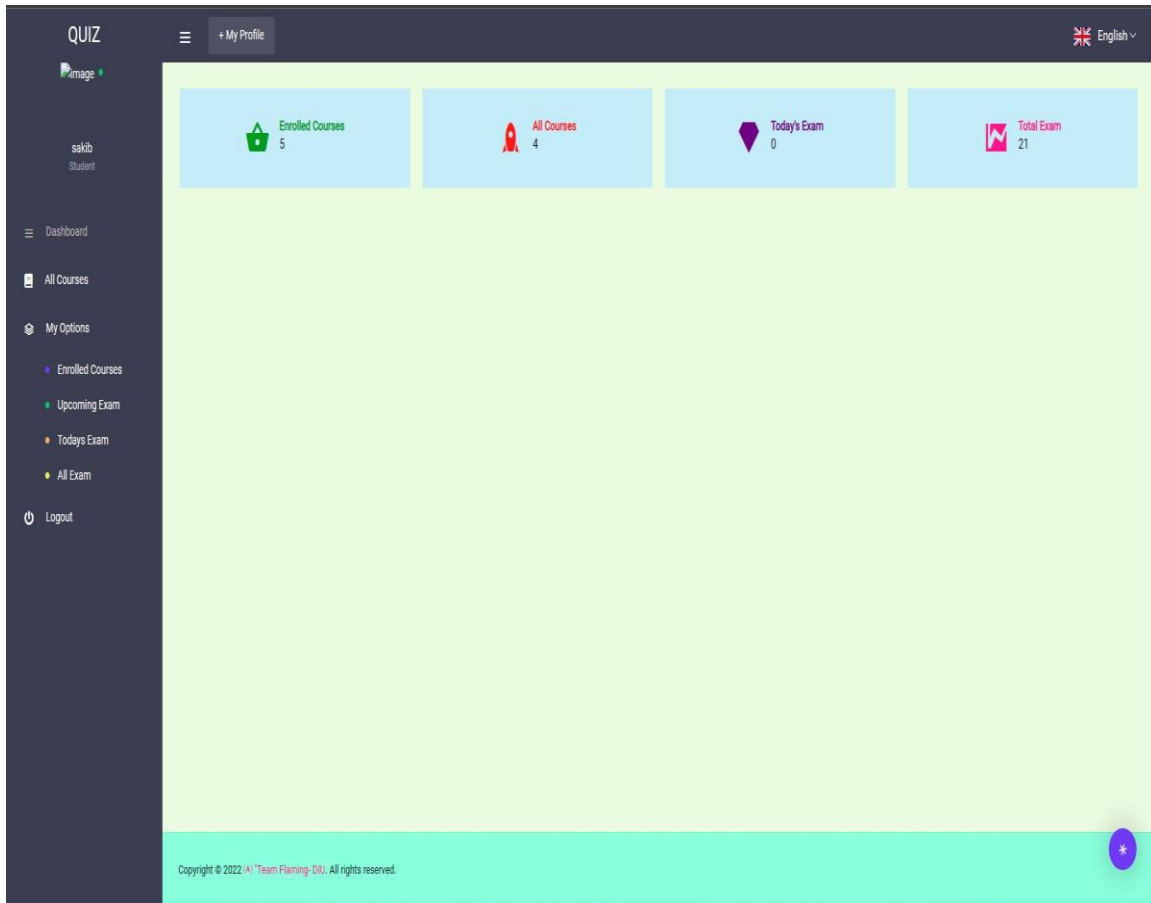


Figure 4.18: Student Dashboard

When he enter his dashboard he can see all courses offered by the administration. By clicking enrolled course he can see which courses he enrolled. Then he can see All exams he attempted and today's exam. Also can see upcoming exams. By clicking my profile he can update his personal info and also can recover his password.

- ❖ Now student will attempt the quiz which was created by course teacher. For attempting quiz student click todays exam and click attempt exam. When he click the button attempt exam the exam will start. When time will finish page will be

automatically disable.

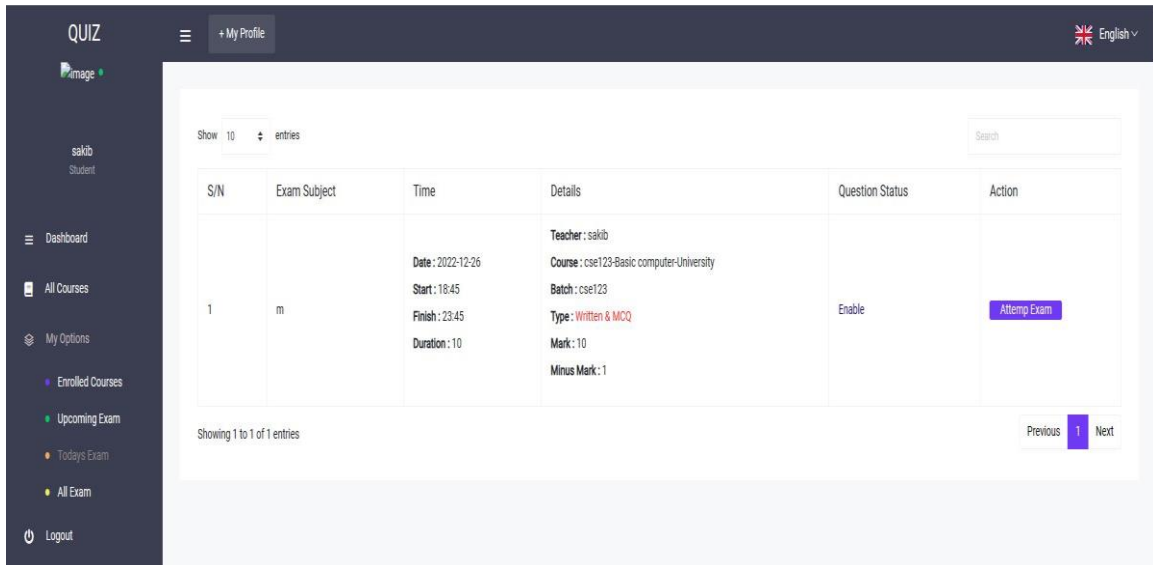


Figure 4.19: Attempt Exam Page

- ❖ After attempt exam the page will like this. Student will submit within time. Otherwise student will be shown as absent in the teachers board.

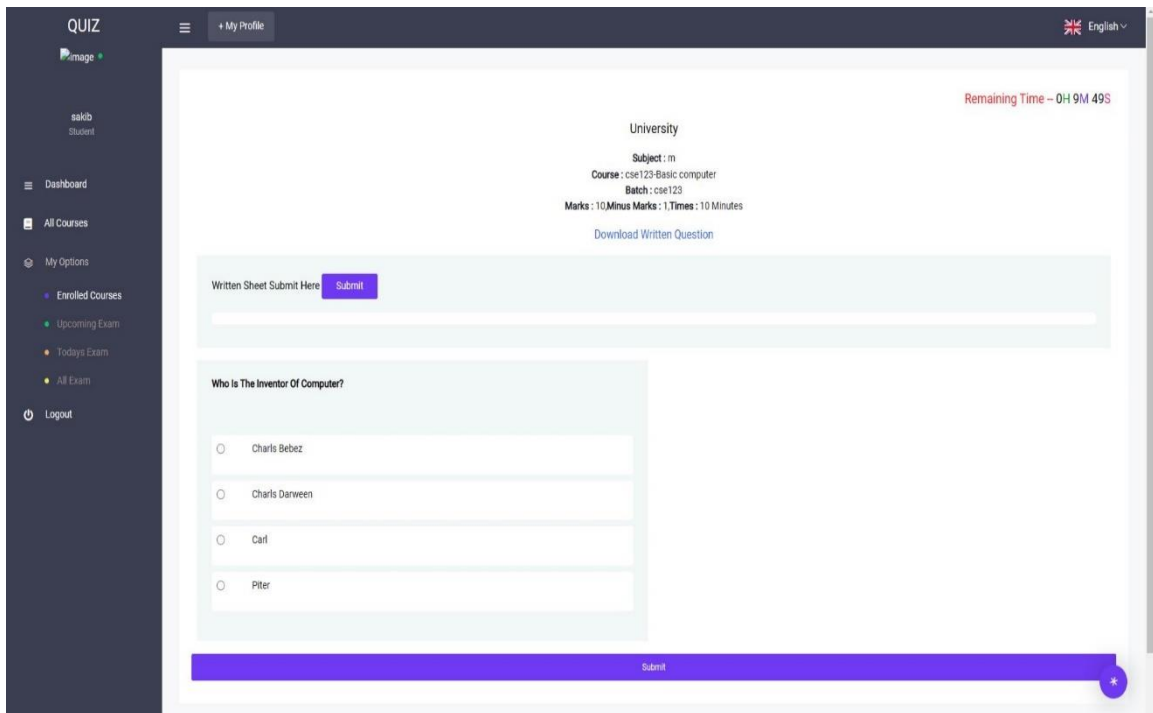


Figure 4.20: Exam Page



- ❖ When student submit the answers both written and mcq then he will see his obtained marks, correct answers, wrong answers, negative marks, total marks.



Figure 4.21:After exam, result page

- ❖ Beside this result student will get a marksheet also. When he click “Print” he can see a result sheet. He can print it as he want.

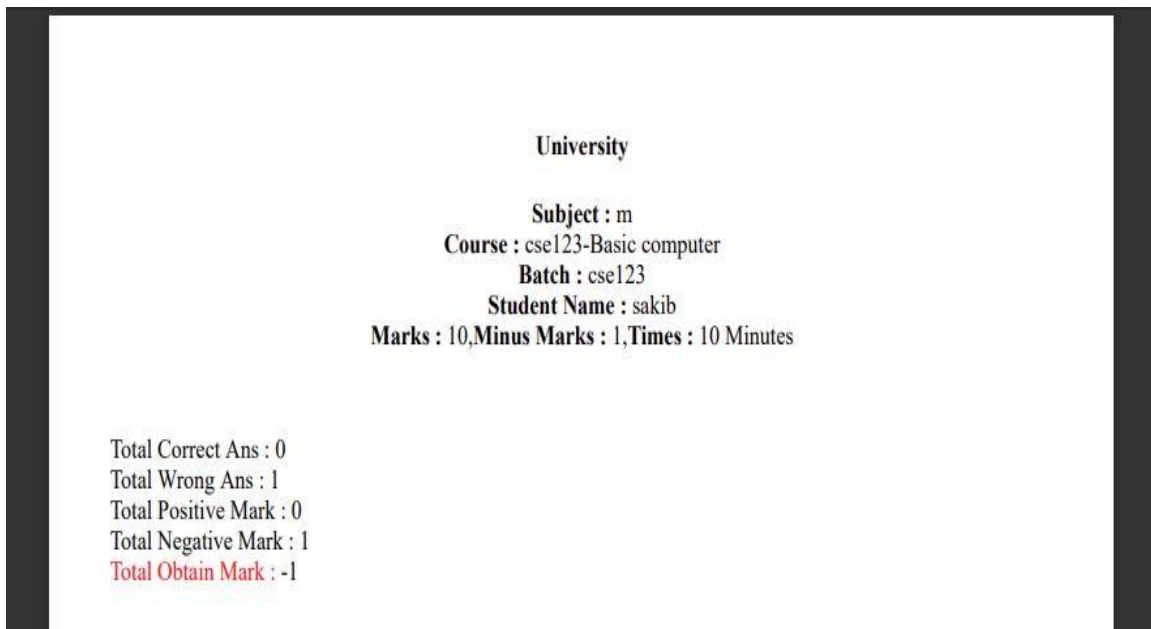


Figure 4.22:Result Sheet

- ❖ Students written paper pdf file will save to teachers page. Student will see all his

written and mcq marks when teacher will remarked the answer paper. Student can see all his previous marks also.

S/N	Exam Subject	Time	Details	Question Status	Mark
22	m	Date : 2022-12-25 Start : 18:45 Finish : 19:30 Duration : 10	Teacher : sakib Course : cse123-Basic computer-University Batch : cse123 Type : Written & MCQ Mark : 10 Minus Mark : 1	Taken	MCQ - 1 Written - 5
21	a	Date : 2022-12-13 Start : 21:32 Finish : 21:46 Duration : 10	Teacher : sakib Course : Math-MAT112-University Batch : BAT-Q Type : Written & MCQ Mark : 10 Minus Mark : 0	Enable	MCQ - 5 Written -

Figure 4.23: Student's obtained marks page

- ❖ Teacher can see all students obtained marks from his dashboard. Also can see students who attempted in the quiz and who was absent. Teacher can see all students details and quiz details also who are enrolled in the course.

Student Name	Student Phone Number	Student MCQ Mark	Student Written Mark
Miraj	09876543215	Absent	Absent
Nabil	09876543234	Absent	Absent
Rohan@gmail.com	01731715003	Absent	Absent
sakib	01744444444	-1	5 <a href="#">Remark</a>

Figure 4.24: Marks,attendance Page from Teacher

- ❖ Now an important part that is course enrollment. If any student want to enroll in the course he have to pay an amount of money which is decided by the administrator. He have to pay via SSLCommerz payment gateway. Here he can use any bank, mobile banking, debit card, credit card anyone else.

## OTP Page

Do not press browser back or forward button while you are in payment page

Payment Summary	
Please review the following detail for this transaction:	
Amount:	1000.00
Currency:	BDT
Invoice number:	221226200214oZik65qAtmCADnP
Description:	Products

**Enter Card Information**

OTP:

Success
Failed

Your entered card information could not be corrupted or become known to the third party, as all transmitted data is encrypted by the SSL protocol.

**Note**

1. For VISA and MC, look at the back side of your Card to find 3-digit CVV2/ CVC2. For AMEX, look at the upper right corner of the front side of your Card to find 4-digit CSC.
2. The cardholder's name should be entered just as it's written on the card.



SSLCOMMERZ TESTBOX GATEWAY (NO CARD INFORMATION WILL BE SAVED AND DUMMY

Figure 4.25: SSL Commarz Page

### 4.5 Implementation Requirements

For implementing the system we need a device with network broadband or mobile data connection. Need a strong database and a good domain and hosting to get higher performance as expected. Should have basic knowledge to operate the system. Have to concern about teacher enrollment and assign to courses. As we used backend database mysql, php, Laravel and other stuffs so have to ensure about the software's conditions.

## **CHAPTER 5**

### **IMPLEMENTATION AND TESTING**

#### **5.1 Implementation of database**

For our “Quiz” web application we have to design and implement a strong and well designed database. Where all data will load according to the user implementation. So here all data will store table by table. As some tables will related or connected with many data tables we say it relational database or many to many relational database. Here admin ,teacher and student can update ,modify some particular data as they have access. But administration can update, modify or handle all data from the database.

#### **5.2 Implementation of Front-End Design**

Designing front-end is fundamental requirement and implementation for development project. Front-end design which present the user interphase of a system. We use bootstrap ,Laravel 9, css3 for making front-end user friendly also with more flexibility and usability. We designed a front page or home page where a user get all the information and instruction about the system that how to use ,what to for a specific work. We designed a registration page also with log in page from where any user can log in or register by following some easy and small steps. Student can find the instruction to enroll course, view exam , attend quiz ,view results of exams very easily and without any conflict and confusion. Teacher can arrange a quiz in a very simple way by following some steps. Overall our front-end design implementation is user friendly more reliable to use [7].

#### **5.3 Test implementation**

Testing software is a technique of executing an application with intension of discovering errors in the code or system organization. This is a process or procedure to evaluate of the system its components with the aid of guide or computerized capacity to confirm that it is pleasant targeted or necessities or not. No system is best due to verbal exchange troubles

between person and developer, time constraints, or conceptual errors through developer. Software checking out is the technique of executing an application with intension of discovering mistakes in the code. Software testing is the crucial manner of software program success. For our system we have to test some major sections. Like registration and login testing, Teacher's quiz creating and questions setting, Viewing results and students obtained marks. Have to test student's course enrollment, quiz attempting, result viewing. There are some procedure to implement test cases.

### 5.3.1 Required Test

- **Unit tests:** In Unit assessments or test will be carried out to check the specific usefulness of every module of this administration framework.
- **Integration Testing:** In the process of Integration checking out will be carried out with the aid of taking all modules or segments of this framework and checking out them as a total to make sure that the framework is working properly.
- **Acceptance Testing:** In acceptance test trying out will be carried out to confirm that the body has met all patron necessities and that the body is prepared for submission.
- **Performance tests:** The performance testing will be carried out to quantify the effectiveness of this modern framework.
- **Security check:** A safety take a look at will be completed to decide whether or not or now not the framework is secure.

For checking at a system or software program we have to take a look at some parameters such as application output, information processing speed, community bandwidth use, load-bearing capacity, memory consumption, command response time etc. For our website we have to take a look at the login test, enrollment test, quiz organizing check, quiz attempting test, result getting test etc. For making a better software test we have ensure a well testing environment. There are some prerequisites to do that.

- Any windows based computer or any android device.
- Internet connection.

- Browser Google chrome, Mozilla Firefox, Edge or any one.
- Printer

### 5.3.2 Unit testing

In the field software development developers usually use “Unit testing” to ensure that their code is working properly and fulfilling requirements of users.

#### Unit testing for signing in:

Table 5.11: Unit Testing

Procedure	Expected outcome	Expected outcome after test
Enter unregistered incorrect email and password.	Display message for entering a username and password.	A message appeared asking that do not match our record.
Entered correct email and password.	Log in to the system according to the user’s input and show the dashboard.	Successfully signed in and show dashboard.

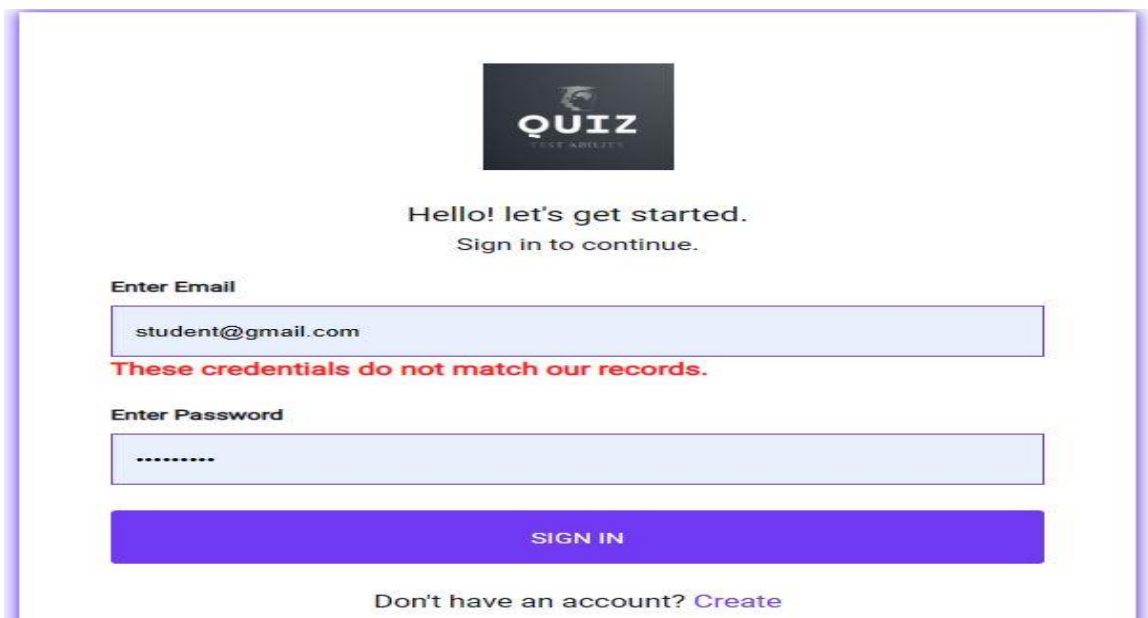


Figure 5.26: Validation Testing For Attempting Quiz

### 5.3.3 Validation testing :

The phase of validation tests are one of the most vital due to the fact records barring cost or which means can purpose numerical problems. It can additionally motive problems for survey information, identification research, and age reporting. Below are the approval assessments for the CFC records desk framework.

Table 5.12: Validation Testing

Input	Expected outcome	Reason	Actual Outcome
Create quiz in the course in which the teacher assigned.	Don't show the course he has not assigned.	System compare data with prior data.	Success and can't create quiz without assigning in the course.
Attempting quiz after the assigned time for attempting quiz.	Student can't attempt in the quiz when the assigned time will finish.	Student can make a plagiarism from other or can avoid the procedure.	Student can't attempt the quiz after the exam time. student's status "absent".

Physics	Date : 2022-09-20	Teacher : sakib		
	Start : 01:13	Course : Physics-PHY112-University		
	Finish : 23:59	Batch : BAT-P		
	Duration : 20	Type : MCQ	Taken	MCQ - Absent
		Mark : 25		
		Minus Mark : 0.5		

Figure 5.27: Validation Tasting for Attempting Quiz

### 5.3.4 Compatibility testing:

By compatibility testing it will check the sections compatibility as quiz web application is perfectly working with the different browsers and system.

Table 5.13: Compatibility testing

Test Name	Execute	Expected Outcome	Actual Outcome
Use Google chrome to run	Success	Meet the requisites successfully	Meet the requisites successfully
Use Mozilla Firefox to run	Success	Meet the requisites successfully	Meet the requisites successfully
Use mobile to see if the system is responsive or not	Success	Meet the requisites successfully	Meet the requisites successfully

#### 5.4 Test result report

In the time our system run we've implemented some testing methods to test our system. To make it success we have checked dashboard of users , log in, functional and non-functional testing, course add by black box testing. we've to check errors of code, page linking, successful routing, connecting server etc. as white box testing. To test as a user view rather than a developer view to ensure user friendliness, server connection, log in and password set process etc. to successful.

Table 5.14: Test Result

Test case	Test Input	Expected Outcome	System outcome	Success/Failed	Test Time
Log in for student	Email and password	Successfully log in	Successfully log in	Succes	
Log in for teacher	Email and password	Successfully log in	Successfully log in	Succes	
Add courses by admin	Course detail and fee	A message "Successfully course added" will appear	A message "Successfully course added" will appear	Succes	



Approve and assign teacher by admin	Assign a registered teacher in a course	Successfully added course teacher and assigned in a batch	Successfully added course teacher and assigned in a batch	Succes	
Creating quiz, add question by teacher	Create a quiz by giving marks, time, date etc.	Successfully created a quiz	Successfully created a quiz	Succes	
Enroll course by student	Click course details and click “enroll course”	Successfully enrolled the course message will be appear	Successfully enrolled the course message will be appear	Succes	
Payment gateway	Enroll course and pay the course fee	Payment successful	Payment successful	Succes	
Attempt quiz by student	Attempt quiz in fixed time	Attempted quiz successfully	Attempted quiz successfully	Succes	
View result by student	Click submit after completing exam	View and get result sheet successfully	View and get result sheet successfully	Succes	

## **CHAPTER 6**

### **IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY**

#### **6.1 Impact on society**

In our project we focused to make a positive impact to improvement and making digitalized our education and exam conducting system. Our target is to arrange exams or quizzes in an effective and digital way. So we developed it. By using our system there will no need any physical presence of student and teacher. No need to waste time by moving any place. Our system will offer courses according to our educational system's need. Student not need to wait for result for a long or a particular time. Student will get their result at a time of completing exam. Teacher and administration can use it without any conflict and confusion. The online system will provide all the facilities for a good exam organizing [9].

#### **6.2 Impact on Environment**

Our project is online platform where a lots of student will learn different courses. So the system hiring authority will offer some popular courses by minimum enrolment fee. That enrolment fee will increase their revenue and also our economy. From this the administration will provide teacher's fee for their participation in the online quiz system. They can get their favorite courses in one place with a reasonable enrollment fee. So it will take impact to our educational environment. Student can attempt quiz as their flexible time. They can get access and can study at any time. Our system will help teacher's or experts in any course to get part time earning source. It will take a part in our economic environment.

#### **6.3 Ethical Aspects**

As our quiz web application in an educational platform there is not any possibilities to sue any kind of anti-social activities or occurring any unethical activities. When designing the system we are concern about copyright act and about to make a trusted platform. As all of information is verifying by the administration so there is not any possibilities to keep any

wrong information. We designed our database so sensitively so that no black hat hacker can know the password of a user. Our password saving method is called “hashing” where the administration also cannot see the user’s password. Cause all password save in hashing method. There is no partiality in student’s exam result cause all result is generated by the system. There is no option to make a + number for anyone. We forced about our ethical aspects so that no anti ethics question can’s raise.

#### **6.4 Sustainability Plan**

The plan of sustainability means how long we exist with our system in market place. We take a lifelong sustainability plan for maintaining our system. Cause we sell our product to any institution or any educational organization or any online educational platform. They will continue their educating system by using our system. So we have to provide our development and updated support to our soled system for our clients. Moreover the online quiz system is an educational system. It will provide valuable education to our upcoming modern generation. We have a plan our system in a wide way international educational platforms. For this we have to take a strong database and a strong hosting in online. Those requisites will help us to broad our system worldwide and reach to our goal that is to spread modern education for all and make our system sustainable.

## **CHAPTER 7**

### **CONCLUSION AND FUTURE SCOPE**

#### **7.1 Discussion and Conclusion**

Online quiz system provides a lot of facilities to conduct quiz or written exam worldwide. The system saves time as well as a huge number of students to attempt exam at a time and displays their exam result when the exam is over. For this no need to wait for result. This is an automated result generate system with the help of server. Authorized admin has privilege to add courses and teacher. Teacher has access to modify, update, delate test questions according to particular courses. The registered student can log in and attempt exam in the specific time and date. They can get their result when the exam time is over. The system successfully implemented and tested for the accuracy, quality, reliability and flexibility. At the time of development and designing we have full field all of the objectives that we have declared. The system is user friendly to all user those are teacher or any student. We developed the system for increasing the efficiency of taking exams and getting result at a time. We reduced use of pen and paper. We tried to save students valuable time to go to any institution physically. Our system will increase the revenue of the employees who are assigned to monetize it. For experts at any subject or course, the person can take a role of teacher and can teach students by his knowledge. Besides he/she can earn a smart amount of money from there. Our system will help the job seekers to test their knowledge in the courses or topics by using our “Quiz” system. They can attend some tests before their interview or written or mcq exam. The board examinee can attend some tests before his final exam and test himself in very fast, smooth, and efficient way without losing valuable time. By using our system any institution or any coaching center can conduct their tests for student very efficient way, without any pen and paper using. They don’t need any physical employee to check those exam papers. they don’t need any machine to check mcq papers. Our system generate result in the time of finishing exam instantly. The system “Quiz web application” is operated at an excessive stage of effectivity and all the instructors and users related with the device is familiar with its advantages.

## **7.2 Scope for Further Development**

We tried to solve some manual problems of conducting quiz, exams or both. We fulfilled those requisites. Although there are some scopes to make exam conducting system more useful, more user friendly. Can add more user's option like video class conducting option for taking class, will add question bank for students from where students can take practice participation for their particular course. By using question teacher also can add question to quiz directly. This is our beginning journey with the "Quiz" system, there's a lots of scope for our further development to give scope for user's to take advantages from our "Quiz" system.

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## Test-1

### ORIGINALITY REPORT

<b>28%</b>	<b>25%</b>	<b>0%</b>	<b>22%</b>
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

### PRIMARY SOURCES

<b>1</b>	<b>dspace.daffodilvarsity.edu.bd:8080</b> Internet Source	<b>12%</b>
<b>2</b>	<b>www.studymode.com</b> Internet Source	<b>7%</b>
<b>3</b>	<b>Submitted to Daffodil International University</b> Student Paper	<b>4%</b>
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