

IMPLEMENTATION OF AN ONLINE BASED EXAM MANAGEMENT SYSTEM

BY

SAYED TANZIM ISHTEAQUE

ID: 173-25-607

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

Supervised By

NAZMUN NESSA MOON

Assistant Professor

Department of CSE

Daffodil International University



DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

MAY 2019

APPROVAL

This Project titled “Implementation of an online based exam management system”, submitted by Md. Sayed Tanzim Ishteaque (ID:173-25-607) 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 M.Sc in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 5 May 2019.

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Professor and Head
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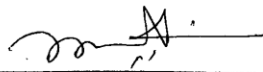
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Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



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Assistant Professor & Coordinator of MIS
Department of Computer Science and Engineering
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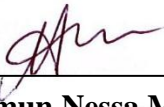
Dr. Muhammad Shorif Uddin
Professor
Department of Computer Science and Engineering
Jahangirnagar University

External Examiner

DECLARATION

I hereby declare that, this project has been done by us under the supervision of **Nazmun Nessa Moon, Assistant Professor, Department of CSE** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

Supervised by:



Nazmun Nessa Moon
Designation
Department of CSE
Daffodil International University

Submitted by:



Sayed Tanzim Ishteaque
ID: 173-25-607
Department of CSE
Daffodil International University

ACKNOWLEDGEMENT

First I express our heartiest thanks and gratefulness to almighty God for His divine blessing makes us possible to complete the final year project/internship successfully.

I really grateful and wish our profound our indebtedness to **Nazmun Nessa Moon, Assistant Professor**, Department of CSE Daffodil International University, Dhaka, Deep Knowledge & keen interest of our supervisor in the field of “*Web Development*” to carry out this project. His endless patience ,scholarly guidance ,continual encouragement , constant and energetic supervision, constructive criticism, valuable advice ,reading many inferior draft and correcting them at all stage have made it possible to complete this project.

I would like to express our heartiest gratitude to Head, Department of CSE, for his kind help to finish our project and also to other faculty member and the staff of CSE department of Daffodil International University.

I would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of our parents.

ABSTRACT

The project titled “**Implement Of An Online Exam Management System**” is basically made of simple php, JQuery and Ajax. The purpose of making the system is trying to digitalize the education system of our country. The working procedure of this project is simple when I will hit at the site link then a dialog box will come at the front with which will say to enter the Email and password for log in. Another sign up option will also be there with the login form. After login another dialog box with The basic information will come at the front. Passing that the exam will start. After finishing the exam, another dialog box with result come at the front. At the very last another dialog box with question and right answer come at the front so show that which answer is write par question basis. I have some limitation in this project. No Time setting function have been added yet and till now basically it is a MCQ based exam system. These limitations will obviously cross over in near future of this project’s development process.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Exam is one of the vital parts of student life. Now a day's exam is taking place in many institutes of the world almost every day of our life. Arranging exams is being harder and expensive day by day in this world for many reasons. Increasing the number of students, lack of space, busy schedule of invigilators are the big problems to arrange exams these days. In previous decades we have seen that internet is a growing part of our life and it's giving us so many solutions of the problems of our life. So, I propose to integrate the part of examination of our life to the internet so that big part of the hassle to arrange examination will turn off.

1.2 Motivation

I have attended in some exams where there are too much examinees and exam venue is hard to reach for the examinees, especially for those who are from outside of the locality. The examinees have faced hard time to attend the exam in time and they have lost the energy before even reaching to the exam hall. Some time the situation can be this hard that one examinee have to travel from one division to another division just for attending a university admission exam just before one or two days ago of the exam and have to get back home again by travelling a long way after attending the exam. In this kind of situation he has to face the pressure of long journey and the tension of exam. So I have wished to make such kind of system where the examinee will not have to face any hard time to attend a exam and he/she will be able to attend to the exam over internet from almost anywhere of the world.

1.3 Objective

- To reduce the expense of arranging and attending exam hall
- To reduce the time between the exam day and result publish day
- To reduce the harassment of moving between home and exam hall

1.4 Expected Outcome

I will get a website where anyone will can easily login into the system and complete their exam by sitting in front of a computer. The examinee will get instant result and after completing the exam the examinee will can compare his/her answer of the question with the write answer too.

1.5 Report Layout

Chapter 1: Introduction

In this chapter we have discussed about the introduction, motivation, objectives and expected outcome of the project later followed by report layout.

Chapter 2: Background

Here we have discussed about the background circumstances of our project. We also talk about the related works, comparison to other candidate system, the scope of problems and challenges of the project.

Chapter 3: Requirement Specification

This chapter is all about the requirements like business process modeling, the requirement collection and analysis, the use case model of the project and their description, the logical data model and the design requirements.

Chapter 4: Design Specification

In this chapter all the designs of the project. Front-end design, back-end design, interaction design and UX and the implementation requirements.

Chapter 5: Implementation and Testing

This Chapter contains the implementation of database, front-end designs, interactions, test implementation and the test result of the project.

Chapter 6: Conclusion and Future Scope

We discussed about the conclusion and the scope for further developments which pretty much derive about the project.

CHAPTER 2

BACKGROUND

2.1 Introduction

An online exam system is basically online based software and to develop the software it requires any kind of IDE that support HTML, CSS, JQuery and PHP. I have used Netbeans to develop this online based application. In Netbeans IDE one can work with most of the markup languages and programming languages of the world.

I have used PHP as the main coding language. And Also used HTML, CSS and JQuery to design the GUI of my online based software. I have used XAMPP as my software's server. And I have used MySQL as my software's database.

2.2 Related Works

There are some web app related to my app. This has almost the same motive as I had intended to do. I compared two of the web apps with my web app.

1. TalentMarx [1]

- Assessment Creation
- Holistic Assessment
- Examination Scheduler

2. Codility [2]

- Time management
- Question randomizing
- Assessment

3. Kaldin [3]

- instant delivery of exam result
- high system security

- data safety

2.3 Comparative Studies

There are many common things in our applications. But there are some significant differences. So the difference between those apps and my app can be given below

- User controlling system from admen panel.
- Light weight software
- User friendly software

2.4 Scope of the problem

This application is based on php. Now php has become one of the mostly used programming languages for web development. So, there are many developers who are working for making a web based application. And this media system was not noticed by me. This has been noticed by many people. So, there are many people trying to solve this problem.

2.5 Challenges

- This project is one of the first project of my life. I had to learn php, javascript and ajax only alone by spending many days.
- As I am new in programming I have faced so many confusing errors at the time of working on this project.
- To add some features I had to study a lot of codes.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

BPM or Business Process Modeling is a process of constructing a structural view of a system or process. It includes some process, starts and symbol, condition as like a flowchart. In this process we can see that how an examinee will access the system, update his/her profile then take part in exam process then get the mark from the system. In the figure 3.1 we can see the process of the examinee that will use the system.

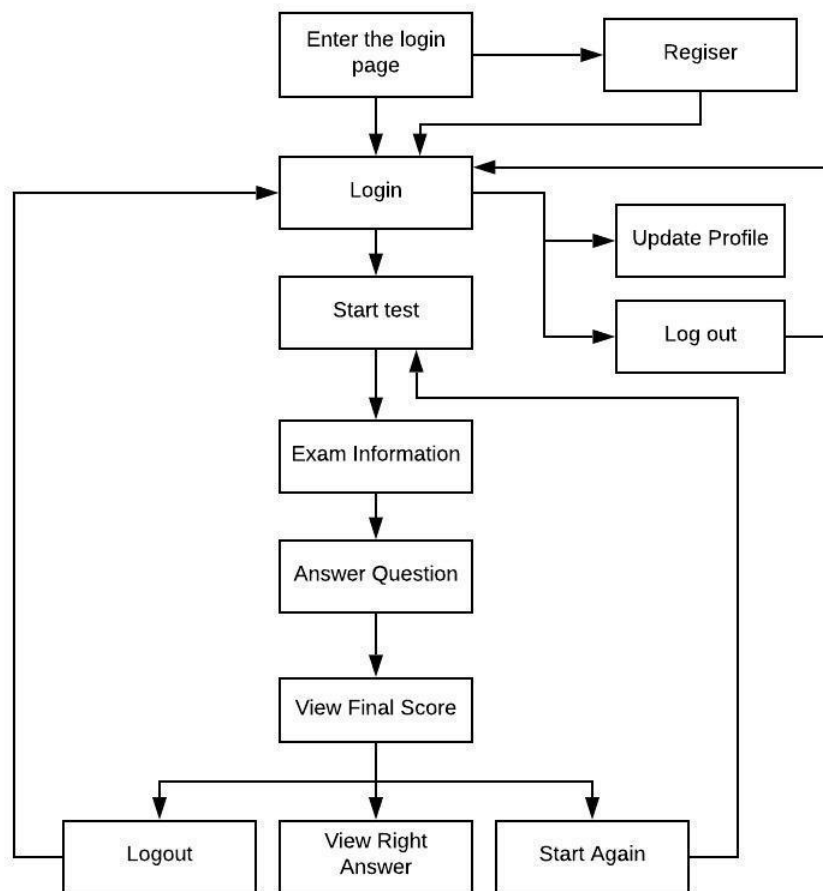


Figure 3.1: Block Diagram of user level system

On the other hand, in figure 3.2 we can see the working process of our admin panel. There we can see how an admin can add question with MCQ type of answers, remove question along with answers, enable users for attending at the exam, disable users to prevent them from taking part into the exam and remove the user to delete him/her permanently from the system.

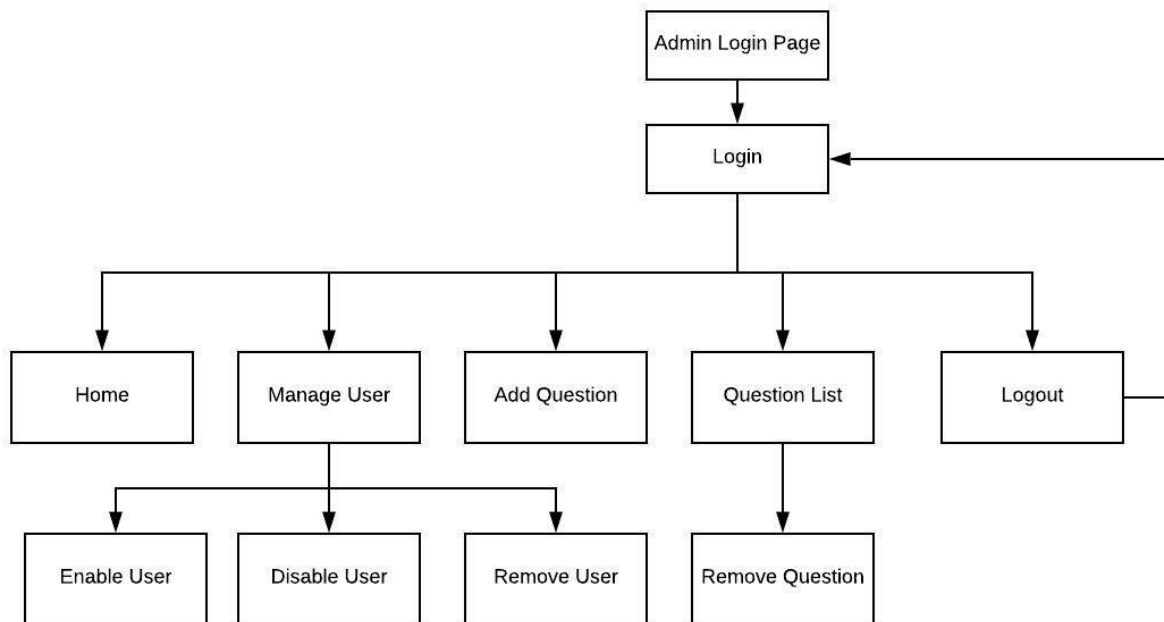


Figure 3.2: Block diagram of admin panel system

3.2: Requirements Collection and Analysis

An online application requires so many things to fulfill the desires of a system. Requirement will be software wise. Just the some part of the software will work hardware wise. My application required a lot of time and logics to finish.

So, the usual **requirements** that needed to fulfill my web application ware,

- Coding languages

➤ PHP

- JavaScript
- Software IDE
 - Net Beans 8.0 [4]
- Hardware
 - Any form of computer

Analysis:

After some personal experience and analysis I wanted to make this web application to help others. I have experienced a lot of hurdle and harassment to attend some exams and I have seen that in the time of admission every year all the students who wants to admit in a good university have to ran far distance from the home within a short time. For this kind of situation all the students have to face so much tuff situation and have to loss there time money and energy behind moving from place to place. So, for that they always be unfit even before attend in the exam hall. By seeing this kind of problem I have decided to make this web application for making it easy to attend to attend in exam.

3.3 Use case Modeling and description:

A use case is a graphic description of the interactions among the elements of a system. A use case is a methodology used in system analysis to identify, clarify and organizing system requirements. Use case model is shown in figure 3.3.

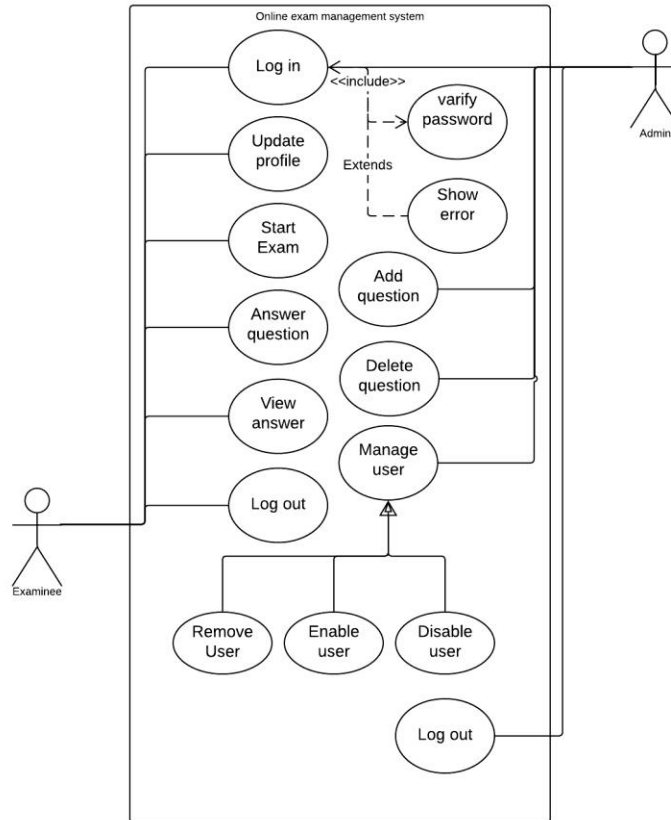


Figure 3.3: Use case diagram of Online exam system

Use Case Description of Online Exam System

Use Case: Examinee Register

Actor: Examinee

Pre-condition: NULL

Primary Path

- Chose sign up
- Fill the data fields
- Click the Signup button
- Take to the Exam.php page

Alternet Path

- Didn't choose sign up
- Data field is empty
- Connection Error

Post condition

- If registration successful
- The Exam.php page is loaded

Use Case: Examinee Login

Actor: Examinee

Pre-condition: Registration

Primary path

- Fill the data fields
- Click the log in button
- Take to the Exam.php page

Alternet Path:

- Empty field or fill with wrong data
- Error message

Post condition

- If the log in is successful
- The Exam.php page is loaded

Use Case: Update Profile

Actor: Examinee

Pre-condition: Log in

Primary path:

- Click on profile button
- Fill the fields
- Click on update button

Alternet path:

- Click on profile button
- Click on update button with empty fields
- Show error message

Post condition:

- If the update successful
- Show a successful message

Use Case: Start Exam

Actor: Examinee

Pre-condition: Logged in

Primary path:

- If the examinee is in profile.php page then click on Exam button on Exam.php page
- Click on Start now button
- Click on Start test button

Alternet path:

- Click on Log out button

- Go to the login.php page

Post condition:

- Exam will Start

Use Case: Exam

Actor: Examinee

Pre-condition: Complete the Start Exam process

Primary path:

- Select the answer from the answer list
- Click on Next Question Button

Alternet Path:

- Click on Next Question button

Post condition

- If all question is passed
- Go to the finish.php page

Use Case: View Answer

Actor: Examinee

Pre-condition: Complete the Exam process

Primary path:

- Click on view answer

Alternet path:

- Click on Log out button
- Go to login.php page

Post condition:

- Go to viewAns.php page

Use Case: Log out

Actor: Examinee

Pre-condition: Logged in

Primary path:

- Click on Log out button

Post condition:

- Go to the login page.

Use Case: Log in

Actor: Admin

Pre-condition: NULL

Primary path:

- Fill up the form with right data
- Click on Log in button

Alternet path:

- Empty field or fill with wrong data

- Error message

Post condition:

- Go to the home.php page

Use Case: Add question

Actor: Admin

Pre-condition: Log in

Primary path:

- Click on Add ques button
- Fill up all fields with appropriate data
- Click on add question button

Post condition:

- If the question added show a successful message

Use Case: Remove question

Actor: Admin

Pre-condition: Log in

Primary path:

- Click on Remove ques button
- Click on the Remove button beside the question that has to be removed
- Click OK on pop up message to ensure remove

Post condition:

- If the question successfully deleted then show a successful message.

Use Case: Disable User

Actor: Admin

Pre-condition: Logged in and user have to be enabled

Primary path:

- Click on Manage User button
- Click on Disable button beside the user name that has to be disabled
- Click OK on pop up message to ensure disabling user

Post Condition:

- If the user is disabled then show a successful message.
- User name's color will be red

Use Case: Enable User

Actor: Admin

Pre-condition: Logged in and user have to be disabled

Primary path:

- Click on manage user button
- Click on Enable button beside the user name
- Click OK on pop up message to ensure disabling user

Post Condition:

- If the user is enabled then show a successful message
- Red color of the user's name will be removed

Use Case: Remove User

Actor: Admin

Pre-condition: Logged in

Primary path:

- Click on manage user button
- Click on Remove button beside the user name
- Click OK on pop up message to ensure removing user

Post Condition:

- If the user is removed then show a successful message
- the user's name will be removed from the list

Use Case: Log out

Actor: Admin

Pre-condition: Logged in

Primary path:

- Click on Log out button

Post condition:

- Go to the login page.

3.4 Logical Data Model:

Logical Data Modeling is a process used to define and analysis requirement needed to support the business process within the scope of corresponding information systems in organizations. The Entity-Relationship model or Entity Relationship diagram (ERD) is a logical data models, it includes the entity, attributes and relationships. Logical data model is given below in figure 3.4.

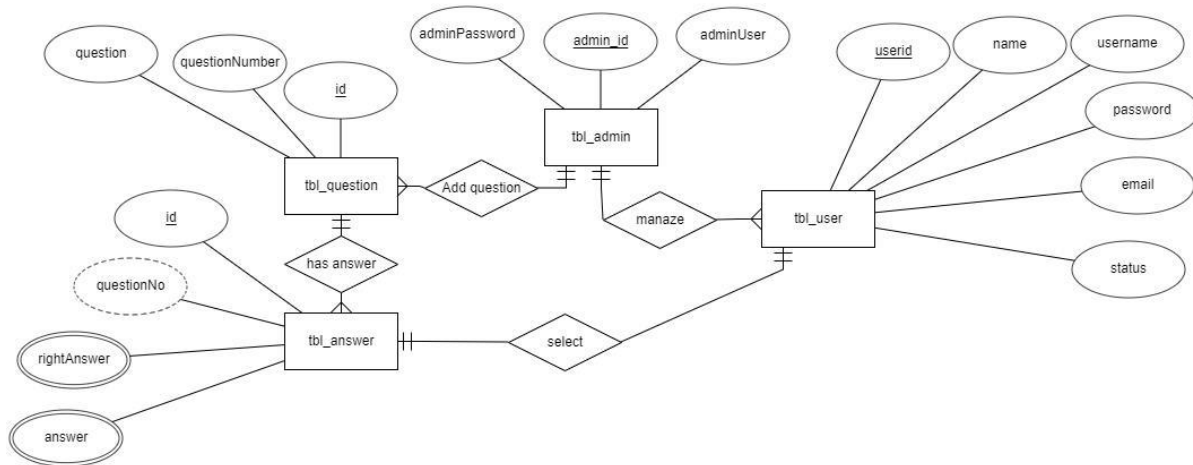


Figure 3.4: E-R diagram of Online exam system

Description of Logical Data Model:

There are two types of users in this system. Examinees and the admin. Examinees will login into the system and then start the exam after seeing the preliminary information of the exam. The examinees also can update their profile from the profile page. After completing the exam the examinees will can automatically see the result of the exam they have achieved. They can also see the right answer of the questions of the exams after completing the exam. Then the examinee will log out from the system. On the other hand the admin will log in to the admin panel then he will can add question, remove question, disable an examinee, enable an examinee and remove an examinee. Then the admin also can log out.

3.5 Design requirements

The following goals were kept in mind while designing this system:

Make System Simple and Flexible for Users

The system users are able to have a great amount of control over their purpose in achieving objectives.

Make the system Compatible

It should be fit in the total system, future maintenance and enhancement must have to be compatible.

Efficiency

It is the most important. The system should run and work minimum hardware and software resource without delaying.

CHAPTER 4

REQUIREMENT SPECIFICATION

4.1 Front-End Design

In any application the front-end design is the virtual part of a web application. By which the examinee can interact with this app. In this sense of an examinee the front-end design is the main thing. In the sense of a coder it means the languages put together to set the UX of an web application.

For a convenient user experience, it is usually needed to be user friendly and understandable by the examinee. There while developing the web application I tried to make it user friendly so that they can easily use it.

I have used HTML, CSS and AJAX to make the user interface. The Online Exam System has many pages. So there were a lot of designing thing for login page registration page, profile page, exam page for student and, add question page, question list page, manage user page for admin. Screenshot with full explanation is given in the chapter 5, 5.2 Implementation of front-end design section.

4.2 Back-End Design

The back-end design is the part where the actual work happens in a web application. The examinee or the admen cannot interact with this part or anything. The back-end part is the most crucial part of a web application. Here all the logics work behind the application. The logics of savings or displaying data from the part to part is the work of backend part.

We thing the front-end part is the heart but reality, without the back-end part we cannot do anything in a web application. Most of the big companies work most of their time for designing the back-end part. My project also took a lot of time for making the logic works.

To develop and maintaining the back-end section I have used MySQL database in my web application. The tables of database is shown in figure 4.1

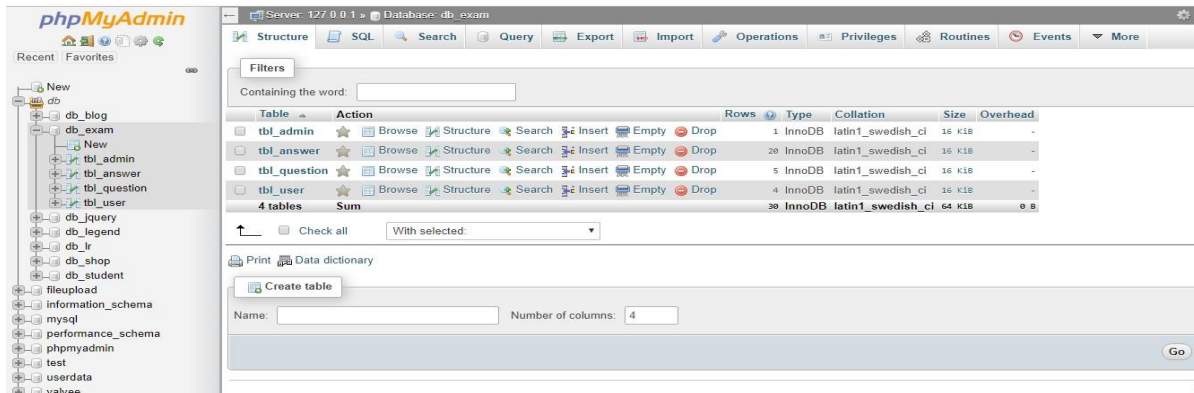


Figure 4.1: Database of the Online Exam System

To run MYSQL database I have used XAMPP software as local server. The image of XAMPP control panel is shown in figure 4.2

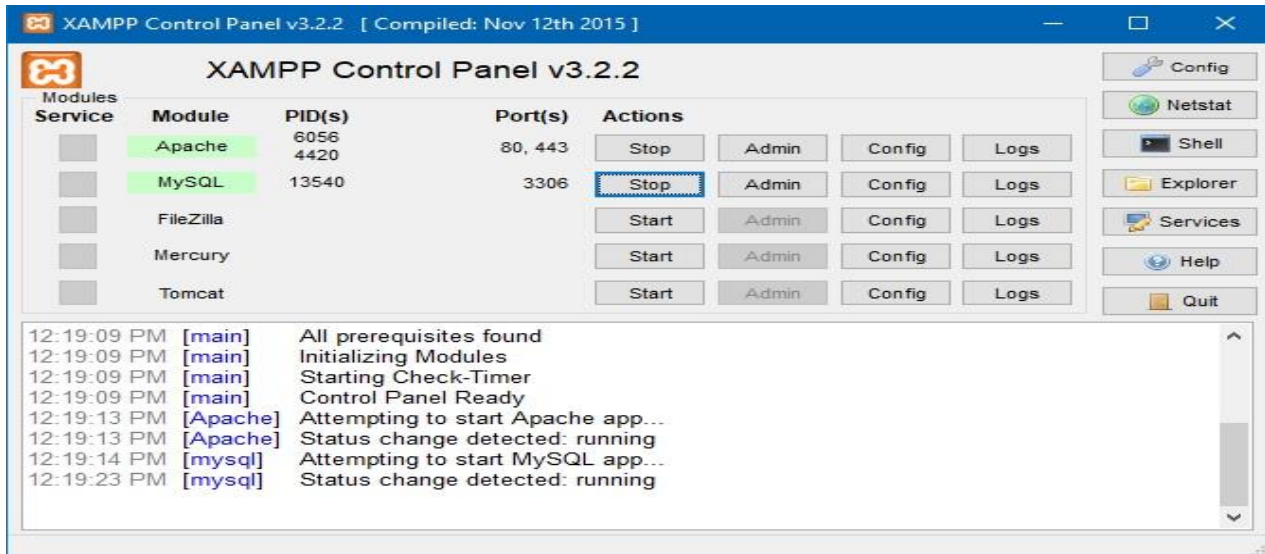


Figure 4.2: local host server control panel

4.3 Interaction Design And UX

Interaction design represents the interaction of the application through the user. Interaction design means the system processing the issues that a user faces or wants to proceed through the application. It mainly focuses the overall outcome of the application.

The UX stands for user experience. User experience is important for any application. It means the overall that is used conveniently by the user. For a better user experience there should be a better design and the application should be user friendly.

I have tried to put these two factors perfectly in my web application as the user will have he satisfaction of using the web application for their purpose of use. And the system shows the design as simple as it possible so that the user can have a great using experience.

4.4 Implementation Requirements

My web application is based on web application system which can be made through any IDE Net Beans, This IDE is freeware. Anyone can use it by download it and install it at the computer. Most web application developer uses net beans for web application development. This IDE helps us with code altering, troubleshooting, execution tooling, and adaptable with framework.

Here I will discuss about the implementation requirements that I need to complete this web application.

XAMPP

XAMPP is software that provides an environment like a server system in any computer. I have used the 7.2.7 version of this software. It supports all the necessary feature which is needed to develop a web application.

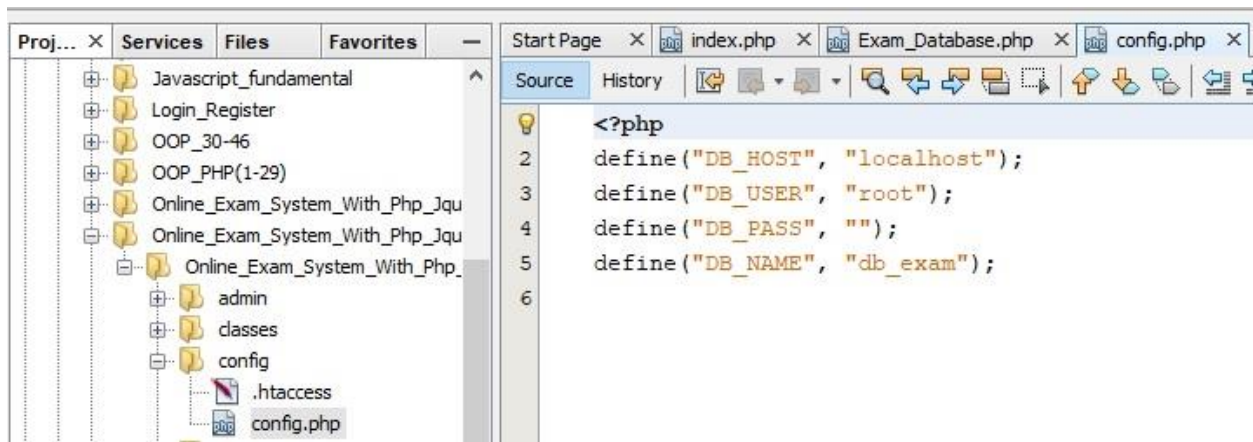
CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

MySQL database is a light weight database system. It can be used to authenticate users. It is a relational database system.

The main database that I have created to use in this project is named db_exam. It has three parts one is for examinee, one is for admin and one part is for both examinee and admin. And these parts can hold the necessary data to control the whole web app. I have connected the database with the web application through config.php and Exam_database.php. the code inside of config.php is shown in figure 5.1

The image shows a screenshot of an IDE window. On the left, a project tree is visible with folders like 'Javascript_fundamental', 'Login_Register', 'OOP_30-46', 'OOP_PHP(1-29)', and 'Online_Exam_System_With_Php_Jqu'. The 'config.php' file is selected. The main editor area shows the following PHP code:

```
<?php
2  define("DB_HOST", "localhost");
3  define("DB_USER", "root");
4  define("DB_PASS", "");
5  define("DB_NAME", "db_exam");
6
```

Figure 5.1: config.php

In Exam_database.php file I have made the connection between the web application and database. The code of database connection inside the file is shown in figure5.2


```

1 <?php
2 $filepath = realpath(dirname(__FILE__));
3 include_once ($filepath . '/../config/config.php');
4 ?>
5 <?php
6 Class Exam_Database{
7     public $host    = DB_HOST;
8     public $user    = DB_USER;
9     public $pass    = DB_PASS;
10    public $dbname  = DB_NAME;
11
12
13    public $link;
14    public $error;
15
16    public function __construct(){
17        $this->connectDB();
18    }
19
20    private function connectDB(){
21        $this->link = new mysqli($this->host, $this->user, $this->pass, $this->dbname);
22        if(!$this->link){
23            $this->error = "Connection fail". $this->link->connect_error;
24            return false;
25        }
26    }
27 }

```

Figure 5.2 database connections with the web application

5.2 Implementation of front end design

When I will enter to the link of our online exam management system, this dialogue box will come at the front at first for log in like shown in figure 5.3:



Figure 5.3: Login page of the user

But, at first the user have to make an account to give the exam. If a user don't have any account then he have to give some information at the registration page to create an account. He have to

click on “sign up” option for going to registration page. The user can also go to the registration page by clicking on “Register” option. The registration page is like shown in figure 5.4.



Figure 5.4: Registration page of the user

When the user will fill up the form with appropriate and valid information then the system will show the user a successful message like shown in figure 5.5 and all of the information of that user will be stored in the database.

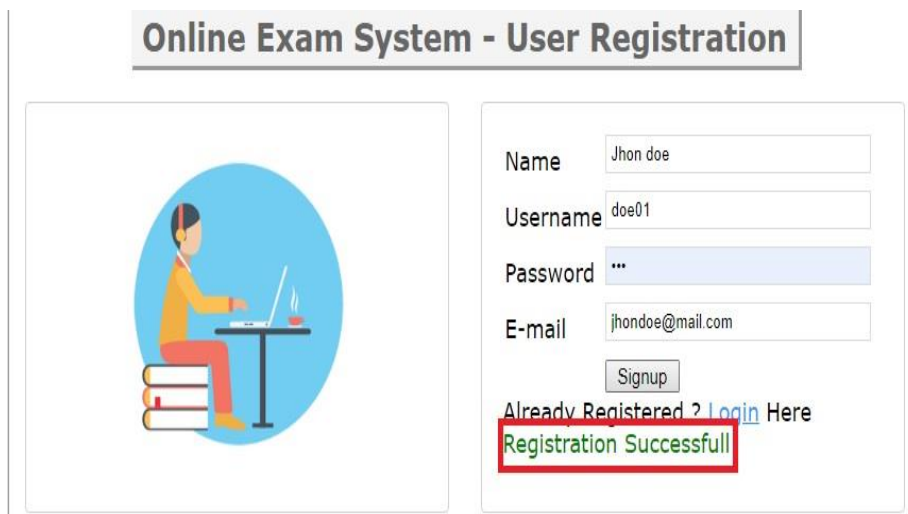



Figure 5.5: Registration successful

If the user enter an email that had been in the system’s database from before then the system will not grant that user as a new user and will give an error message like shown in figure 5.6.

Online Exam System - User Registration



Name

Username

Password

E-mail


Already Registered ? [Login Here](#)

Email address already exist!

Figure 5.6: registration failed for same email of two users

If the user by chance forget to fill up any of the fields of the registration form then the system will give another error message like shown in figure 5.7.

Online Exam System - User Registration



Name

Username

Password

E-mail

Already Registered ? [Login Here](#)

Field must not be empty!

Figure 5.7: Error for empty field in user registration form

Now, let's come back to the login page. If the user enters a wrong email or wrong password then the system will give an error message like shown in figure 5.8. And this error message will be fed out just after 4 seconds because of the characteristics of ajax.

Online Exam System - User Login

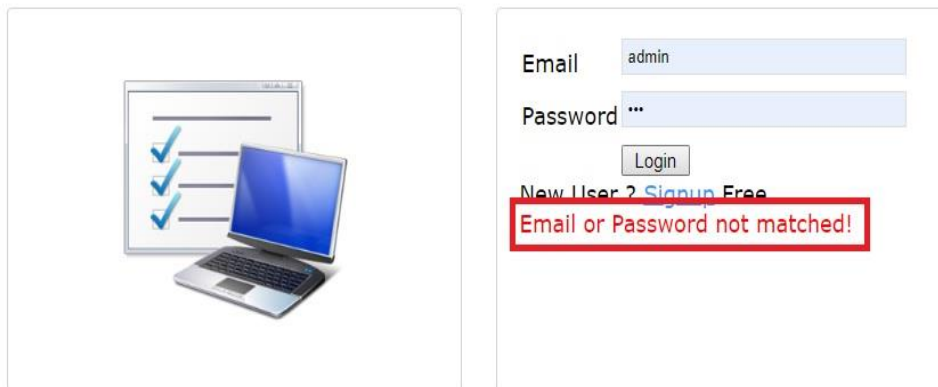


Figure 5.8: User login error for wrong email and password

If by chance the user forget to fill up any of the field the login page and click on “Log in” button then the system will give an error message like shown in figure 5.9 And this error message will be fed out just after 4 second because of the characteristics of ajax.

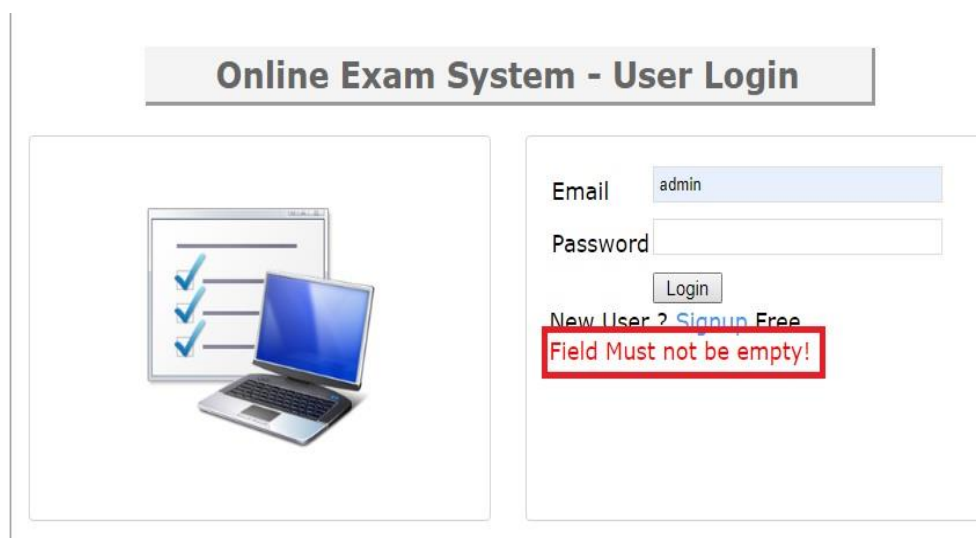


Figure 5.9: User login error for submitting empty field

Now, when a user logged in then the system redirect the user to “start exam” page. The page is like shown in figure 5.10.



Figure 5.10: Image of starttest.php page

The user can also update his/her profile if he/she wants. For doing this he/she have to click the “Profile” button. After clicking the profile button the profile page will come at the front like shown in figure 5.11.



Figure 5.11: image of profile.php page

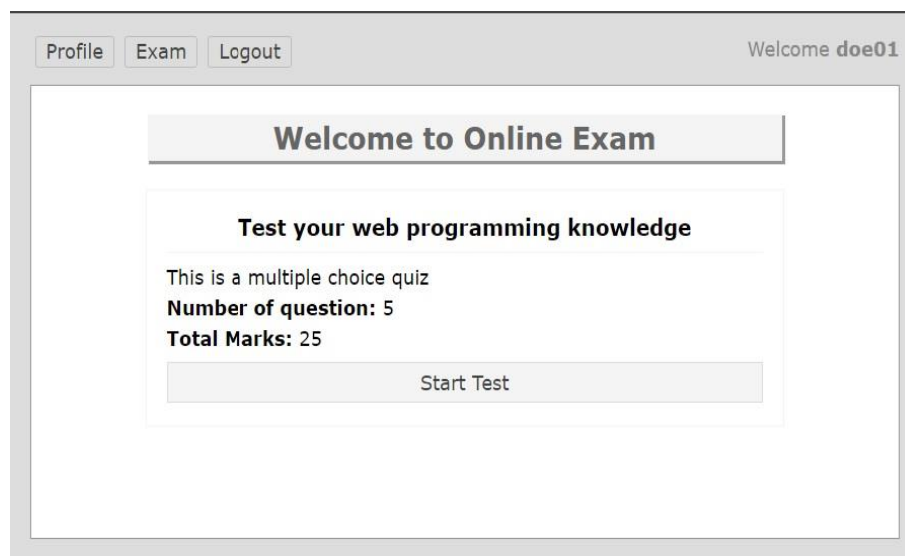
When the user will click on “update” button a success message will be shown like shown in figure 5.12.



The screenshot shows a web form titled "Update Your Profile". At the top, there is a grey header bar with the title. Below the header, a white box contains a green message "User Data Updated" which is highlighted with a red border. Underneath the message are three input fields: "Name" with the value "Jhon doe", "Username" with the value "doe01", and "Email" with the value "jhondoe@gmail.com". At the bottom of the form is a grey "update" button.

Figure 5.12: Message of profile successful updated

After coming into the “starttest.php” page, the user have to click the “Start Now...” button. After clicking the “Start Now” button the basic information about the exam which will be sated by admin will be showed up like shown in figure 5.13.



The screenshot shows a web page with a navigation bar at the top containing "Profile", "Exam", and "Logout" buttons, and a "Welcome doe01" message. The main content area has a grey header bar with the title "Welcome to Online Exam". Below this, there is a white box with the heading "Test your web programming knowledge". Underneath, it says "This is a multiple choice quiz", "Number of question: 5", and "Total Marks: 25". At the bottom of this box is a grey "Start Test" button.

Figure 5.13: Basic information about the exam

Now, when the user will click on “Start Test” button again on that page above then the exam will finally be start and the questions with MCQ type of answers will start to come at the front like shown in figure 5.14.

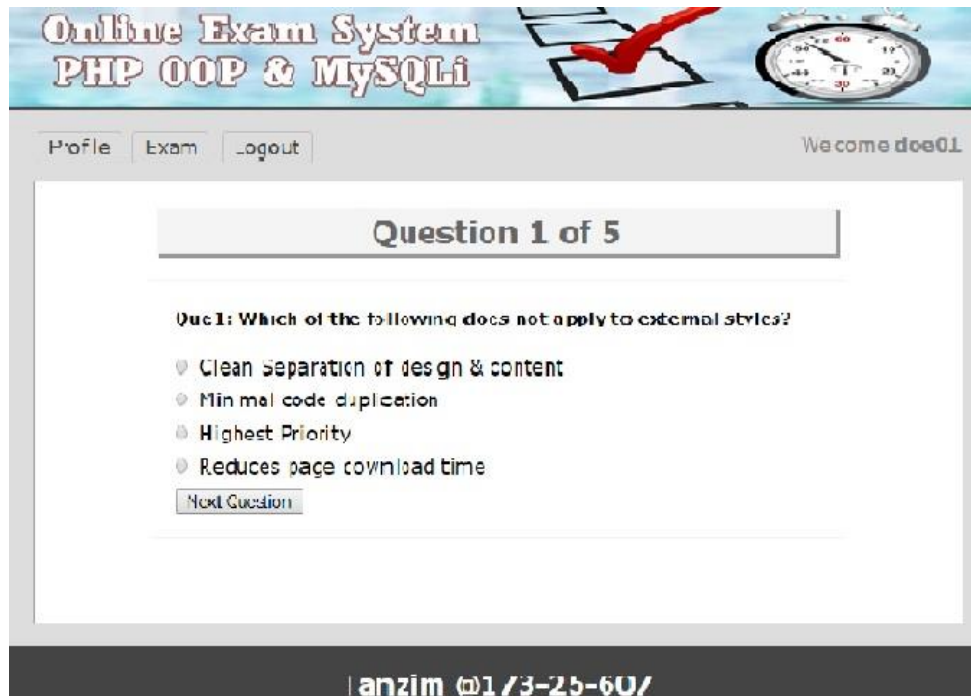


Figure 5.14: Image of the exam.php page

Questions will come one after one. When user will finish of answering all the questions, the system will show the total marks he/she have achieved. Like shown in figure 5.15

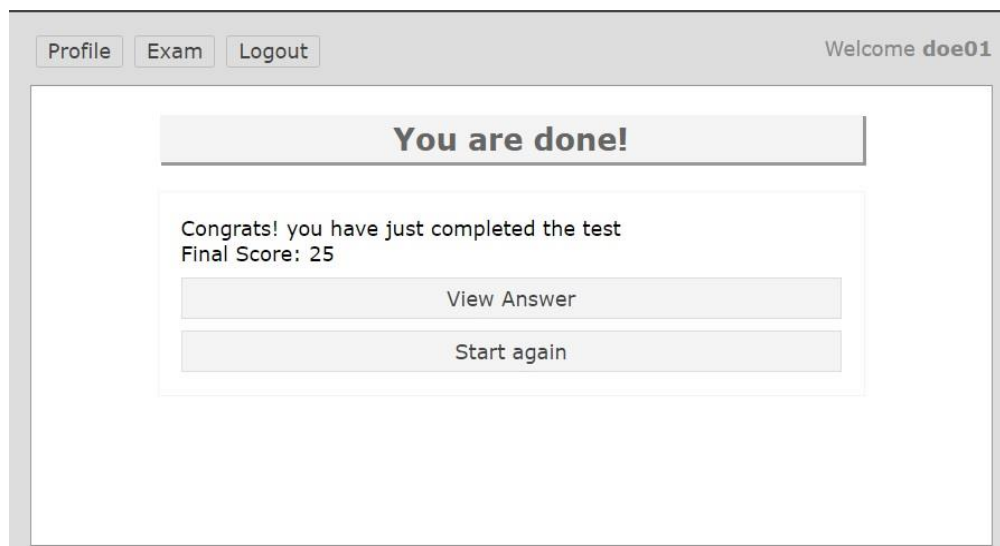


Figure 5.15: Image of finsh.php page

After that if the user wants then she can see the right answer of all of the questions. Or as if it is a test exam then he/she can start the exam again. If the user wants to see the correct answer then

the page will come at the front with the correct answer after clicking “View Answer” button. The page will be like shown in figure 5.16:

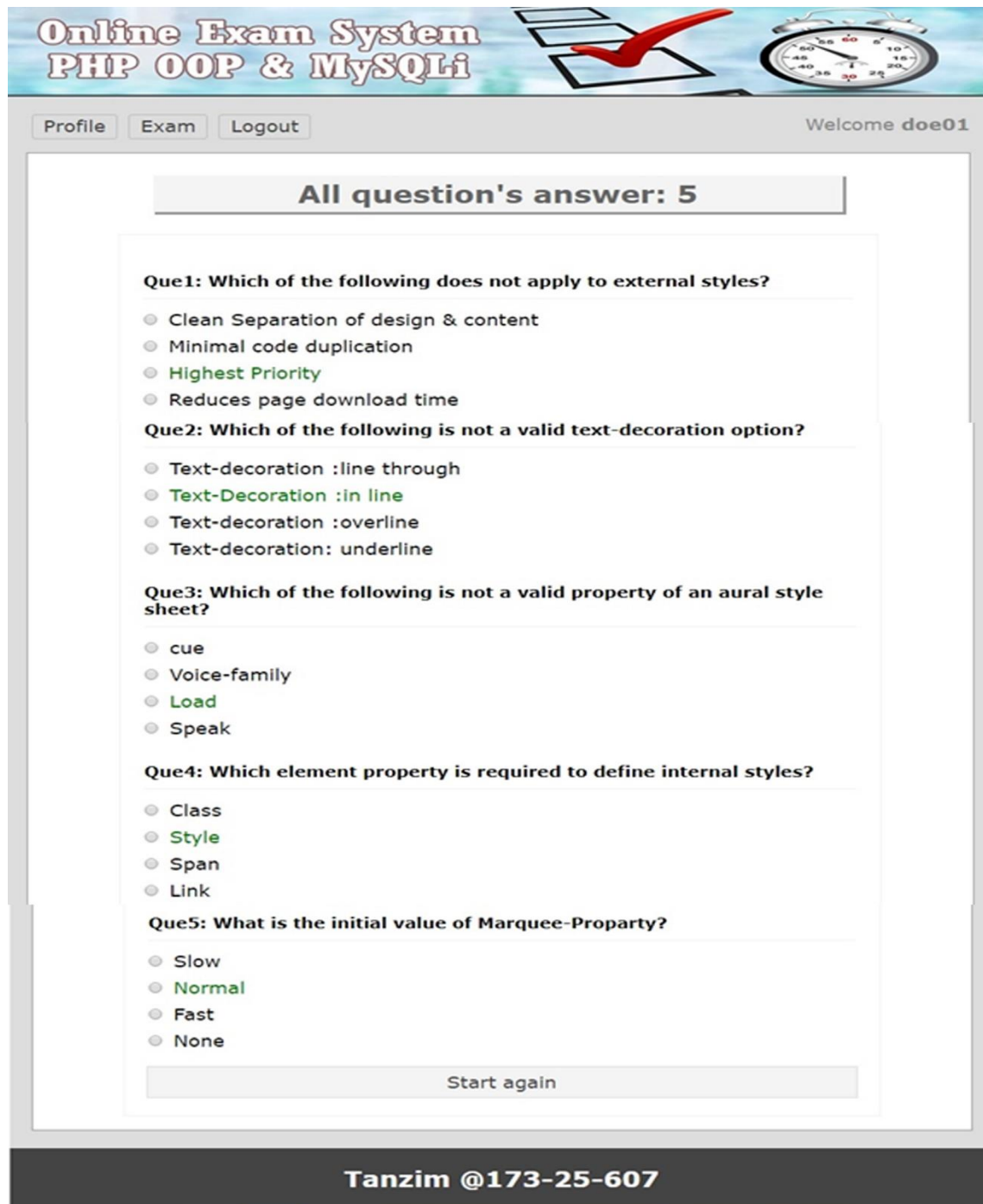


Figure 5.16: Image of viewAns.php page

Admin panel: When the admin hit the link of admin panel the admin login page will come at the front. The admin login page will be like shown in figure 5.17



Figure 5.17: Image of login.php page of the admin panel

After login the system will redirect the admin the home page of admin panel. The home page will be like shown in figure 5.18

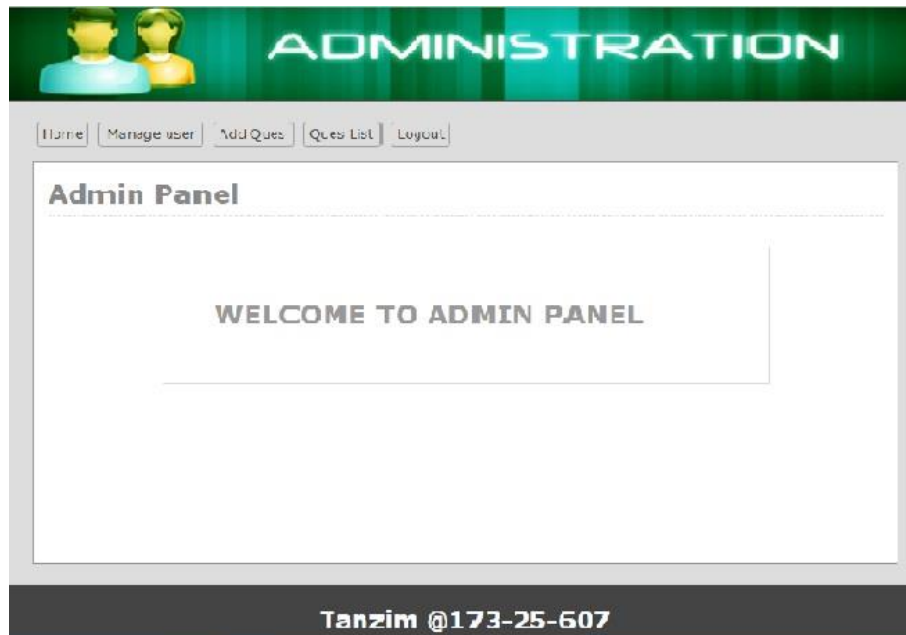


Figure 5.18: Image of home.php page of admin panel

The admin will be able to enable or disable any user. For that he have to click the “Manage user” button. After click that button the user list will come at the front. User list will be like shown in figure 5.19

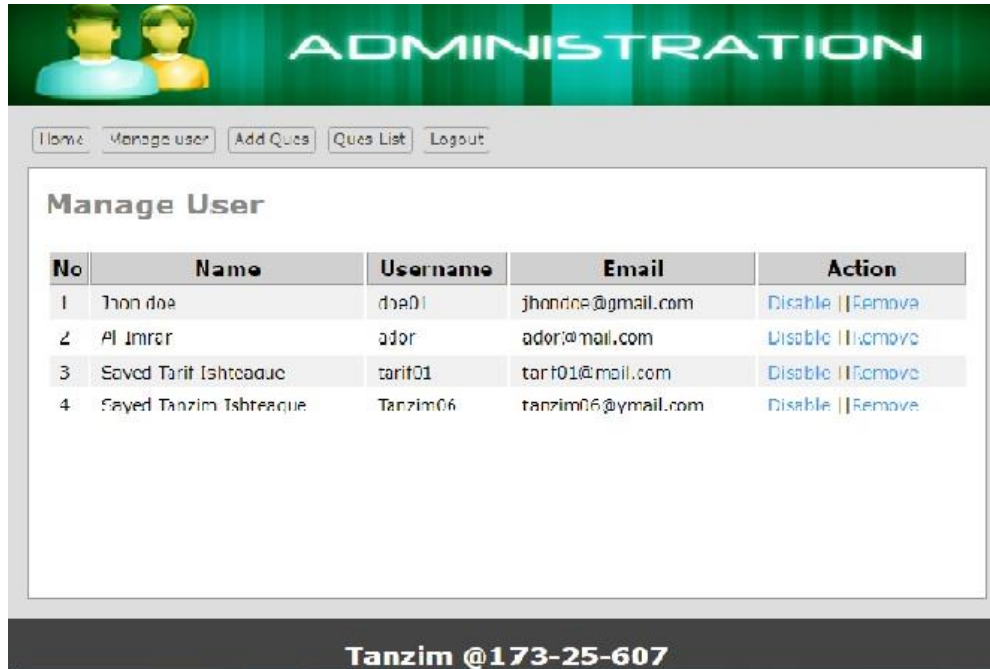


Figure 5.19: Image of user.php page of admin panel

If the admin click on the “disable” button beside any user’s name then the system will give a pop up message to ensure the decision like shown in figure 5.20:

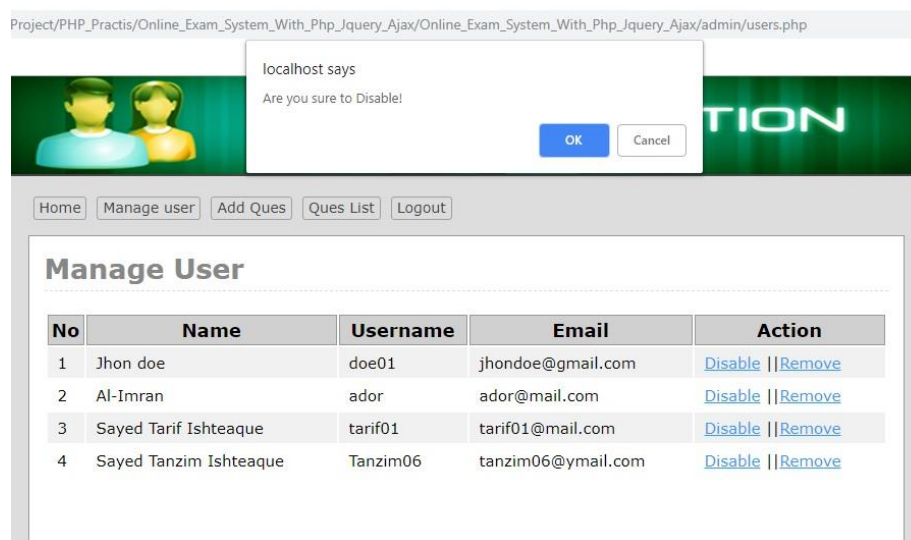
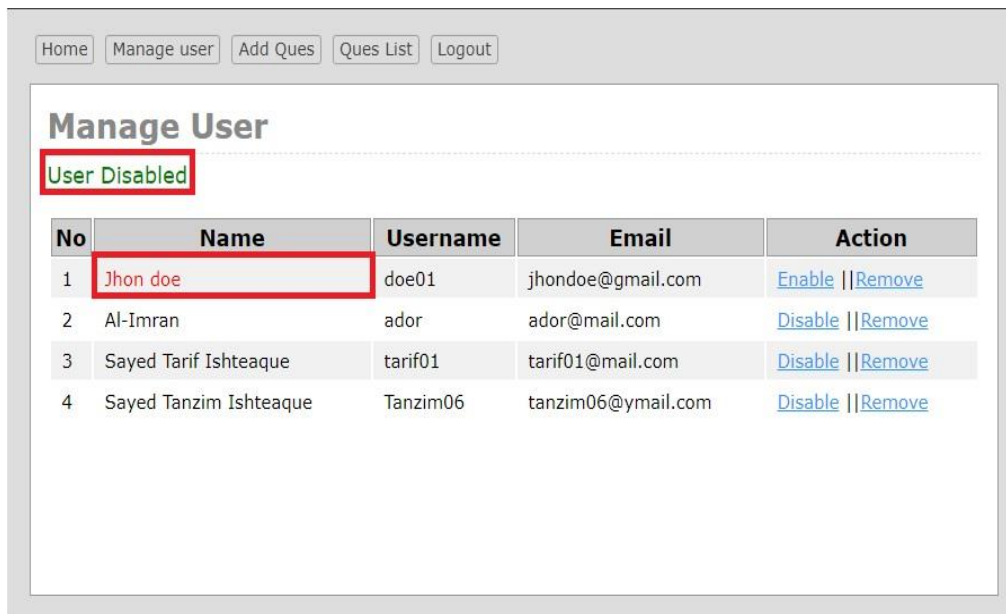


Figure 5.20: pop up message to ensure disable user

If the admin click “OK” on pop up message then that user will not be able to login to the system. And the name of the user will be red marked in the list. Like shown in figure 5.21:



Home Manage user Add Ques Ques List Logout

Manage User

User Disabled

No	Name	Username	Email	Action
1	Jhon doe	doe01	jhondoe@gmail.com	Enable Remove
2	Al-Imran	ador	ador@mail.com	Disable Remove
3	Sayed Tarif Ishteaque	tarif01	tarif01@mail.com	Disable Remove
4	Sayed Tanzim Ishteaque	Tanzim06	tanzim06@ymail.com	Disable Remove

Figure 5.21: successful message of disabling user

Because of disabling the user, that user will be unable to login into the system. System will show an error message to the disabled user like shown in figure 5.22



Login Register

Online Exam System - User Login

Email

Password

New User ? [Signup Free](#)

User Id disabled!

Figure 5.22: Id disabled message for user

Then The admin will also be able to enable that disabled user to give permission attend the exam by clicking on enable button and clicking “OK” on pop message Like shown in figure 5.23

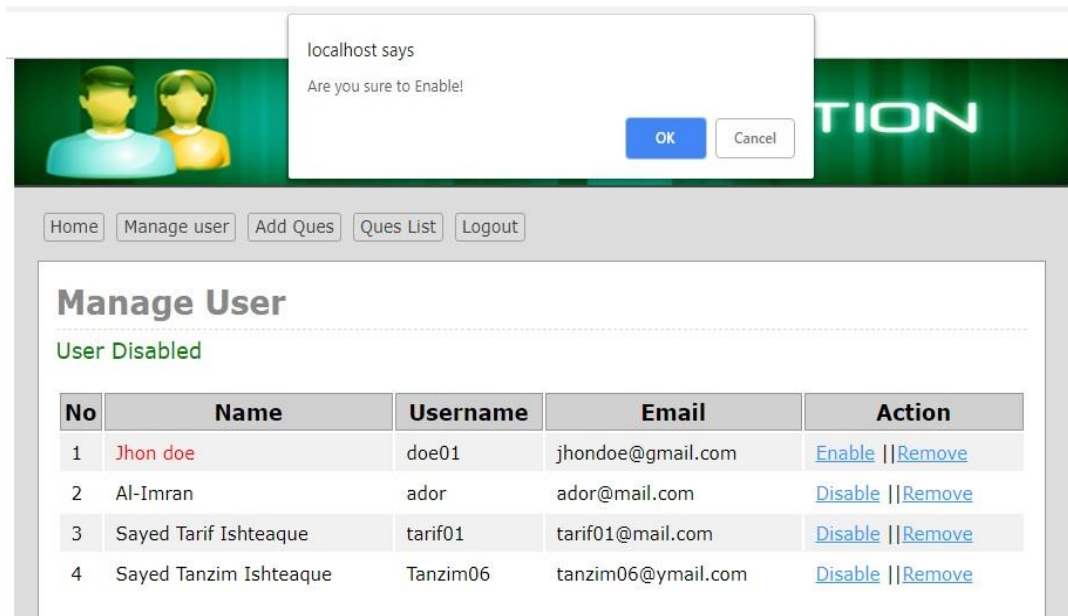


Figure 5.23: pop up message to ensure enable user

A successful message for enabling user will be shown after clicking OK on pop up message like shown in figure 5.24

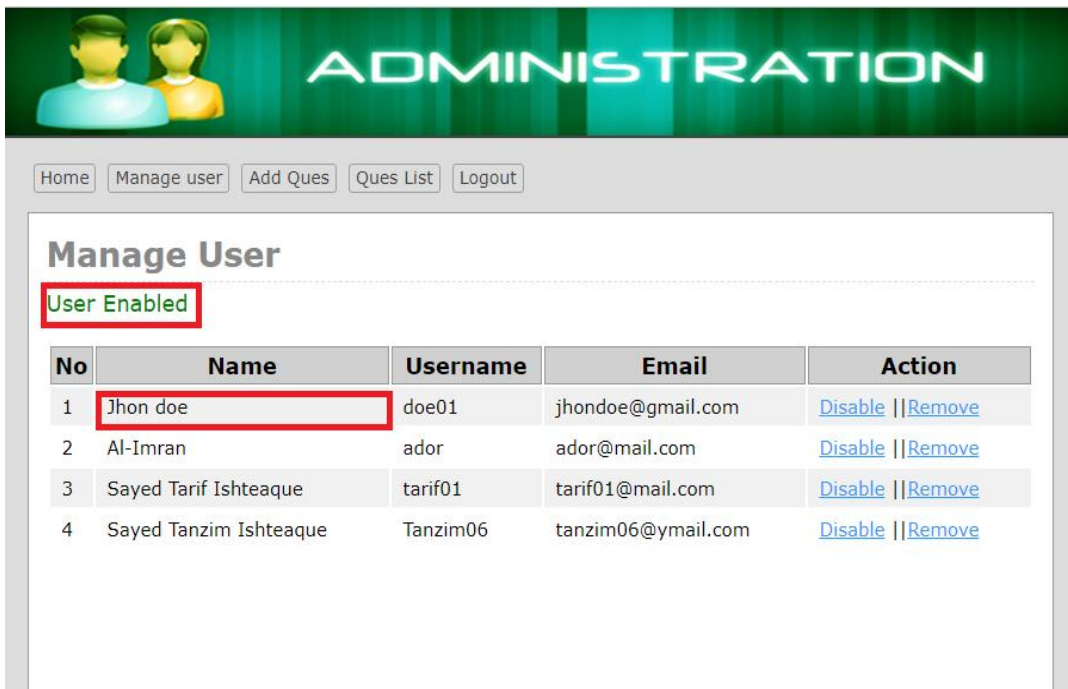


Figure 5.24: Successful message of enabling user

If admin wants then he will be able to remove the user permanently. So that the user have to register him/herself at the site again. Admin have to ensure his decision at the pop up message shown in figure 5.25

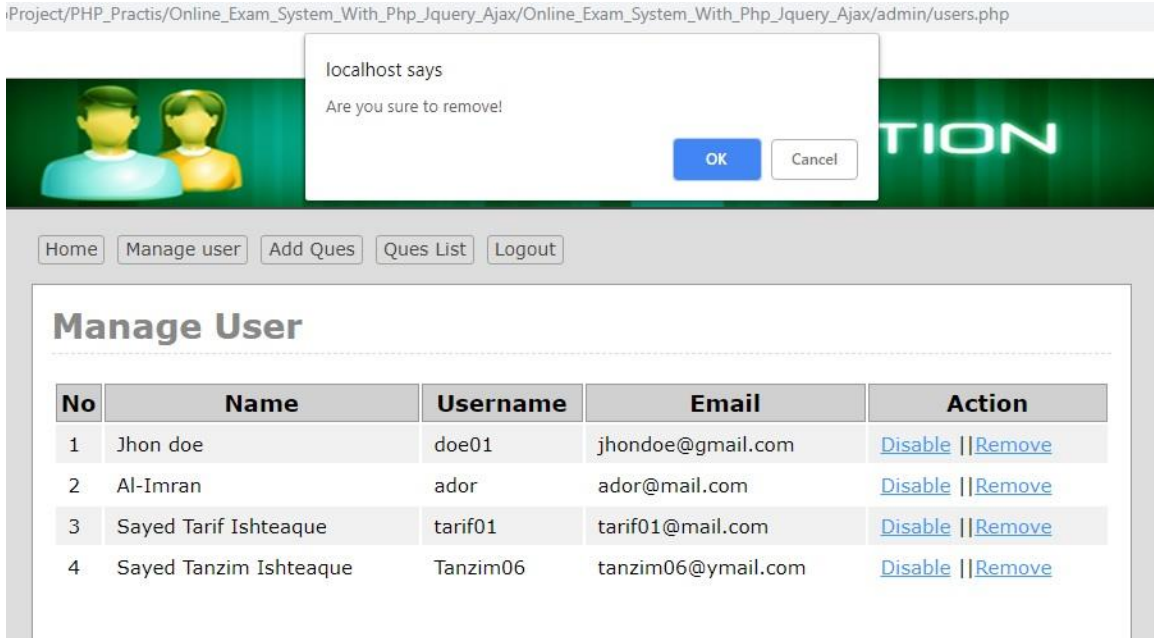


Figure 5.25: Pop up message to ensure remove user from the system

A successful message for deleting user will be shown after clicking OK on pop up message like shown in figure 5.26

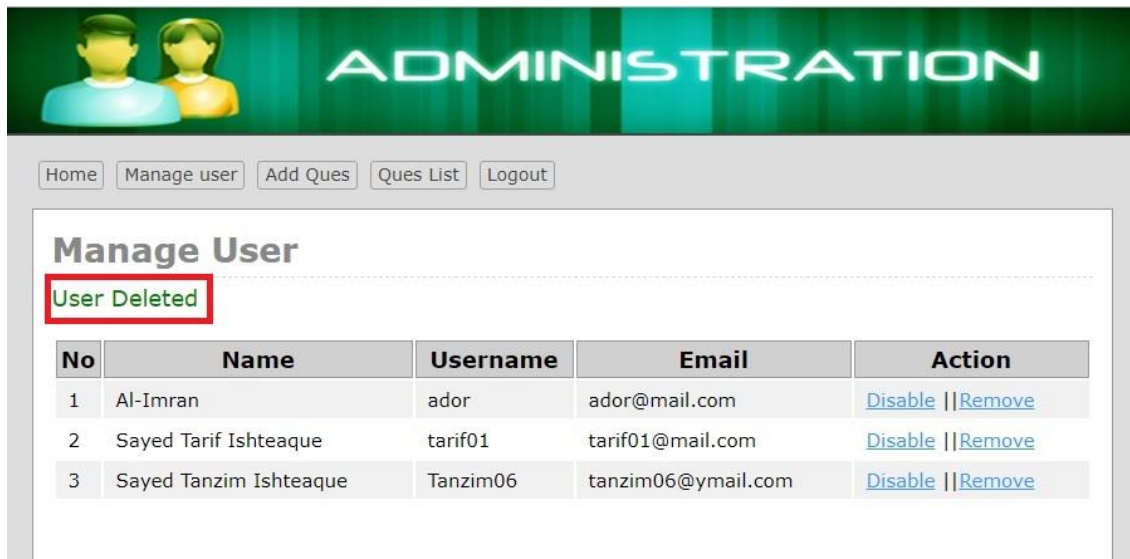


Figure 5.26: Successful message for removing user from the system

Now, when admin needs to make questions then he have to click on “Add ques” button.

When he will click on that button then the page to add question will come at the front, that page is look like shown in figure 5.27

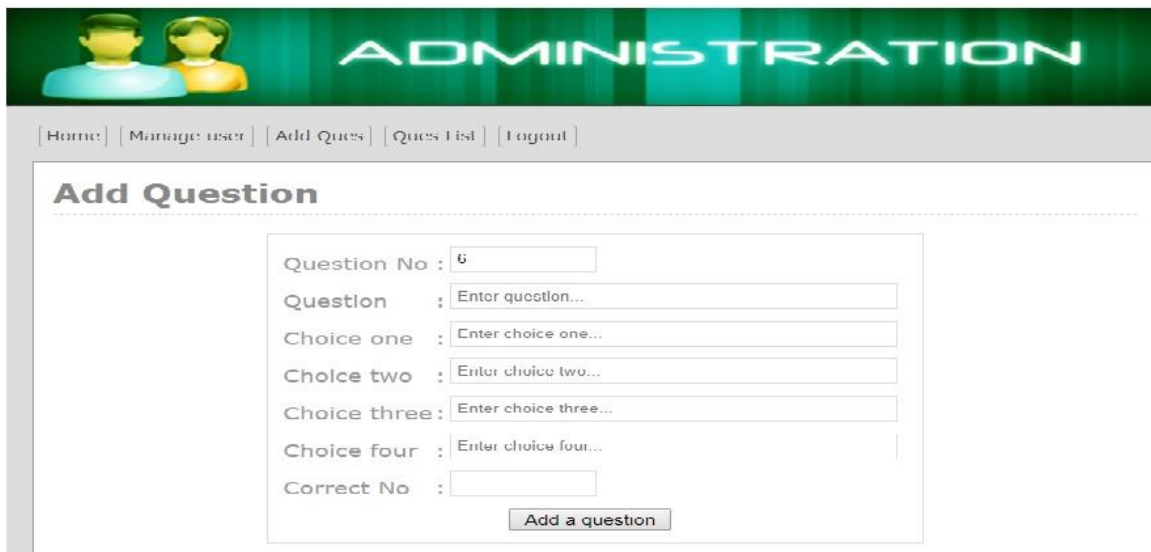


Figure 5.27: Image of addques.php page

When the question is successfully added to the system then system will show a success message like shown in figure 5.28

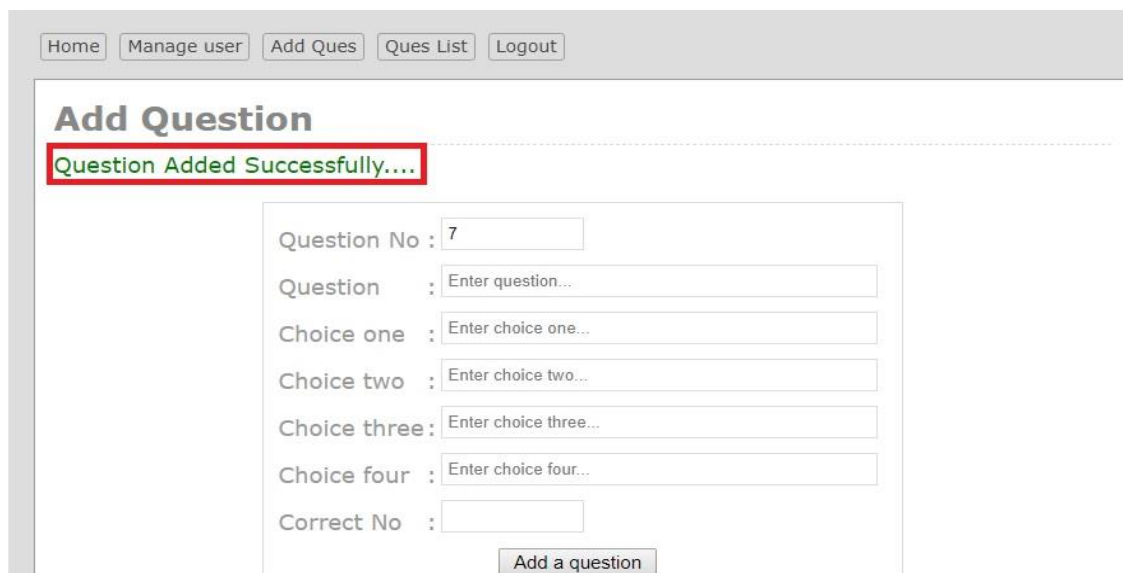


Figure 5.28: Successful message for adding question for exam to the system

Now, all question those are added to the system all is shown as listed in “questionlist” page where admin can go by clicking at “Ques List” button. The page is like shown in figure 5.29

No	Question	Action
1	Which of the following does not apply to external styles?	Remove
2	Which of the following is not a valid text-decoration option?	Remove
3	Which of the following is not a valid property of an aural style sheet?	Remove
4	Which element property is required to define internal styles?	Remove
5	What is the initial value of Marquee-Property?	Remove
6	What does CSS stand for?	Remove

Figure 5.29: Image of queslist.php

Admin can also delete any question from the list. But first admin have to confirm deletion from a pop up message shown in figure 5.30

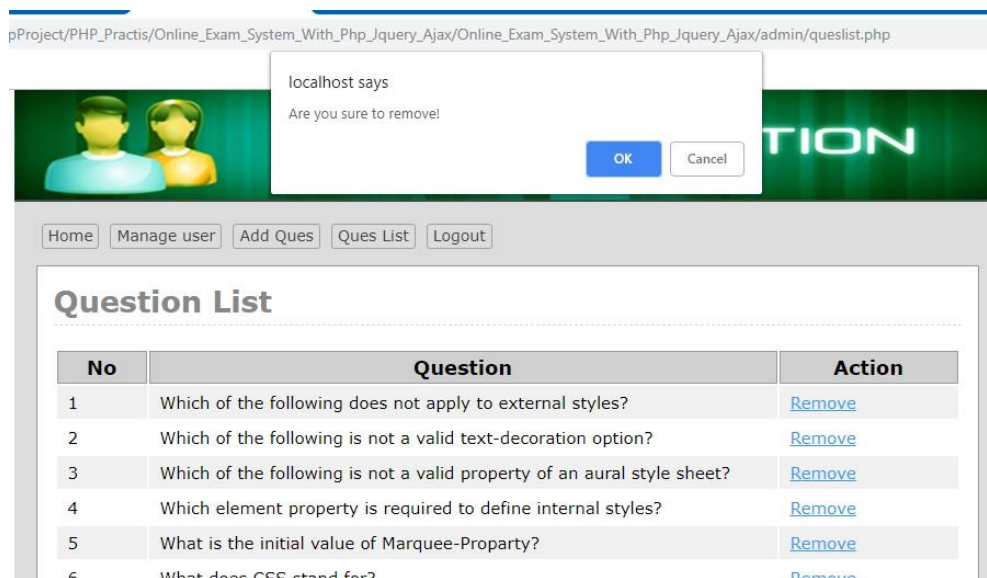


Figure 5.30: Pop up message to ensure remove question from the system

When the admin confirm deletion by clicking “OK” on popup the system will give a success message of deletion like shown in figure 5.31

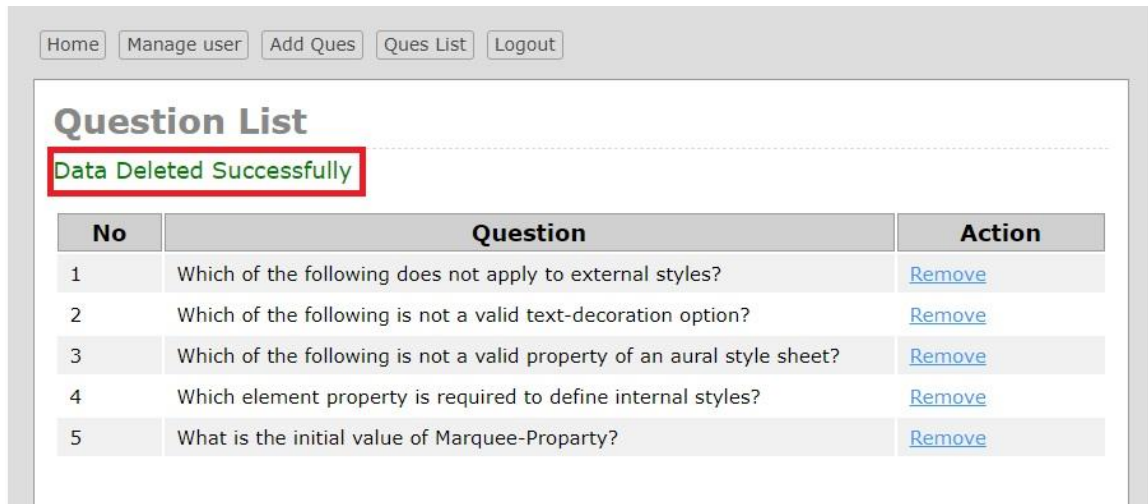


Figure 5.31: Successful message for removing question for exam from the system

When admin will delete any question, all relative MCQ answer will be deleted automatically. At last “Logout” button will log the admin out of the system.

5.3 Implementation of Interactions

The more an application is interactive the more it is used. For making an application it needs attractive design with user friendly system. For a convenient system the design should be colorful with some good designed button.

I have tried to make my application more interactive to the users. So for better interface I have used good text fonts and button.

5.4 Testing Implementation

Testing Implementation is a process of testing the implementation of a system which is shown in table 5.1, where tester or system architect will see various cases and specification. Is it implementable or it has limitations.

Table 5.1: Testing implementations

No	Tested case	Test Input	Expected outcome	Actual outcome	Result	Tested on
1	Registration	Register as examinee	To successfully register	Registration complete	Passed	5/09/2018
2	Registration	Register as admin	To successfully register	Registration complete	Passed	15/09/2018
3	Sign in	Enter non-registered email and password	Give error message and not let in to the system	Given error Message and didn't enter the system	Passed	27/09/2018
4	Start exam	Click on Start Test button	System will redirect to startes.php	System had redirected to startes.php	Passed	10/10/2018
5	Exam	Chose the correct answer and click the Next question button	System will calculate the mark and redirect to the next question	System had calculated the mark and redirect to the next question	Passed	21/10/2018
6	Finish exam	Complete answering all the question	System will be redirected to finish.php page and show the total achieved mark	System had been redirected to finish.php page and shown the total achieved mark	Passed	3/11/2018
7	View Answer	Click on View Answer Button	System will redirect to the view answer page and show the correct answer	System had been redirected to the view answer page and shown the correct an answer	Passed	15/11/2018
8	Add question for	Input the question	Data will be saved after	Data saved successfully	Passed	22/11/2018

	admin	with relative answer and the correct answer number	clicking add question			
9	Remove question	Click on remove button and click on ok button on the pop up message	Question will be removed and a successful message will be shown	Question has been removed and a successful message shown	Passed	30/11/2018
10	Disable user	Click on disable button and click on ok button on the pop up message	User will be disabled and a successful message will be shown	User Has been disabled and a successful message has been shown	Passed	6/12/2018
11	Enable User	Click on enable button and click on ok button on the pop up message	User will be enabled and a successful message will be shown	User Has been enabled and a successful message has been shown	Passed	14/12/2018
12	Remove user	Click on Remove button and click on ok button on the pop up message	User will be deleted and a successful message will be shown	User Has been deleted and a successful message has been shown	Passed	27/11/2018
13	Log out	Click on log out button	Examinee and user will be logged out	Examinee and user has been logged out	Passed	30/11/2018

5.5 Test Result and Reports

I have tested my web application if it works or not as I wanted. So, this test result will help me to understand the problem of my system and improve it. I tried to test every step of my project to make it as a successful web application.

I have tested my online exam system many times to see that if it works fluently. And yes it has worked perfectly.

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

I have tried our level best to build this project as a useful project for our student life. I admit that there are lots of limitation I have in our project. I believe that I will be able to recover the limitations of our project in near future. At the very ending state of our report I would like to say that all our stress and hard work turned into a feeling of absolute happiness when I saw that our website is running absolutely fine. The implementation of this project took four months and I must say that these four months were an amazing experience. The practical knowledge what I have gained through this project will have a great impact in our upcoming life.

6.2 Scope for Further Development

I would like to continue developing this app to add:

- Different types of answering methods.
- Question translation system.
- Details report of the result.

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Project Reflection

The purpose of this appendix is about project reflection. From summer 2019 semester I have started the journey to make this application. The main feature of my application is to manage an exam on online.

Firstly I build a model for my project and then I implemented my idea step by step. After many hard work and spending a lot of time finally I was able t reach my goal.

This project will be very helpful for not only student but also for teachers. Exam system will be more easier then before. So I believe that my web application will be a positive application for users.

Online examination system

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