QAIWAN BLOG SYSTEM

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QAIWAN BLOG SYSTEM

PAIWAND HADI H. SAEED

A thesis submitted in fulfilment of the
requirements for the award of the degree of
Bachelor of Computer Science (Software Engineering)

School of Computing
Faculty of Engineering and Science
Qaiwan International University

JUNE 2024

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I declare that this thesis entitled **"QAIWAN BLOG SYSTEM"** is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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DEDICATION

This thesis is dedicated to my father, who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my mother, who taught me that even the largest task can be accomplished if it is done one step at a time.

ACKNOWLEDGEMENT

In preparing this thesis, I was in contact with many people, researchers, academicians, and practitioners. They have contributed towards my understanding and thoughts. In particular, I wish to express my sincere appreciation to my main thesis supervisor, for encouragement, guidance, critics and friendship. Without their continued support and interest, this thesis would not have been the same as presented here. My fellow student should also be recognised for their support. My sincere appreciation also extends to all my colleagues and others who have provided assistance at various occasions. Their views and tips are useful indeed. Unfortunately, it is not possible to list all of them in this limited space. I am grateful to all my family member

ABSTARCT

University blogging platforms can result in management systems that are error-free, safe, dependable, and quick. It may enable the user to put less emphasis on record-keeping and more on other tasks. As a result, it will help businesses use their resources more effectively. The company can keep computerized records updated without making duplicate inputs. This implies that in order to access the knowledge, one does not need to be sidetracked by irrelevant information. Through better information management and knowledge sharing, this change not only helps the immediate users but also has the potential to have a positive impact on the larger academic and business communities. Furthermore, these platforms may be adapted to match the unique requirements of different departments, offering specialized solutions that improve overall productivity. Institutions may make data-driven decisions and optimize their operations and strategic planning by integrating analytics technologies.

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LIST OF ABBREVIATIONS

QBS	-	Qaiwan Blog System
UTM	-	University Technology Malaysia
QIU	-	Qaiwan International University
US	-	Use Case
ERD	-	Entity Relationship Diagram
QAEP	-	Quality Assurance Evaluation Program
SRS:	-	Software Requirement Specification
SDD	-	Software Design Description
STD	-	software testing document

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CHAPTER 1

INTRODUCTION

1.1 Introduction

A fresh and cutting-edge method of information sharing among university students is blogging. Blogs are the fourth-generation Internet intercommunication format that differentiates from email. They are journal-style websites that consistently publish new articles over time. Blogs run by organizations, journals, or publications dedicated to disseminating scientific knowledge, as well as blogs run by individual scientists. Numerous blogs were early tweeters.

They enable the distribution of not just study-related material but also of individual stories and experiences linked to higher education, especially those written by professionals' learners. This Project is about implementing an online blogging website in the university, user can use this website for knowing departments, courses, The project that its students done or having details on it, HTML, CSS and PHP are used in this project for the creation of the project. The students' personal blogs then serve as a venue for them to publish and archive blog items, whether they are written debates on various themes, answers to questions, free writing, or drafts of assignments.

1.2 Problem Background

Blogs are frequently updated webpages that offer crucial insights into a certain issue. This blog system consists of distinct postings on topics that are more specialized within the blog's area of expertise, and it can make the university more known among the students, which gives a benefit for the student and the university because Qaiwan University is new to the city and also the departments like Software engineering and biomedical engineering are the one and only departments that QIU offers in the country, and the benefits for the graduated students, they can share their ideas and projects so their works will remain.

1.3 Project aim

This system's project aim is to develop an online Blog system using HTML, CSS, and PHP for Qaiwan international university. To have the proposed project of the ability to showcase the information about departments, courses, and student's projects. The system will give all the information for the students regarding the university, for instance if a student wants to know about courses, they can find all the information they need in a detailed way, and it will also let the graduation students can get benefit based on this system, they can have contact with the new idea of their carrier.

1.4 Objectives

- To inform university personnel and students of the news as soon as possible.
- To design a blog system for the University.
- To analyze an online blogging platform for university.
- To test the necessary information from the faculty and the students.

1.5 Scope

University blogs, like any blog system, seem to function better when they focus on a particular topic, such as a certain department, school, or even a specific degree program. Universities can display certain works or a portfolio of students' work on course-specific blogs. In order to give international students moving from overseas more information, local university blogs can also be a useful resource. This system makes it easier for Qaiwan International University students to know more about the university's activities and events.

1.6 Importance of the project

The content on this website, which is based on university departments and activities, will be useful to students because it can:

- Provide a system that can be accessed from a mobile and PCs.
- It will give the newsiest students information and the newsiest activity inside the university.
- Help the university to be more popular.
- Get the new information earlier.

1.7 Report organization

This chapter contains an overview of the system, the history of the issue, the project's purpose, its goals, its scope, and its significance. The project's concept is about the process of the system and how it will be the university's latest innovation is the creation of a blog website system that will include all of the staff and student activities as well as other university-related materials. The implementation of a literature review will be done in the following chapter, along with comparisons between this project and other projects and papers.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter, a literature review will be implemented as a report, and in the interorganizational case study part, requirements to understand the nature and source of problems will be gathered. A survey is conducted among university students to better understand their problems, such as when new students want to choose a department and understand the courses and credits that they must take. The current system analysis involves reviewing currently available system(s) or prototype(s) and determining the system's advantages and disadvantages. There are few systems in Kurdistan that have blog systems for their universities. In comparing existing systems to ensure the strengths and weaknesses of the systems will be implemented, some research has been done to find systems about blog websites or applications that are similar to the proposed system but do not have the desired functions that we want to implement in the proposed system, so we will discuss the differences between the current systems and the proposed system. A literature review on technologies used will be written, as well as a declaration of the technologies that have been used in making the project by specifying what the technologies are, what they do, and how they implement the project.

2.2 Inter-Organization Case Study

Based on a survey that was made through Blog system, Courses, Credits, Information of University, together with university students, both male and female, ages 18 and older, there are many answers to the questions that were planned to be asked were gathered through them.

While conducting the survey, it was found that most of the students have a mutual problem. The problem is that when students want to apply, they never find the complete answer to their questions. So, the blog system is the perfect system in order to get the knowledge that they are looking for about the universities departments, activities, courses, and any other information needed to fix the vagueness that the student have.

One of the main problems that is facing the students in Kurdistan region is that the majority come from a governmental background, so they are not familiar when they come to a private establishment. when it comes to UTM's system the students that have a governmental background are not really used to many of the rules and regulations regarding the UNI. For example, the grading system is one of those obstacles, because students don't really follow GPA system in Kurdistan. The system will also include this information in a nice, detailed way.

2.3 Current System Analysis

2.3.1 Current System Analysis

A blog system for university already exists in Kurdistan, it contains details about the university as well as information on its programs and activities. Students can profit from this blog system since it enables them to find everything there is to know about the department they wish to enroll in and become familiar with the university's system before they even go through the registration process.

2.3.2 Proposed System

The most major benefit of the project to construct a blog system website for posting university information, and communication on a blog website for a university is improving the details for students about the information of the departments and more. In this paper, we talk about a website that helps students to gain a better understanding of the university system.

2.4 Reviewing Similar System

This section will address the systems that are currently in use that have been studied or developed in the past. The discussion will contain the name of the article, a brief explanation that includes their weaknesses and strengths, and, in the conclusion, they will be compared.

2.4.1 American University of Iraq Sulaymaniyah (AUIS) Blog system

This website is for their university and, it gathered the knowledge of the AUIS university. Students can get fully information just by visiting of the website. Also, they can contact the university throw the system by email, phone call and social media. And there are used three languages inside the website which is (Kurdish, Arabic and English).

2.4.2 Suleimani Polytechnic University Blog system

This website is also giving the students information and knowledge them based on their departments, and you can contact the university by email, social-media, and phone call. There is one language used in this website which is English.

So, based on this existing website and the deference between my website will be the same, except that inside this website I will put the link of the Moodle and the alumni. The students will get full information of their university and aware of all knowledge of UTM system. They can also see the information of the sinners' students and their experiences with the courses based on their departments and they can contact them directly by their profile information they share with the website. And view the activities based on the clubs of QIU university.

2.5 Compare between existing systems

Table 2.1 Comparison between existing systems

Features	**AUIS Blog**	**SPU Blog**	**QIU Blog**
Deployment	website	website	website
Specific Functions	Allow users to view events. Has environment view.	Allow users to view events. Users can see courses	Allow users to view and apply for events. Allow users to add posts.
Technology	Web technology	Web technology	Web technology
Platform	windows	windows	windows
Connectivity	Online	Online	Online
Security features	Normal password	Normal password	OTP Verification
Friendly	Yes	No	Yes

2.5 Literature review on the technology used

Coding: In layman's terms, Visual Studio Code is a code editor. Visual Studio Code is "a free editor that helps the programmer write code, helps in debugging, and corrects the code using the intelli-sense method." In normal terms, it facilitates users' ability to write the code in an easy manner. Many people say that it is half of an IDE and an editor, but the decision is up to the coders. Any program or piece of software that we see, or use works with code that runs in the background. Traditionally, coding was done in the traditional editors or even in the most basic editors, like Notepad! These editors used to provide basic support to the coders. Visual Studio will support HTML, which stands for Hypertext Markup Language and is a language for making or creating web pages. It describes the structure of a web page; it instructs the browser on how to display the contents on the website; CSS, which is used to style HTML contents in a website, specifies how the HTML contents should be displayed on the website. JavaScript is a text-based programming language used both on the client and server sides to allow you to design websites interactively. JavaScript web pages provide interactive elements that appeal to users. PHP stands for "Hypertext Preprocessor," and its scripts are executed on the server. We use this code so that we can create the website with its code. And Visual Studio is an easy-to-use tool to work with, which is why it is used in this project.

Database MySQL—is used to allow us to connect to the database through MySQL and save the system's contents into the database. And MySQL is an easy tool to use that's why it is used in this project.

A database is generally a structured collection of data; it is a location where data is saved and sorted. MySQL uses Structured Query Language, a domain-specific language, and implements a client-server model. The server responds to the client's request by getting information from the database.

2.6 Chapter summary

The literature review, an inter-organizational study employing a survey, and feedback from the people we interviewed and surveyed were all discussed in this chapter. We looked at the existing system in Kurdistan and its positive and negative elements as described by the people we interviewed and questioned for our analysis of the current system. We discussed the contrasts between the articles and our proposed strategy while compared the current systems. In the literature review on the technologies used, we looked at the technologies used to produce this project and how they work.

CHAPTER 3

SYSTEM DEVELOPMENT METHODOLOGY

3.1 Introduction

So that the project can be managed quickly and effectively, this chapter will describe the methodology kind of approach to the system development as well as how the system will be produced step-by-step and how it will be executed. Every project needs a methodology type that is best suited for the project at hand, and every methodology type has advantages and disadvantages. The phases of the methodology type will be covered in the phases of the selected methodology along with the implementation of this project.

3.2 Overview of Methodology and justification

This project will employ the agile approach type since it is primarily intended to create a blog system, and the system will be created in accordance with their criteria. After that, you can change the system to a new one if you receive any feedback. A project is broken down into its many stages so that it may be handled effectively using the agile methodology. It is very necessary to continue working together with the many stakeholders and to do better on every level. Once a project has gotten underway, the teams will go through a process that includes planning, carrying out, and evaluating. Project stakeholders and team members must regularly collaborate.

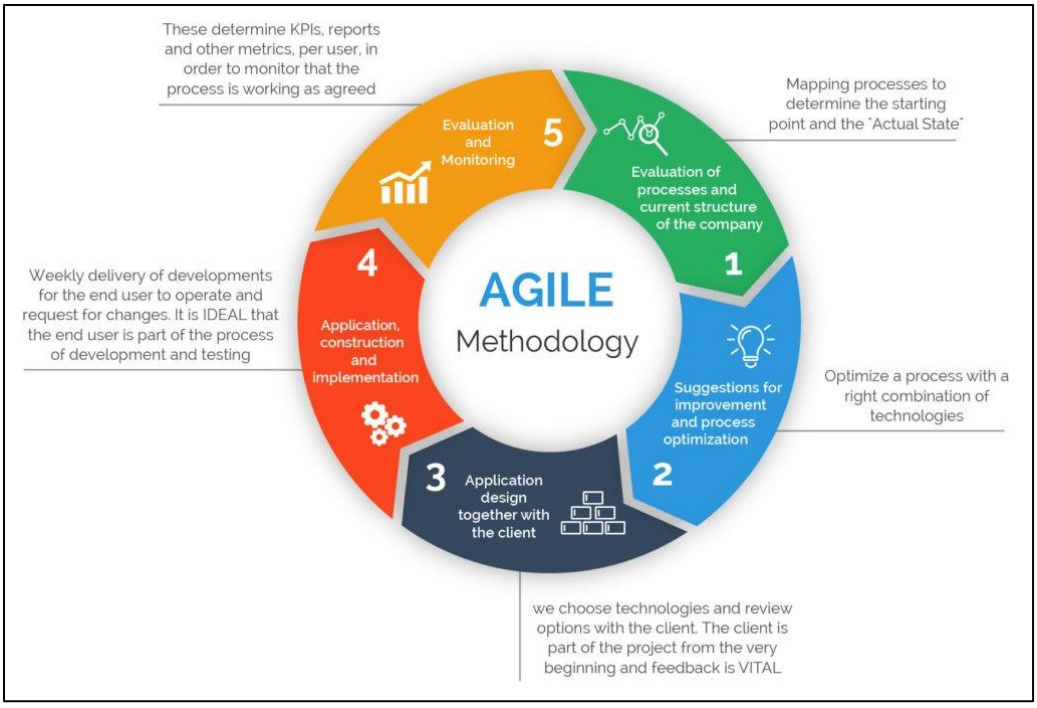


Figure 3.1 Agile

3.2.1 Planning & Analysis

The two phases that make up the SDLC's planning stage are requirement gathering and requirement analysis. During the requirement gathering stage, you gather requirements from your client or other stakeholders, and during the requirement analysis stage, you assess whether it would be feasible to produce the product while taking various aspects like user needs, production costs, and potential revenue into account.

3.2.2 Design

You start writing seriously when you are in the design stage. The software's basic structure, which includes the programming language, templates, platform, and application security measures, builds upon the original idea and vision. Another option is to create a flowchart that shows how the program reacts to user input.

3.2.3 Implementation and coding

The coding phase is when programmers put in the most work. Every component needs to be installed, and all functionality that was previously designed needs to be coded. An emphasis on teamwork is also required when working on a project with multiple developers, which is the most common scenario. This is because each previously specified capability must be translated into code. A focus on teamwork is also required if multiple developers are working on the project, which is the most typical situation. Efficiently identifying and fixing errors and issues is a crucial goal of releasing high-quality code. It is advantageous to produce comprehensive documentation as a manual to assist users in comprehending the purpose and operation of the program and to facilitate the developers' work.

3.2.4 Testing

Before deploying the software, your quality assurance team must test it to make sure it is working properly and serving its intended purpose. Any serious security or user experience issues may be resolved with the help of the testing process. Before the product is made available to users, this stage concludes with test-driven development, or it may even begin before coding (TDD).

The types of testing to do in this phase:

- performance testing
- functional testing
- security testing
- unit-testing
- usability testing

3.2.5 Deployment

First of all, you must realize that the first deployment is never simple. The application is made public and made accessible to users or customers after successful testing. The time is here for improving scenarios based on real-world happenings. Even though deployment is often automated, you and your staff should exercise caution because it is a sophisticated procedure. Compared to bigger networks, devices need to be linked often to complete this phase. More time and effort can be needed in some situations.

3.2.6 Maintenance

The maintenance phase of the SDLC process is arguably the most crucial. Customers' feedback can be used to add new features, address recurring problems, and seal any potential security holes once they've had a chance to use your product in an actual setting. The current task for the development team is to maintain the current product in line with user preferences and technological requirements.

3.3 Justification of using Iterative Development or tools to develop the system

In this section, we shall justify the technologies and tools that will be employed during the system's development phase, as well as their utilization, advantages, and potential effects on user needs.

3.3.1 Visual studio

Microsoft's integrated development environment (IDE), Microsoft Visual Studio, is used to construct a range of products, including software programs, sites, web applications, online

services, and smartphone apps. Visual Studio contains complementary tools, compilers, and other capabilities to help with the software development process. It supports different programming languages for coding and Visual Studio is used for this project to implement all the coding in the IDE.

3.3.2 HTML

HTML, short for "Hypertext Markup Language," is a programming language used to develop websites. It specifies the structure of a website page and instructs the browser how to display the data on the website. It is used to create the website for this work and defines the structure of the website Most of the coding for the project is written in HTML.

3.3.3 CSS

CSS stands for Cascading Style Sheets, which are used for designing the website, styling the HTML contents of a website, describing how the HTML contents should be shown on the website, and coloring the website contents. CSS is used for styling in this proposed project.

3.3.4 Tailwind

Tailwind CSS can help you write and maintain your application's code more quickly. With this utility-first framework, you can style your application without writing custom CSS. Instead, use utility classes to control the padding, margin, color, font, shadow, and other elements of your application.

3.3.5 PHP

PHP stands for "Hypertext Preprocessor." Its scripts are executed on the server; it is used in this project so that it can connect to the database. It is used for server-side scripting.

3.3.6 MYSQL

The relational database management system MySQL is free and open source. It is used so that we can connect to the database via MySQL save the data of the contents of the system into the database. And MySQL is an easy tool to use that's why it is used in this project. A database is a place in which data is stored and organized, it is simply a structured collection of data The client queries the server, and the server answers to the client from the database using the client-server architecture that MySQL implements. SQL is a domain-specific language used by MySQL.

3.4 System requirement analysis:

The system requirements for this project cover both software and hardware. Hardware is any physical item, such as a device or piece of computer hardware, that is utilized to carry out many tasks, comprising calculation, processing, storage, and input and output. Software, on the other hand, is a collection of guidelines that a computer may follow to do certain tasks, such as producing code and building a system.

3.4.1 Hardware justification

Hardware requirements are essential throughout project development to guarantee that the project or product will operate as efficiently as possible in any given user situation. The necessary hardware is shown in the following table:

Table 3.1 Hardware justification

Hardware	Minimum Specification
Processor	Apple A8, Core (TM), intel(R)i5-8400U @ 1.90 GHz, 1.75GHz
Random Access Memory	4 GB
Hard Drive Capacity	256 GB
Operating System Architecture	64-bit.
Input Device	Mouse, Node, and Keyboard
Output Device	Screen, Monitor, etc.

3.4.2 Software justification

The basic specifications for a platform that must be met to operate the proposed project are known as software requirements. The project's minimum requirements are shown in the table below:

Table 3.2 Description of the Software system requirements.

Software	Minimum Specification
Operating System	**Windows 10, IOS 12**
Integrated Development Environment	**Microsoft Visual Studio.**
Database Management System	**MySQL**
Web Browser	**Safari, Google Chrome, Brave, Opera**

Visual Modelling & Design Tool	**Enterprise Architect, Lucid Chart**
High Fidelity Prototype	**Adobe XD**

3.4.3 Project Planning

The project's timeframe will be scheduled using a Gantt chart for the planning-related component of the project. One well-liked depiction representing a project schedule is the Gantt chart. It resembles a bar chart in that it shows the beginning and ending dates of several project components. The Gantt chart is the most often used chart in project management. These diagrams are essential for planning projects and specifying the order in which activities must be completed. Frequently, a horizontal bar chart is used to display the chart.

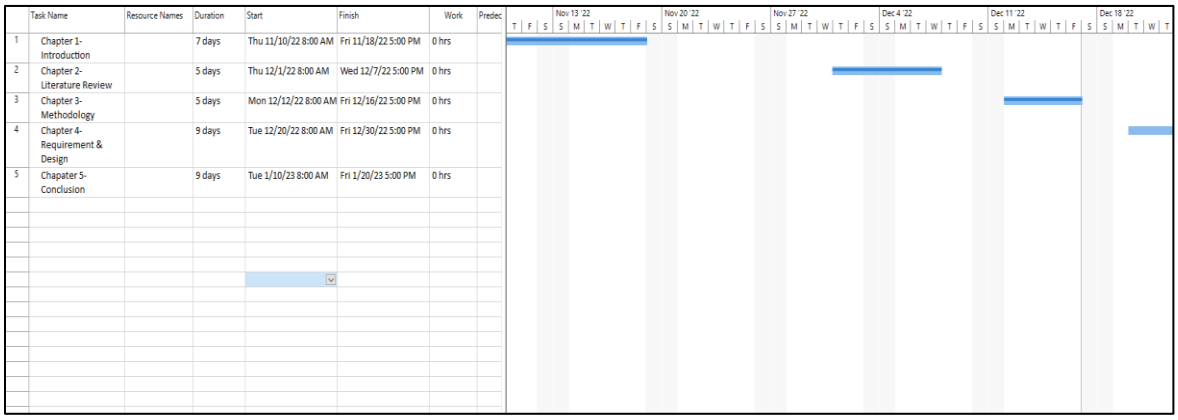


Figure 3.2 Gantt Chart

3.5 Chapter summary

This chapter concludes with a discussion of how to use the Agile development process technique that was selected for the project. Each phase of the development process is then explained and supported by examples from the implementation of the phases in this project. Each technology or tool used in the project is justified and explained, along with its purpose. The proposed system, a website, can be viewed by mobile phones, tablets, or desktops, and the system requirements list both the software and hardware requirements.

CHAPTER 4

REQUIREMENT ANALYSIS & DESIGN

4.1 Introduction

Requirements analysis and design requirements are covered in this chapter. which includes the use case, sequence diagrams, and activity diagrams will be described. The design part, which displays the class diagram and overall system architecture, will next be explained. The ERD database architecture, normalized tables, and eventually the website's interface and interactions will be covered after that.

4.2 Requirement analysis

The user functions and the user's interaction with the system are described in the requirement analysis. Admin and students are the only two users of the system. The admin will oversee the whole system, including the pupils. When a student logs onto the system, they may see all of the information and materials related to the Qaiwan university.

4.2.1 Use case diagram

The use case diagram depicts the interaction between the actors, users, head of club, and system. The requirements may be explained using case diagrams. The Qaiwan Blog System, which is my system, is the subject of this use case. It depicts the dialogue between the administrator and the student.

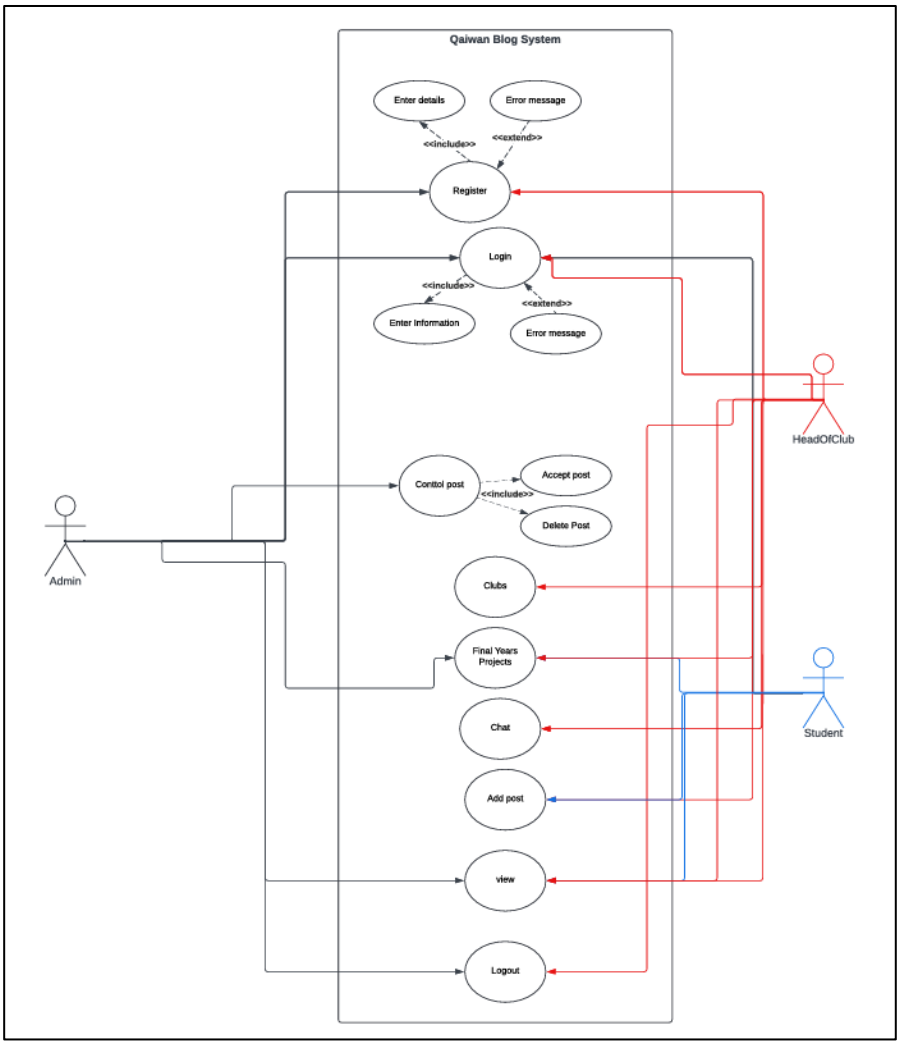


Figure 4.1 Use Case Diagram (Qaiwan Blog System)

The student is permitted to register and login to the website according to the use case design in figure 4.1. The student may view university content, post in the system, see events, departments, and activities after logging in, as well as provide system feedback. Students may also view profiles of each other. The head of the club can add the activities inside the blog system and they will control. The student can use chat inside the club and view the events in the clubs. The administrator will be in charge of the system; the registration is just for the administrator, and the administrator will offer the student an account.

4.2.2 Sequence diagram

Sequence diagrams in UML are a type of interaction diagram that are used to depict the stages that are required to finish an operation. They show the ways in which the many components of a partnership interact with one another. In order to graphically show the progression of the interaction, sequence diagrams center their attention on time and utilize the vertical axis of the diagram to represent time in the form of the messages that are delivered and when they are sent.

4.2.2.1 Register Sequence Diagram

In this figure 4.2, in diagram below is about Register sequence diagram based on my blog system, how it works with this system and the data base for admin.

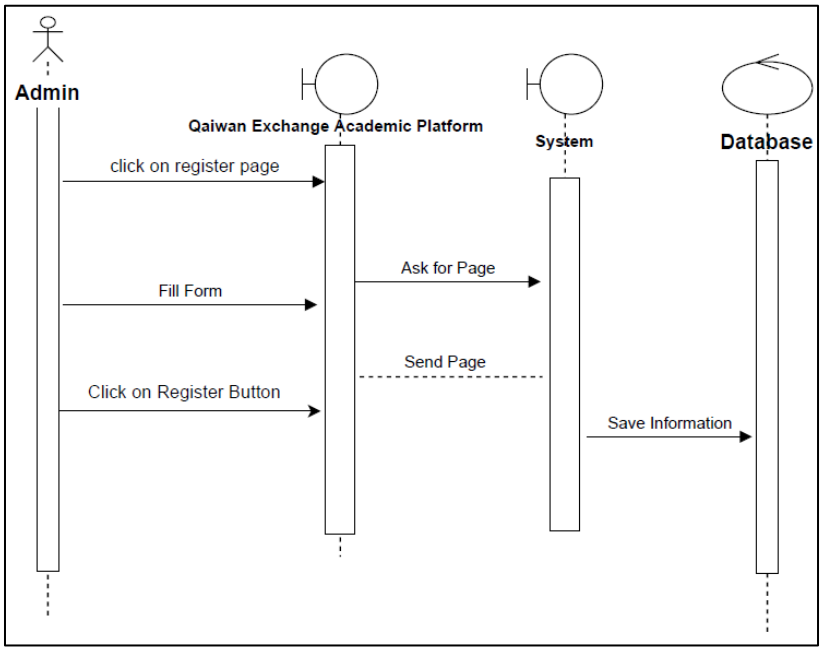


Figure 4.2 Register Sequence Diagram

4.2.2.2 Login Sequence Diagram

In this figure 4.3, it's about login sequence diagram, and the connection of the system with the system and database for both admin and user.

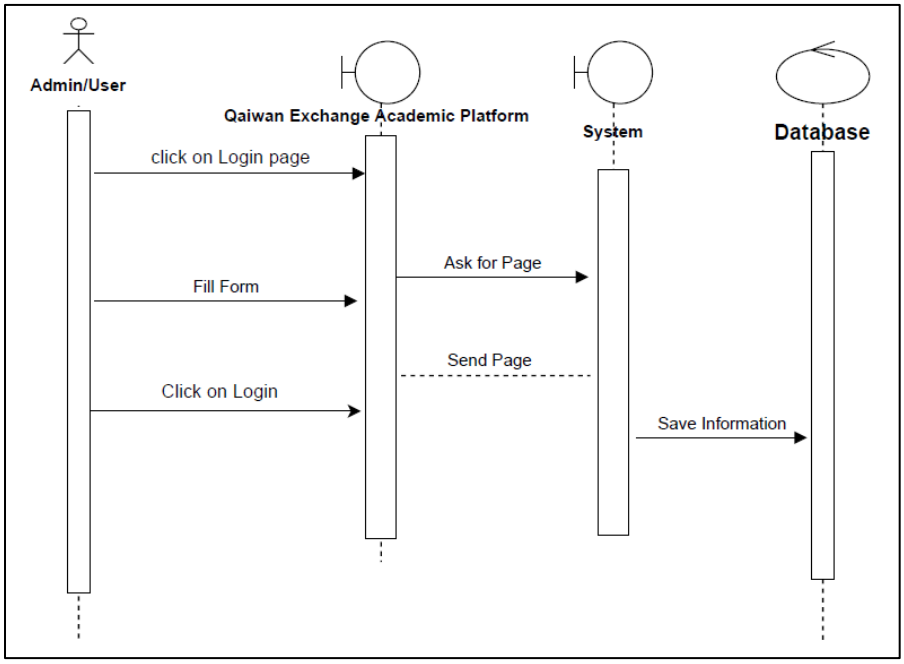
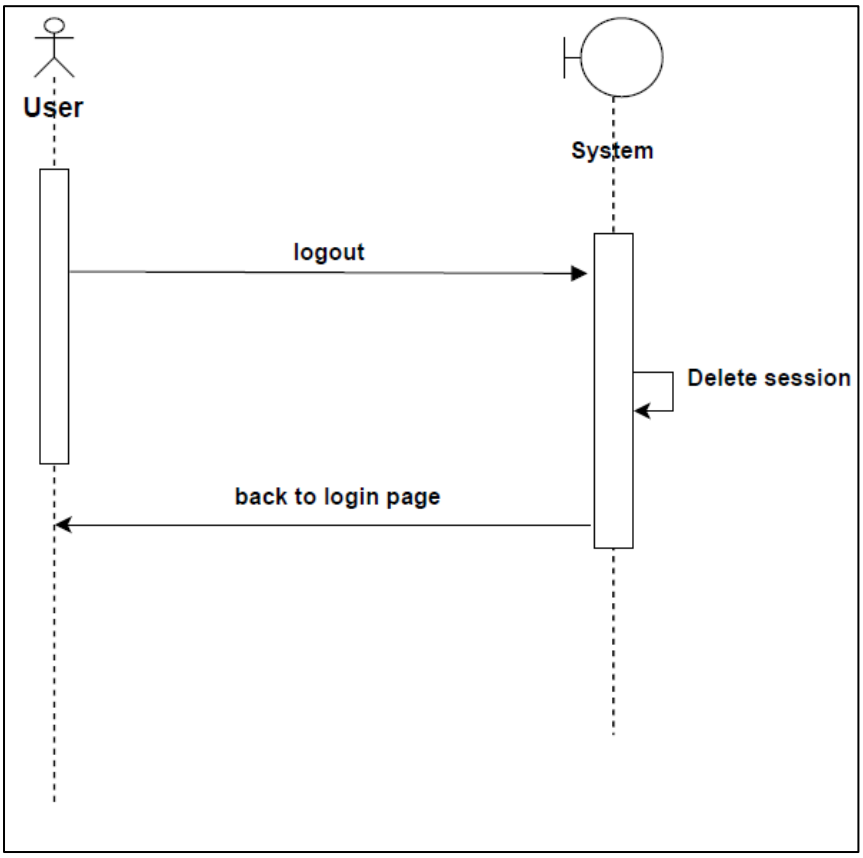


Figure 4.3 Login Sequence Diagram

4.2.2.3 Logout Sequence Diagram



This figure 4.4 is Logout sequence diagram.

4.2.2.4 Search Sequence Diagram

In figure 4.5, is about the search sequence diagram in this system and the connections between the system and database, user can search inside the website by the name that related on the website.

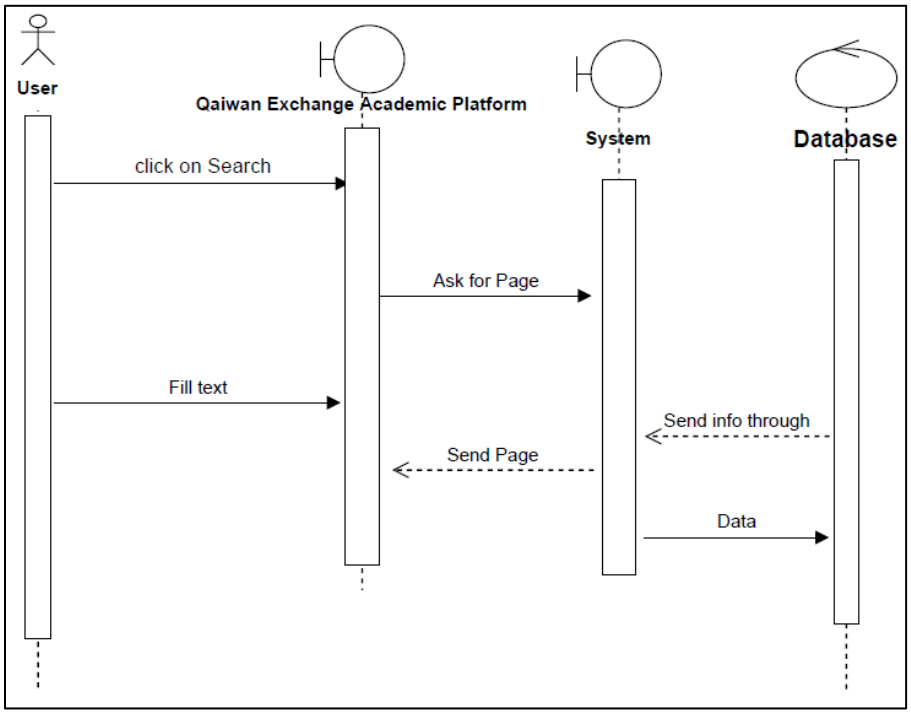


Figure 4.5 Search Sequence Diagram

4.2.2.5 Control Post Sequence Diagram

In Figure 4.6, the admin will be handling the posts according to their kind. There are two options for the admin: one is to approve the post, and the other is to remove the post, taking into account all of the system and database ideas.

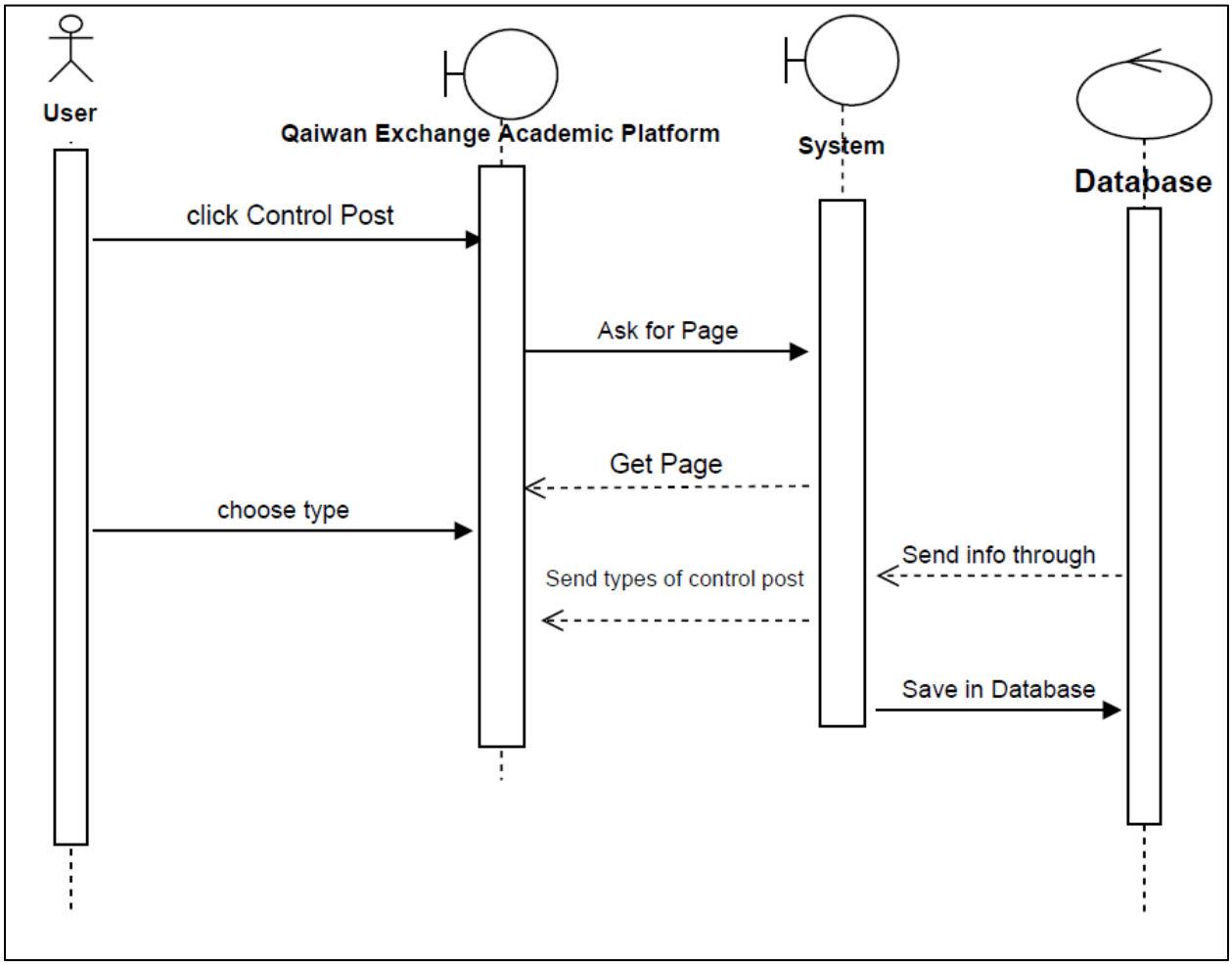


Figure 4.6 Control Post Sequence Diagram

4.2.2.6 Add Post Sequence Diagram

The add-post sequence diagram may be seen here in this picture. This website allows users as well as admins to submit content.

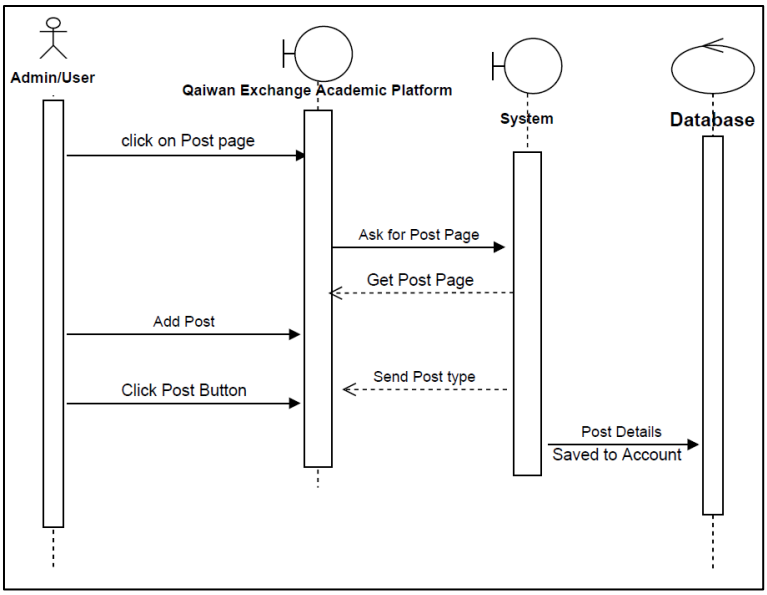


Figure 4.7 Add Post Sequence Diagram

4.2.2.7 Chat Sequence Diagram

In this figure 4.8, showing the chat sequence diagram that students can use chat inside the system.

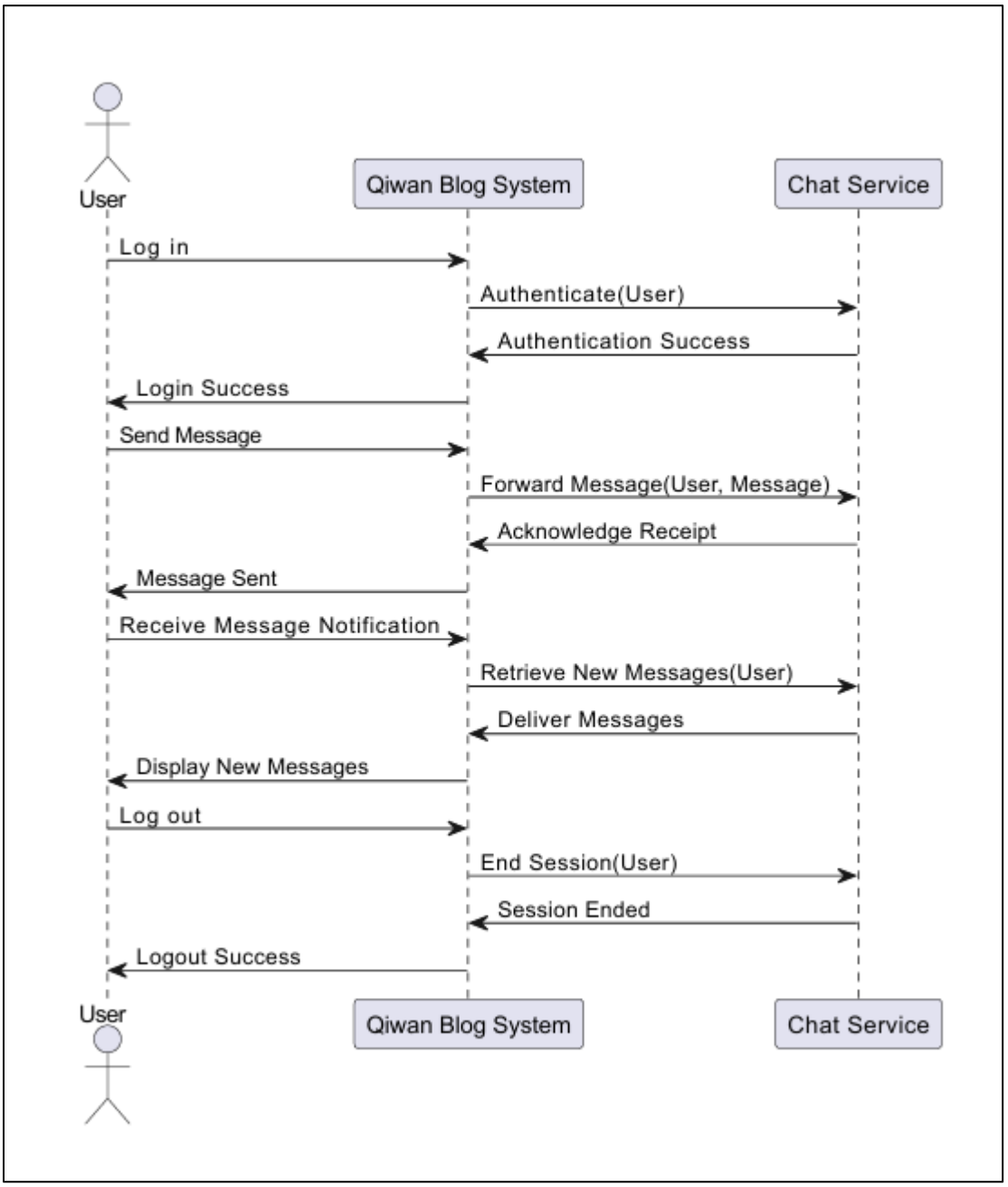


Figure 4.8 chat Sequence Diagram

4.2.3 Activity Diagram

When attempting to represent the dynamic characteristics of a system using a UML diagram, activity diagrams are another key behavioral diagram to include. Modeling the transition from one activity to another is the primary purpose of an activity diagram, which is basically an advanced form of a flow chart.

4.2.3.1 Control Post Activity Diagram

Figure 4.9 shows that admins always start at the home site and make their way to the control post. After that, administrators have the ability to modify the postings, at which point they may either remove them or approve them; the post will be stored if all went according to plan. If this is not the case, an error notice will be shown.

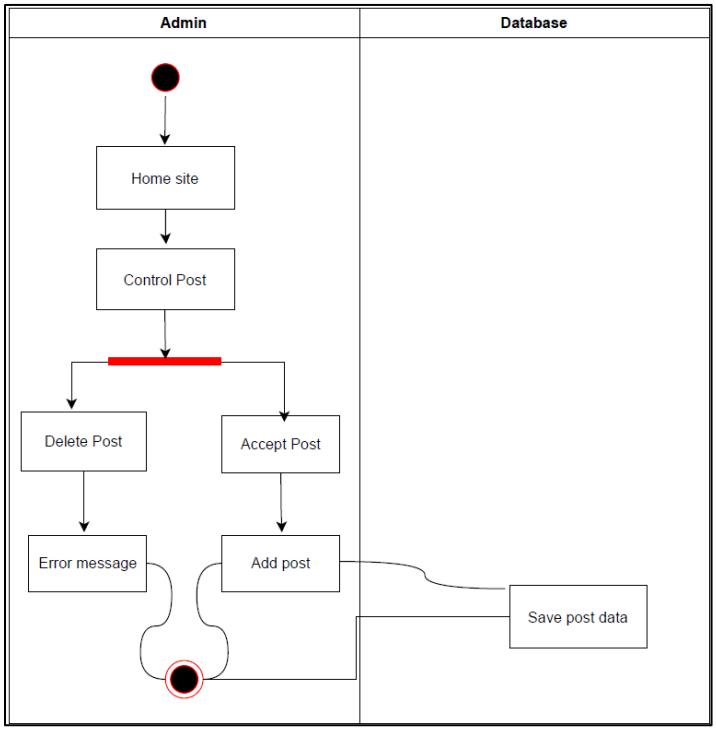


Figure 4.9 Control-Post Activity Diagram

4.2.3.2 Login Activity Diagram

According to this figure 4.10, the admin has already registered the system. When the user first logs in to the system, there are two conditions that must be met. If the first condition is met, the login information will be saved to the database, and the user may then log in to the system. If this is not the case, an error message will be sent.

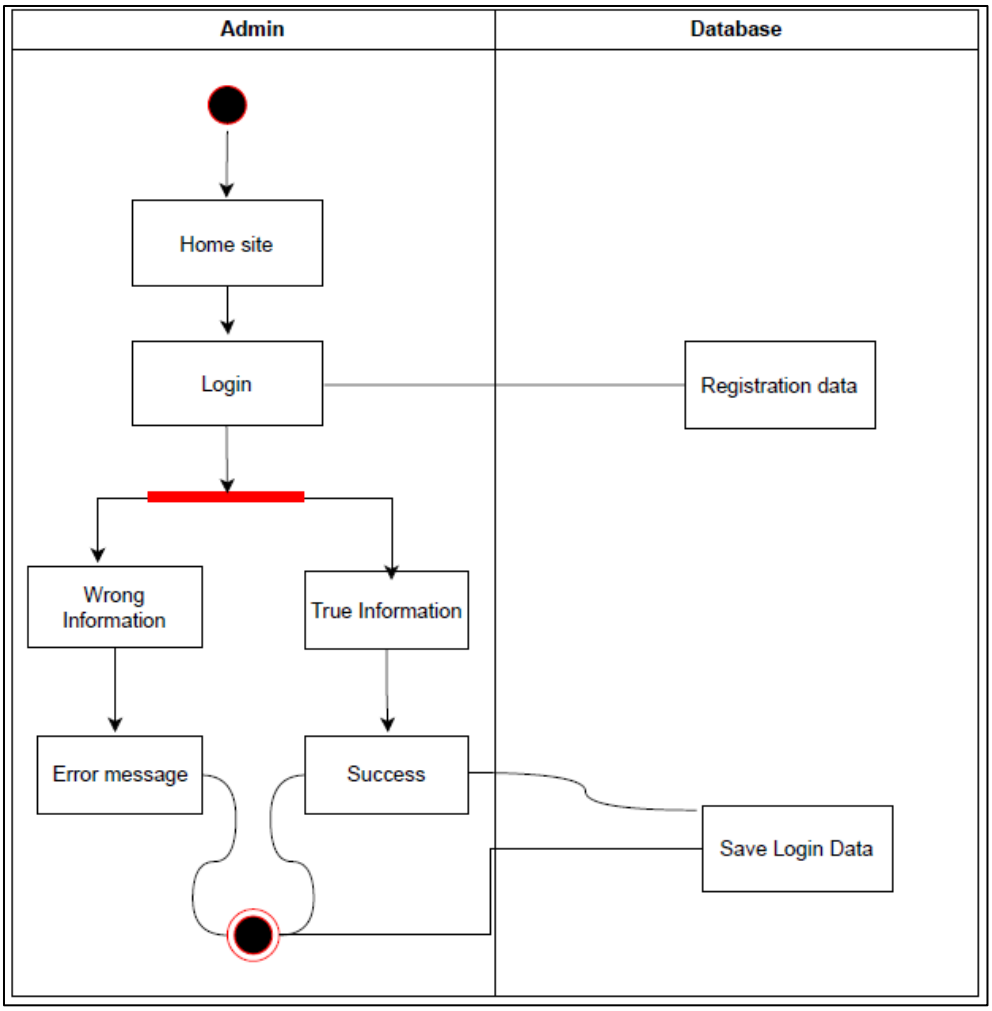


Figure 4.10 Login Activity Diagram

4.2.4 Data Dictionary

Table 4.1 Data dictionary 1

Table	Attribute	Type	Length	PK/FK	NULL
ADMIN	A_ID	INT	30	PK	
	A_EMAIL	VARCHAR	350		
	A_CODE	INT	30		
STUDENT	S_ID	INT	30	PK	
	S_EMAIL	VARCHAR	350		
	S_CODE	INT	30		
Search	SR_ID	INT	30		
	SR_INFO	VARCHAR	350		
CONTROL POST	P_ID	INT	30	FK	
	P_INFO	VARCHAR	350		
	P_TYPE	VARCHAR	350		
	P_DATE	DATE			

FEEDBACK	F_ID	INT	30		
	F_INFO	VARCHAR	350		
PROFILE	P_ID	INT	30	PK	
P_INFO	VARCHAR	350			

Table 4.2 Data dictionary 2

Table	**Attribute**	**Type**	**Length**	**PK/FK**	**NULL**
ADMIN	A_ID	INT	30	PK	
	A_EMAIL	VARCHAR	350		
	A_CODE	INT	30		
STUDENT	S_ID	INT	30	PK	
	S_EMAIL	VARCHAR	350		
	S_CODE	INT	30		
Search	SR_ID	INT	30		
	SR_INFO	VARCHAR	350		

CONTROL POST	P_ID	INT	30	FK	
	P_INFO	VARCHAR	350		
	P_TYPE	VARCHAR	350		
	P_DATE	DATE			
FEEDBACK	F_ID	INT	30		
	F_INFO	VARCHAR	350		
PROFILE	P_ID	INT	30	PK	
P_INFO	VARCHAR	350			

4.3 Design

4.3.1 Class Diagram

In order to facilitate the construction of object-oriented systems as well as their visualization, a graphical notation that is known as the UML Class Diagram is utilized. The Unified Modeling Language (UML) contains something called a class diagram, which may be thought of as a static structural diagram. The purpose of this kind of diagram is to describe the structure of a system by exhibiting the system's components in the picture that can be found further down on this page:

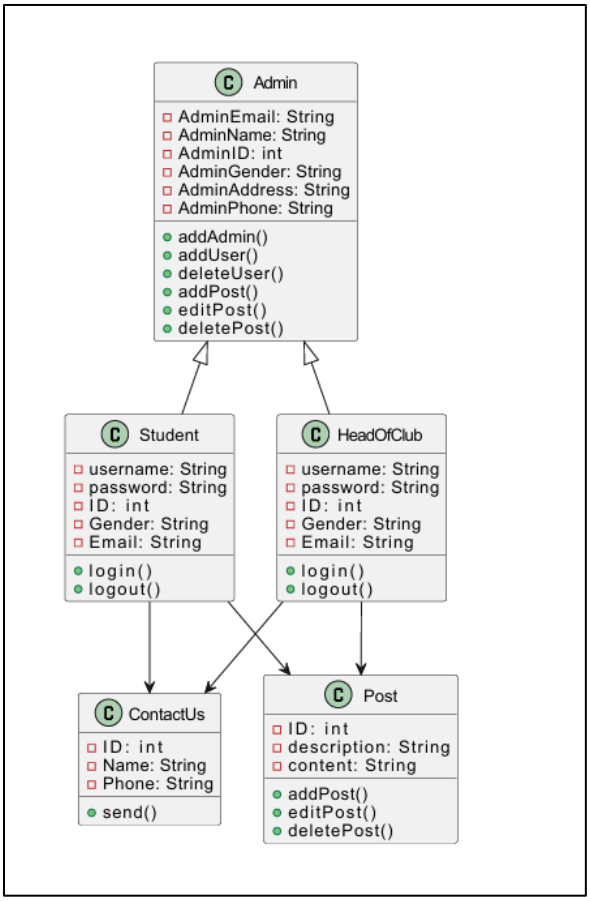


Figure 4.11 Class Diagram

4.3.2 System Architecture

The phrase "client-server architecture" describes a type of computer system that not only satisfies the majority of the requests for resources and services that are made by clients, but also hosts, delivers, and maintains the majority of those resources and services. This model of computing is sometimes referred to as the networking computing model or the client-server network. It may be separated from other paradigms by the fact that all requests and services are transmitted across a network in order to be processed.

A client-server architecture, also known as a client-server model, is a type of network application that divides responsibilities and workloads between clients and servers that are either co-located on the same computer or are linked to one another through the implementation of a computer network. This kind of application is generally referred to as a client-server model.

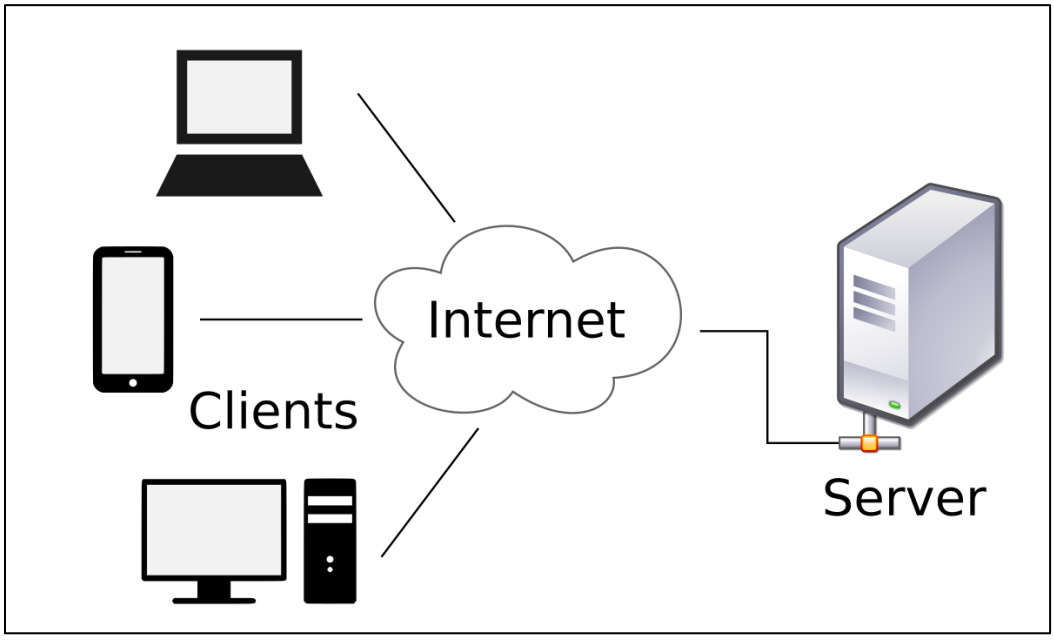


Figure 4.12 (System Architecture Design)

4.4 Database Design

4.4.1 ERD Design

The classes that are contained inside the system, as well as the connections that link the classes to one another, are represented by class diagrams. Class diagrams contain not only the class itself, but also its attributes and methods, as well as the relationships that link the three of them together. These relationships may include inheritance, aggregation, composition, and a great number of others; however, these three are the most important ones. Figure 4.13 depicts a class diagram for the project that is being proposed.

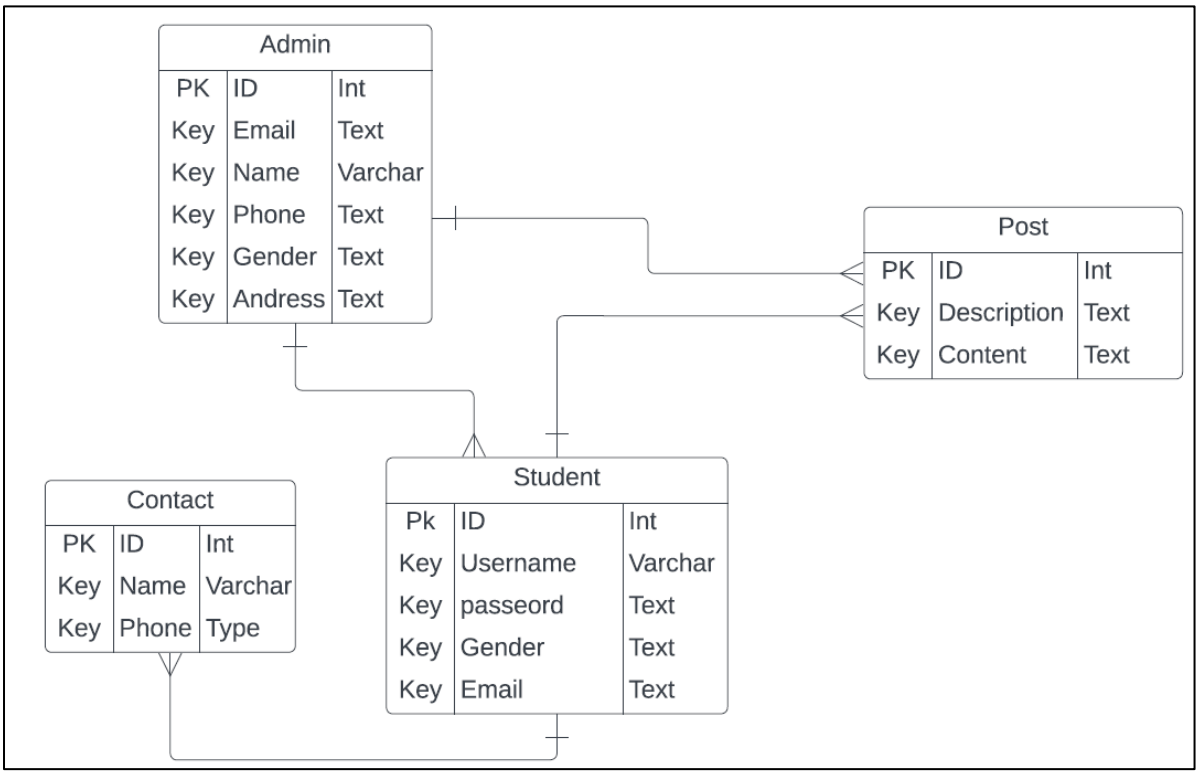


Figure 4.13 System ERD diagram

4.4.2 Normalized Table

Table 4.3 (Admin)

Attribute	Type	PK/FK
ID	Int	PK
Email	Text	
name	Varchar	
Phone	Text	
Gender	Text	
Address	Text	

Table 4.4 (Post)

Attribute	Type	PK/FK
ID	int	PK
Description	Text	
Content	Text	

Table 4.5 (Contact)

Attribute	Type	PK/FK
ID	int	PK
Name	Varchar	
Phone	Type	

Table 4.6 (Student)

Attribute	Type	PK/FK
ID	Int	PK
username	Varchar	
Password	Text	
Gender	Text	
Email	Text	

4.5 Interface Design

These figures below are the design of the (Qaiwan Blog System):

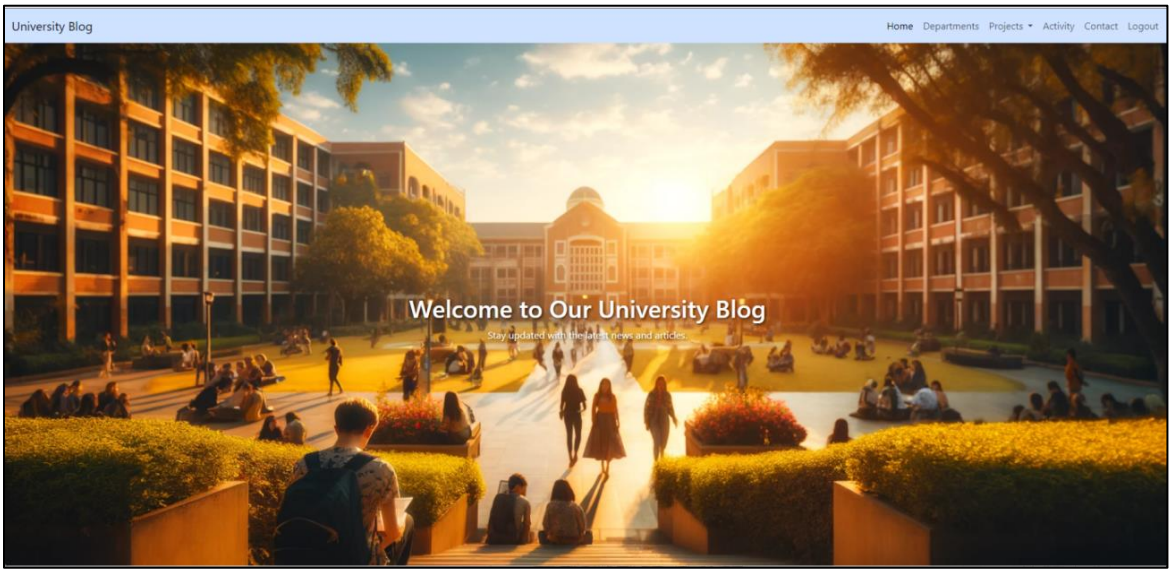


Figure 4.14 (Home Page)

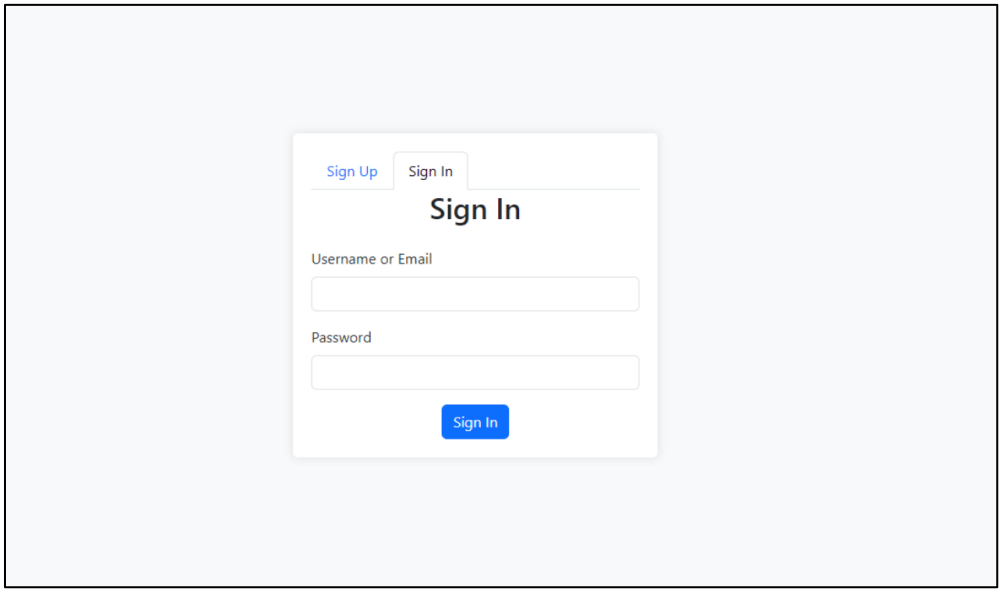


Figure 4.15 (Sign in Page)

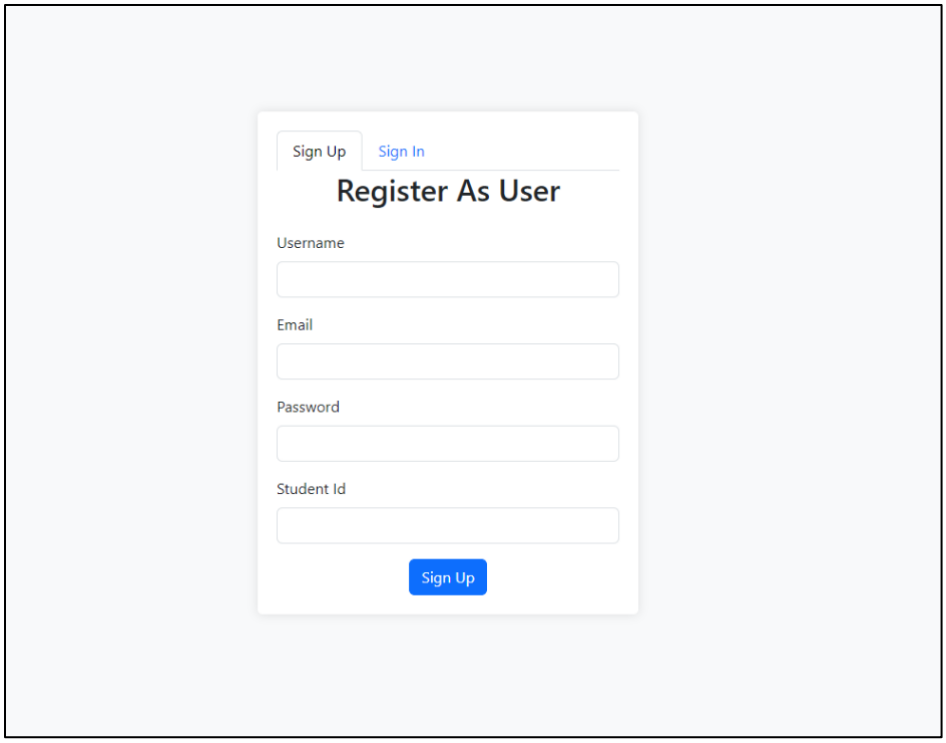


Figure 4.16 (Register Page)

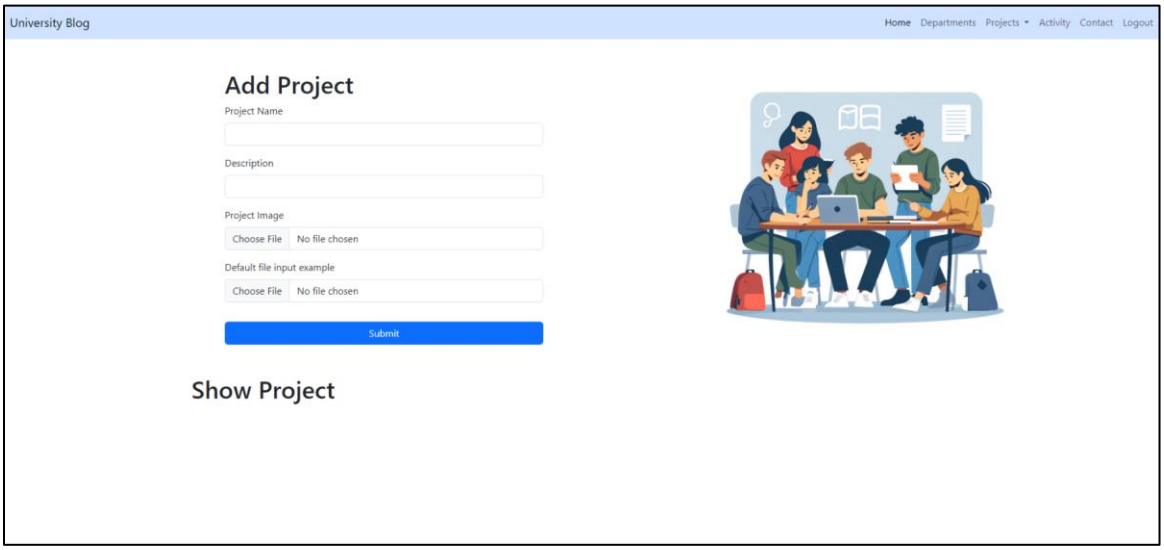


Figure 4.17 (view & Add Project)

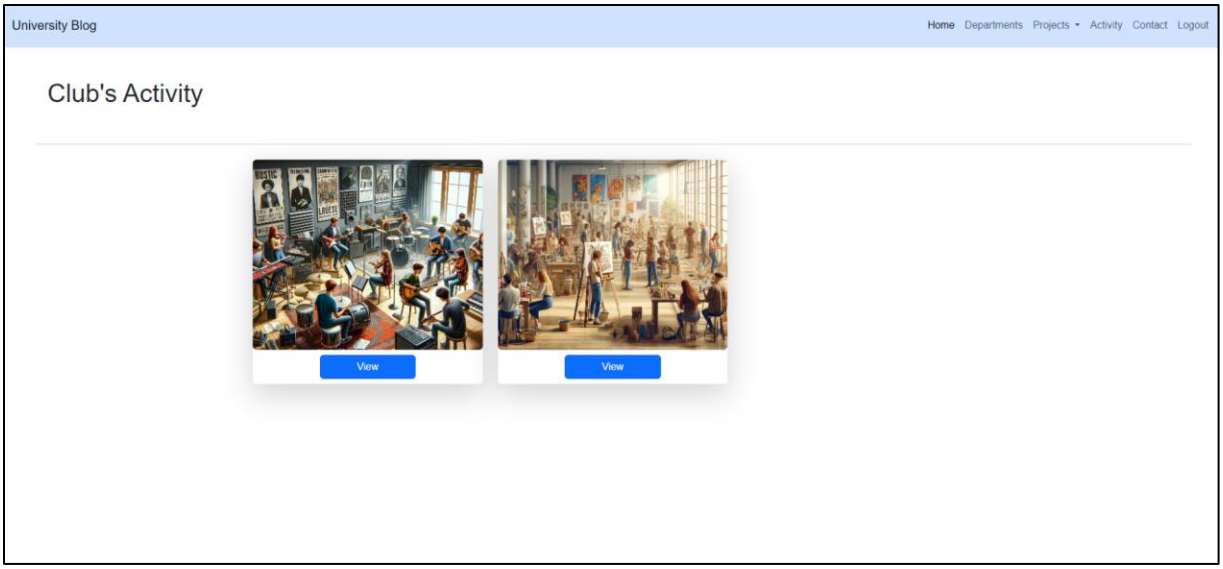


Figure 4.18 (View Activity)

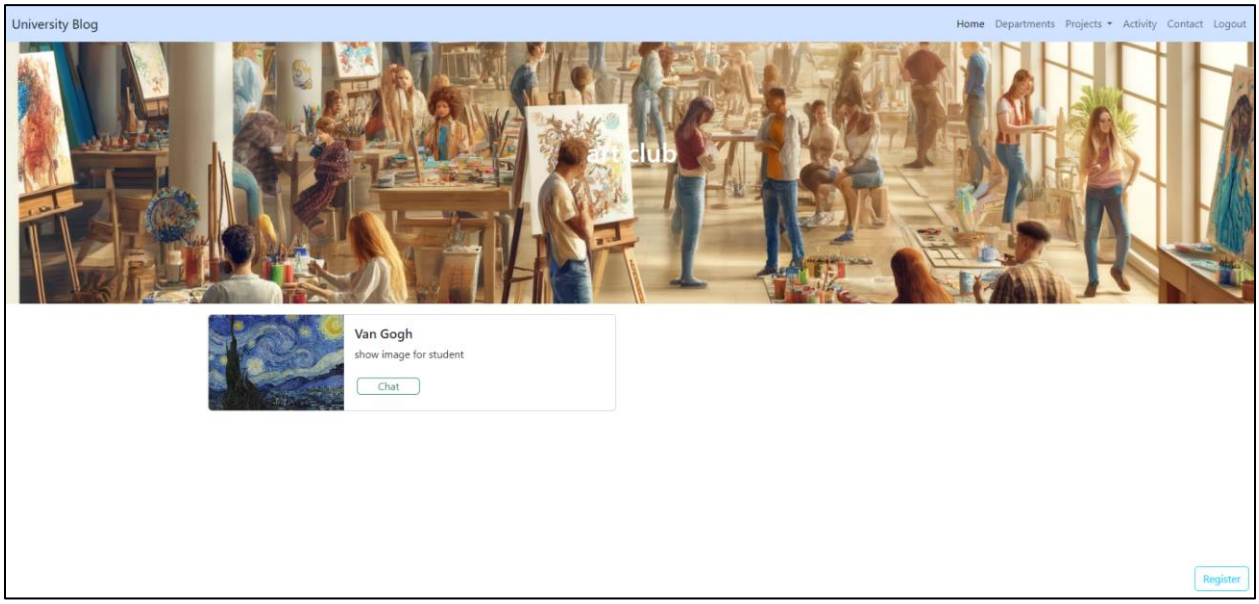


Figure 4.19 (View Club)

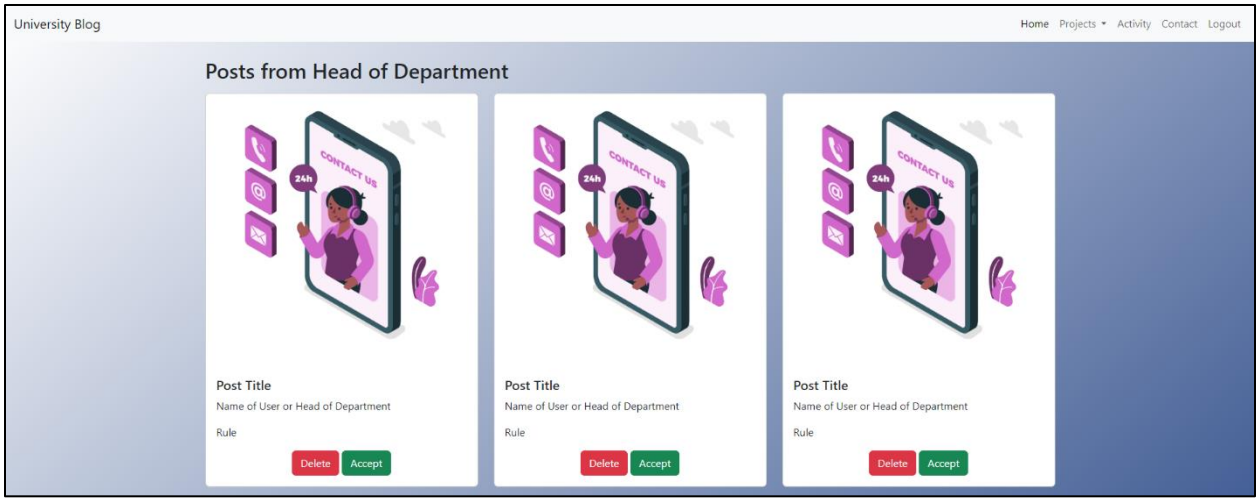


Figure 4.20 (Control Post)

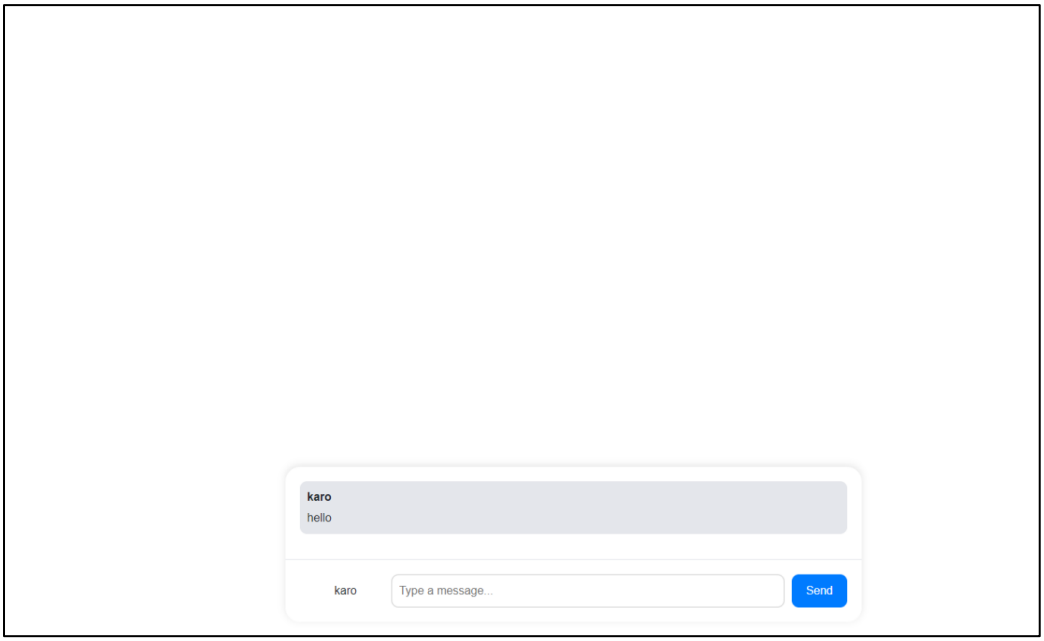


Figure 4.21 (Chatting)

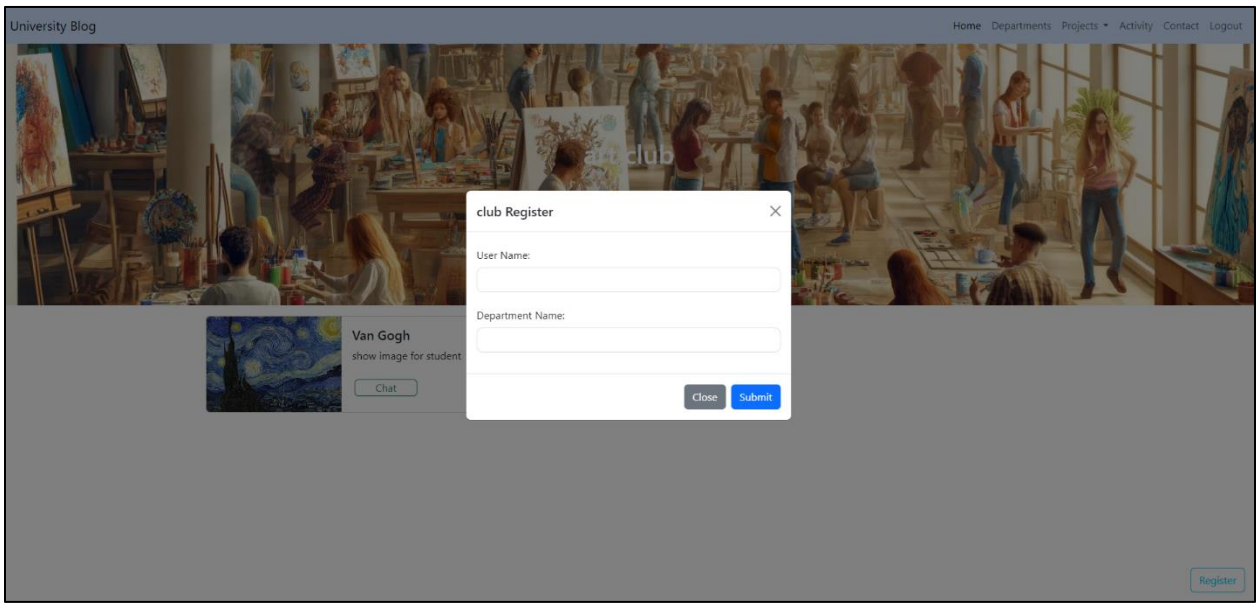


Figure 4.22 (Register for clubs)

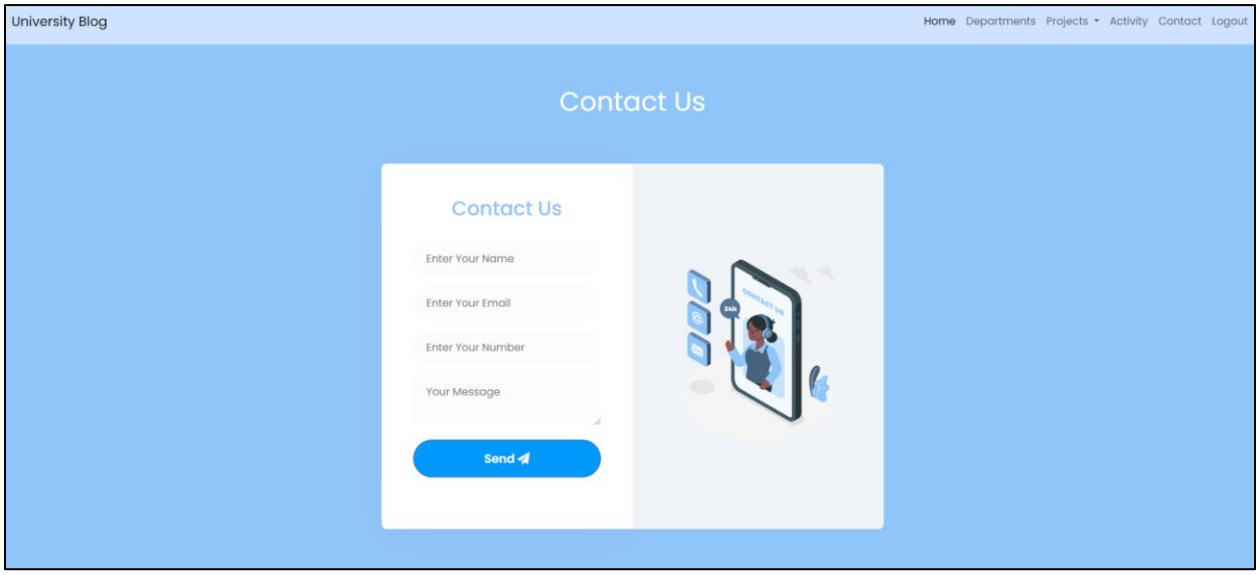


Figure 4.23 (Contact us)

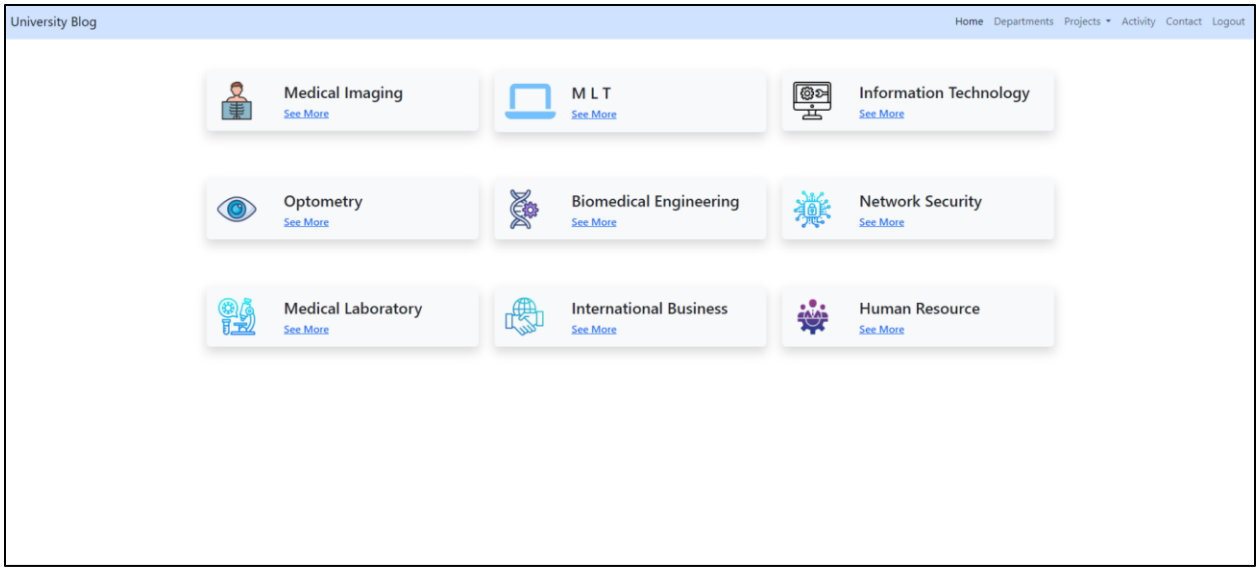


Figure 4.24 (Departments)

4.6 Chapter Summary

The development of schematics and plans for the system was the primary focus of this chapter's discussion of important subjects. Such design for class diagrams, ERD, use cases, design for databases, etc. These diagrams are going to be put to use in the system implementation for the subsequent tasks (FYP2).

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Introduction

This chapter outlines the implementation and testing of the Qaiwan Blog System (QBS). The primary functionalities of the system, including registration, login, adding posts, and activity management, are implemented using HTML, CSS, PHP, and MySQL. The system's interfaces are designed to be user-friendly and efficient. Each section below details the coding and interfaces of the system's main functions.

5.2 Coding of System Main Function

5.2.1 Register

The registration function allows new users to create an account in the Qaiwan Blog System. The code ensures that all necessary information is collected and stored securely in the database.

5.2.2 Login

The login function verifies user credentials and grants access to the system if the provided information matches the records in the database.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Login</title>
    <link rel="stylesheet" href="../../plugins/bootstrap/css/bootstrap.css">
    <style>
        body {
            background-color: #f8f9fa;
        }

        .login-container {
            width: 400px;
            margin: 100px auto;
            padding: 20px;
            border-radius: 5px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
            background-color: #fff;
        }
    </style>
</head>
<body>
    <div class="container vh-100 vw-100">
        <div class="row h-100">
            <div class="col-md-6 offset-md-3 d-flex justify-content-center align-items-center">
                <div class="login-container">
                    <h2 class="text-center mb-4">Login</h2>
                    <form action="../../controllers/admin/login.php" method="post">
                        <div class="mb-3">
                            <label for="username" class="form-label">Username</label>
                            <input type="text" class="form-control" id="username" name="username" required>
                        </div>
                        <div class="mb-3">
                            <label for="password" class="form-label">Password</label>
                            <input type="password" class="form-control" id="password" name="password" required>
                        </div>
                        <div class="text-center">
                            <button type="submit" class="btn btn-primary">Login</button>
                        </div>
                    </form>
                    <!-- <div class="mt-3 text-center">
                        <p>Don't have an account? <a href="#">Sign up</a></p>
                    </div> -->
                </div>
            </div>
        </div>
    </div>
</body>
```

Figure 5.1 (Login Code)

5.2.3 Add Post

The add post function allows head of clubs to create new blog posts. The code ensures that the post content is saved to the database.

```
<?php require 'nav.html'; ?>
    <div class="container mt-5">
        <h1>Show Project</h1>
            if (count($projects) != 0) {
                foreach ($projects as $index_0 => $club) {
                                $projects_array[$index_0][2] = $content;
                            }
                        }
                    }

                    // DEBUG: PRINT THE PROJECTS ARRAY
                    // print_r($projects_array);
                }
                ?>
                <!-- <div class=""><?php  print_r($projects_array); ?></div> -->

                <?php
                if(isset($projects_array)){
                foreach ($projects_array as $index_0 => $club){ ?>
                <div class="col-3">
                    <div class="card my-5" style="width: 18rem;">
                        <img src="<?php echo $club[2]['file_dir'].$club[2]['file_name']; ?>" class="card-img-top" alt="...">
                        <div class="card-body">
                            <h5 class="card-title"><?php echo $club[0]['name']; ?></h5>
                            <p class="card-text"><?php echo $club[0]['description']; ?></p>
                            <div class="col d-flex justify-content-around">
                            <form action="../../controllers/users/project/delete_project.php" method="POST" class="delete-form">
                                    <input type="hidden" name="project_id" value="<?php echo $club[0]['id']; ?>">
                                    <button type="submit" class="btn btn-danger">Delete</button>
                                </form>
                                <a href="<?php echo $club[1]['file_dir'].$club[1]['file_name']; ?>" class="btn btn-primary" download="<?php echo "project".$club[0]['id']; ?>">Download</a>
                            </div>
                        </div>
                    </div>
                </div>
                <?php }} ?>


            </div>
    </div>

</body>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6jIeHz" crossorigin="anonymous"></script>

</html>
```

Figure 5.2 (Add Post Code)

5.2.4 Activity

The activity function logs head of club's activities such as posting, chatting, and logging in, which are then displayed on the user's activity feed.

```
/* Add your custom styles here */
</style>

<body>
    <div class="video-container">
        <img src="<?php echo htmlspecialchars($club['image']); ?>" alt="" class="img">
        <div class="video-text">
            <h1><?php echo htmlspecialchars($club['name']); ?></h1>
        </div>
        <?php include 'nav.html'; ?>
    </div>

    <div class="container mt-3">
        <div class="row w-100">
            <?php foreach($club_activities as $activity) { ?>
              <div class="col-6">
                    <div class="card mb-3" style="max-width: 640px;">
                        <div class="row g-0">
                            <div class="col-md-4">
                                <img src="<?php echo htmlspecialchars($activity['image']); ?>" class="img-fluid object-fit-cover rounded-start w-100 h-100" alt="...">
                            </div>
                            <div class="col-md-8">
                                <div class="card-body">
                                    <h5 class="card-title"><?php echo htmlspecialchars($activity['name']); ?></h5>
                                    <p class="card-text"><?php echo htmlspecialchars($activity['description']); ?></p>
                                    <div class="w-100 d-flex justify-content-start align-content-center">
                                        <button type="button" class="btn btn-outline-success col-3 p-0 my-2 mx-1" onclick="window.location.href='chat.php?club_id=<?php echo $activity['
                                        <?php if ($club_head) { ?>
                                            <form action="../../controllers/head/club_activity/delete_activity.php" method="POST" class="col-3 p-0 my-2 mx-1">
                                                <input type="hidden" name="club_id" value="<?php echo htmlspecialchars($activity['club_id']); ?>">
                                                <input type="hidden" name="activity_id" value="<?php echo htmlspecialchars($activity['id']); ?>">
                                                <button type="submit" class="btn btn-danger col-12 rounded">Delete</button>
                                            </form>
                                        <?php } ?>
                                    </div>
                                </div>
                            </div>
                        </div>
                    </div>
                <?php } ?>
            </div>
    </div>

    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
        integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6jIeHz" crossorigin="anonymous"></script>
</body>
```

Figure 5.3 (Activity Code)

5.2.5 Chat

The chat interface allows users to communicate in real-time. This interface displays a chat window where users can send and receive messages.

```php
<!DOCTYPE html>
<html lang="en">

<?php

include "../../controllers/database.php"; // Assuming you have this file
include "../../controllers/utils/utils.php";
include "../../models/club_activity.php";
include "../../models/users.php";

session_start();


$user_id = $_SESSION['user_id'];
$club_id = filter_input(INPUT_GET, 'club_id', FILTER_SANITIZE_SPECIAL_CHARS);
$activity_id = filter_input(INPUT_GET, 'activity_id', FILTER_SANITIZE_SPECIAL_CHARS);

// CHECK IF THE USER IS LOGGED IN
if (!isset($_SESSION['user_id'])) {
    // USER IS NOT LOGGED IN, REDIRECT TO LOGIN PAGE
    header("Location: ./register.php");
    exit();
}

try {
    $db = new Database();
    $club_activities = new ClubActivities($db);
    $users = new Users($db);

    $club_activity = $club_activities->read($activity_id);
    $user = $users->read($_SESSION['user_id']);

    $username = $user['username'];
    // Debug: Remove this in production


} catch (Exception $e) {
    echo "An error occurred: " . $e->getMessage();
    exit();
}

?>


<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Chat Group</title>
```

Figure 5.4 (Chat Code)

5.3 Interfaces of System Main Function

The user interfaces for the Qaiwan Blog System (QBS) are designed to be intuitive and user-friendly. The main functions of the system—registration, login, adding posts, and viewing

activities—each have their own dedicated interface. Below are the detailed descriptions and HTML code for these interfaces.

5.4 Testing

The website is now complete and functional, but in order to have a decent website, you must test it to see if the input you provide results in the intended output or not.

5.4.1 Black Box Testing

Black boxing is a method for evaluating the performance of the system and testing your program. In this method, the tester chooses a function, provides inputs, and tests the function's output to determine if it succeeded or failed.

Table 5.1 Black box testing (Register Page)

Input	Expected Result	Actual Result	Status
Username, password, email Valid	Successful Register, Showing the Login page	Successful Register, Showing the Login page	pass
username, password and email, Invalid	unsuccessful register and showing error message	unsuccessful register and showing error message	pass
Password match	Successful Register, Showing the Login page	Successful Register, Showing the Login page	pass
Password does not match	unsuccessful register and showing error message	unsuccessful register and showing error message	pass
Left out required Field	User should fill out the fields	User should fill out the fields	pass

Table 5.2 Black box testing (Login page)

Input	Expected Result	Actual Result	Status
username and password valid	Successful to login Showing the home page	Successful to login Showing the home page	pass
Invalid username and password	unsuccessful login and showing error message	unsuccessful login and showing error message	pass
Left out required Field	User should fill out the fields	User should fill out the fields	pass

5.4.2 White Box Testing

White-box testing is a kind of testing that looks at how a system works on the inside. This kind of testing looks at how much a code statement, branch, path, or condition is used. White-box testing is a term for testing at a low level.

Table 5.3 White box testing <login Page>

Use Case Name	Login
Use Case ID	UC01
Description	The use case talks about how the admin and user Login to the website.
Pre-Condition	The user must have an account on the website.
Date	11- Feb - 2023
Tester:	Paiwand Hadi

Table 5.4 White box testing <login Page>

Input	Expected Result	Actual Result
username and password valid	Session created and redirected to Homepage page	Session created and redirected to Homepage page
wrong username or password	Display error message	Display error message

5.4.3 User Testing

User testing is the process of putting a website or app's features and user interface to the test by having real people do certain tasks in real life. For testing, the users are regular people who are testing the Qaiwan Blog System website.

Table 5.5 User Testing <Contact Us>

Tester: Paiwand Hadi		
Date: 11/2/2023		
Module: Contact us		
Instruction	Expected Result	Result
1. Click on Contact us page. 2. Fill out the fields. 3. Click Send Button	1- Show the waiting icon. 2- Show successful message	pass

Table 5.6 User Testing <Add Club>

Tester: Paiwand Hadi		
Date: 18/6/2024		
Module: Add Club		
Instruction	Expected Result	Result

1. Open the website. 2. Log in to the website. 3. Navigate to the "Clubs" section. 4. Click on "Add Club". 5. Fill in the required fields (e.g., club name, description, etc.). 6. Click on "Submit". 7. Verify if the new club appears in the club list.	Website is successfully opened. User is successfully logged in. "Clubs" section is displayed. Add Club form is displayed. Required fields are filled in correctly. Club is successfully added and confirmation is displayed. New club is listed in the club section.	Pass Pass Pass Pass Pass Pass Pass

Table 5.7 User Testing <Chat>

Tester: Paiwand Hadi		
Date: 19/6/2024		
Module: Chat		
Instruction	Expected Result	Result
1. Open the website. 2. Log in to the website. 3. Click on the chat icon. 4. Select a contact or group. 5. Type a message.	Message is sent and displayed in the chat window. Message is typed in the input box.	pass

CHAPTER 6

CONCLUSION

6.1 Introduction

The overall results of the Qaiwan Blog System will be the subject of the primary discussion in this chapter's major topic. This system will be available for our university (Qaiwan International University).

6.2 Achievement of the Project

The success that is attained as a result of the requirements, the literature review, the resources based on the blog system, and the chances for growth that it provides to both the teaching staff and the students and by contrasting those systems with this one, we have identified the problems that exist inside it, which will help us learn more about it and attempt to solve them.

6.3 suggestions for future Improvements

There are a lot of different aspects of it that I want to learn more about, and one of those aspects, which will be covered throughout the next semester, is the practical consequences of the website. And if it were up to me, I'd want to take this website to the next level by adding features like the ability to pay for books at our university.

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APPENDIX A

SOFTWARE REQUIREMENT SPECIFICATION (SRS)

1. Introduction

1.1 Purpose

The purpose of this SRS (Software Requirement Specification) was to outline the exact requirements for the system that was developed. It is a document that lists the features and requirements for the system's performance.

1.2 Scope

The university community is the target audience for this project, which intends to assist people stay informed about everything that occurs on campus, including changes to the campus landscape, new club activities, and other things.

1.3 Definitions, Acronyms and Abbreviation

QBS: Qaiwan Blog System
UC: Use Case
SRS: Software Requirement Specification

1.4 Overview

The following chapter of this publication, titled "Overall Description," provides an overview of the productive viewpoints, system features, user characteristics, and constraints. User interfaces, hardware interfaces, and software interfaces are all covered in detail in Chapter Three,

Specific Requirements. The use cases, use case requirements, and activity diagram are all discussed in the system features.

2. Overall Description

This whole document is about the problem that facing in Kurdistan. The information from a product standpoint is in the SRS that follows. With the user characteristics allowed limits and assumptions, it offers all information and details regarding Qaiwan Blog System.

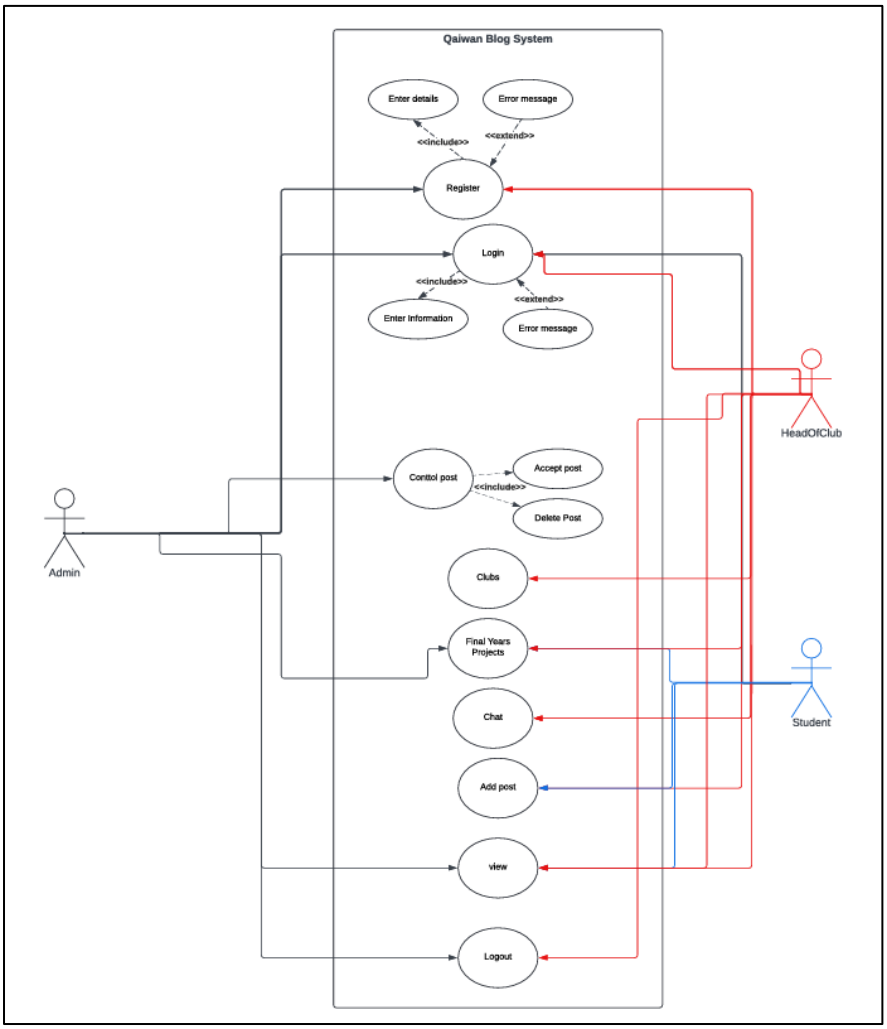

Figure A.1 Use case

2.1 Product Perspective

Because the QAEP is a web-based tool, a browser like Google Chrome, Safari, etc. is necessary. The MySQL database server is linked to the website. The system retrieves the data from the database and displays it on the webpage.

In this system has 2 users:

- Admin
- Student

2.1.1 System Interfaces

2.1.2 User Interfaces

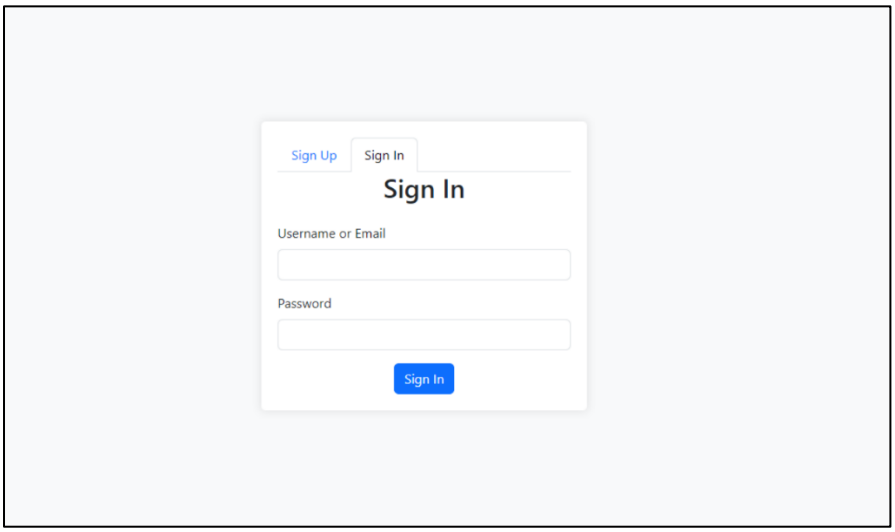

Figure A.2 Sign in Page

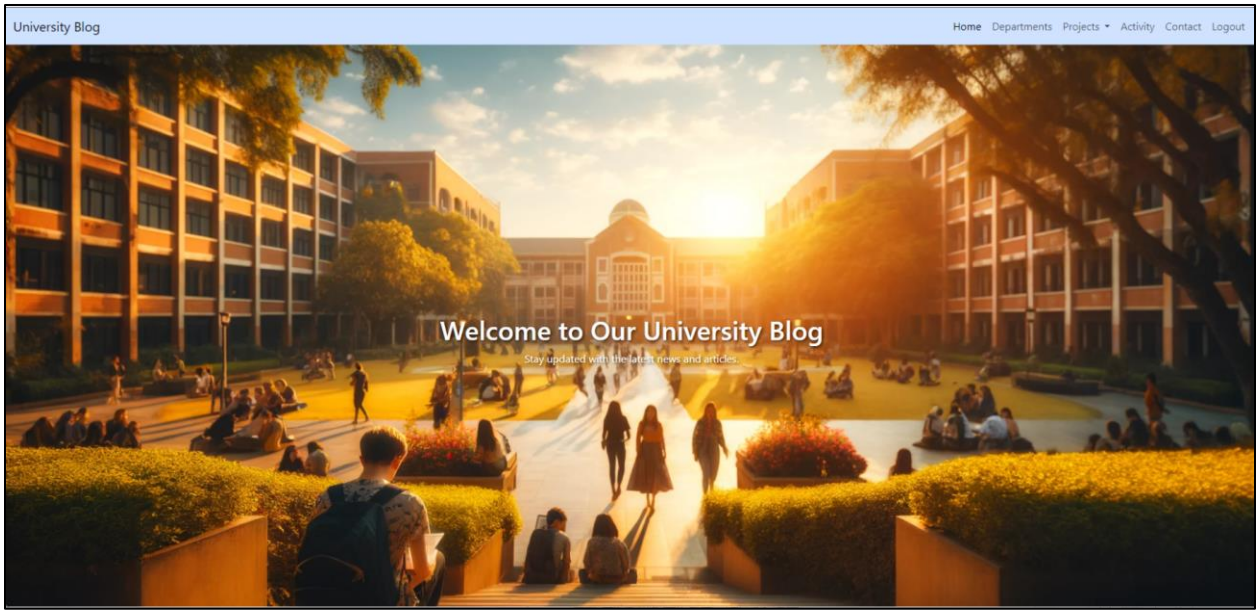

Figure A.3 Home Page

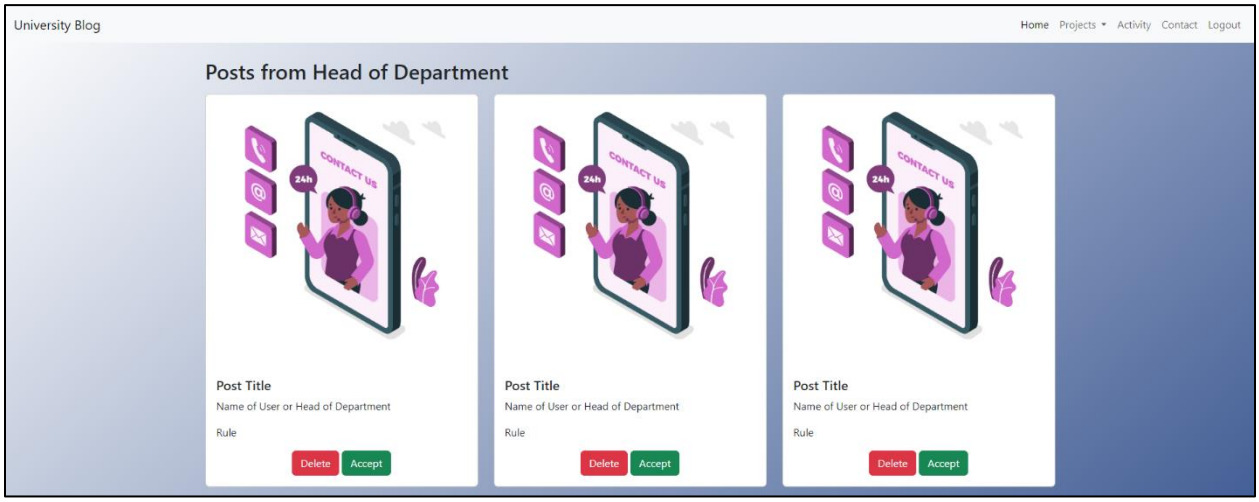

Figure A.4 Post control

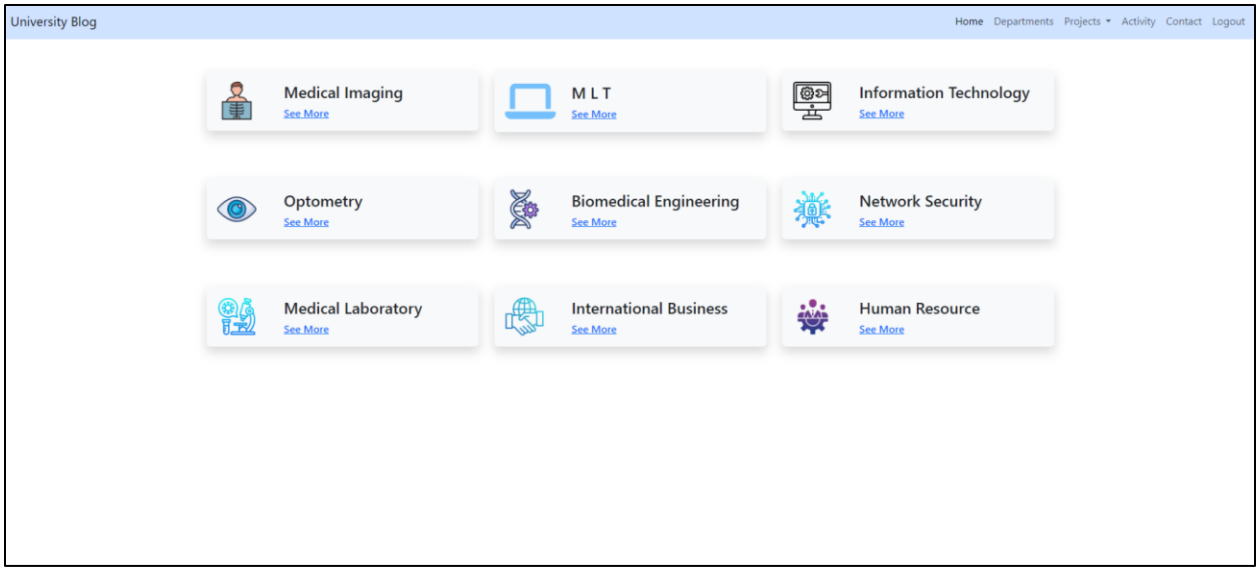

Figure A.5 Departments

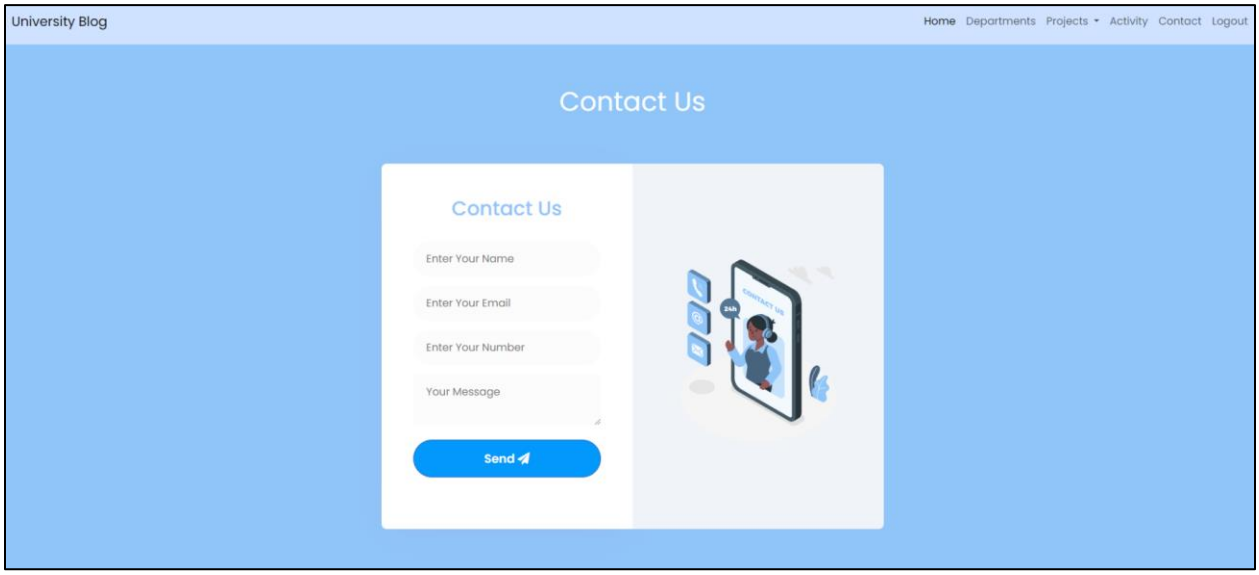

Figure A.6 Contact Us

2.1.3 Hardware Interfaces

The website requires an internet connection, either through cellular or Connected by LAN services. To use internet browsers, the system needs a device that can connect to the internet.

2.1.4 Software Interfaces

Because PHP is the greatest option for us to connect our website with the database because we are using MySQL, we have used HMTL, CSS, PHP, and java script because they are more interactive and support our website.

Database: We kept all of our information as well as the admin's and students' records in the MySQL data base.

2.1.5 Communication Interfaces

This system will supper all types of web browser.

2.1.6 Memory

The primary memories should have at least 2GB of RAM, while secondary memories should have at least 32GB and ideally 64GB

2.2 Product Functions

The use case for the system and how it will communicate with one another based on this blog system are described in the following statement.

2.2.1 Register Use Case

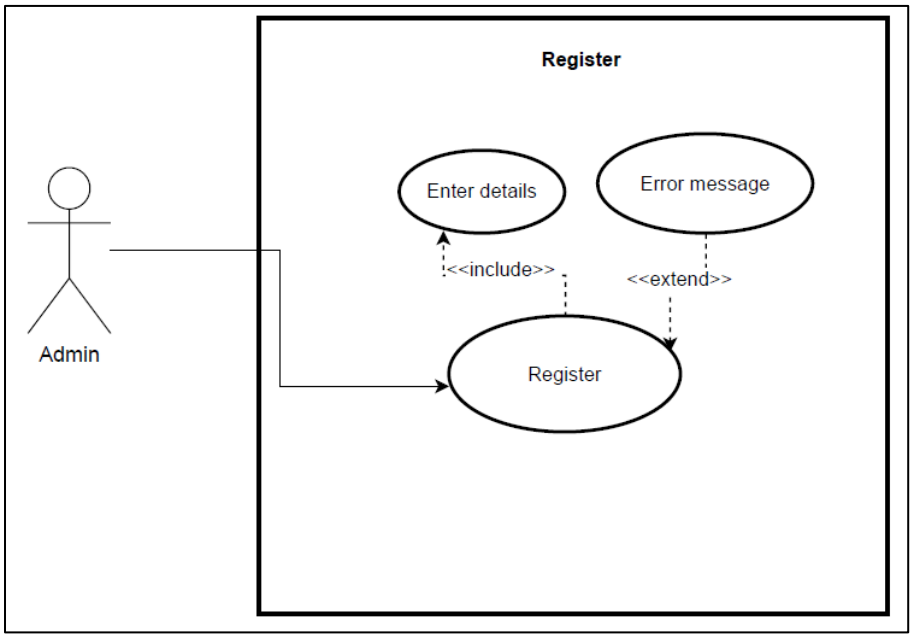

Figure A.7 Register Use case

Description: Admin can sign up and add another admin or student to the system.

2.2.2 Login Use Case

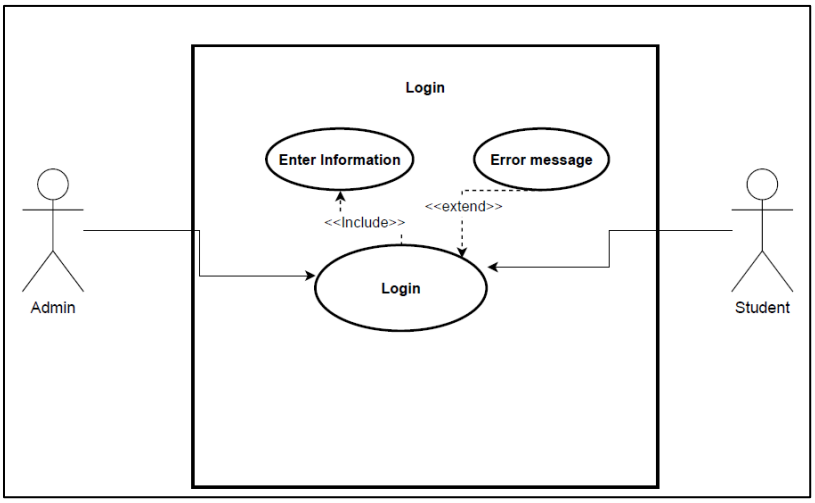

Figure A.8 Login Use case

Description: Both admins and students can login in, but administrators must first create student accounts.

2.2.4 Search Use Case

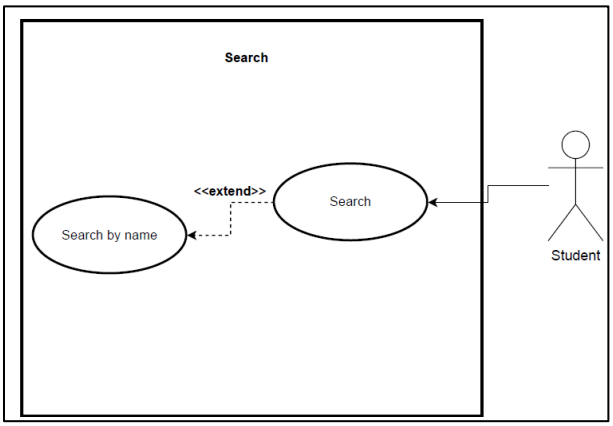

Figure A.9 Search Use case

Description: Student can search in the search form by the names that related to the system.

2.2.5 Contact us Use Case

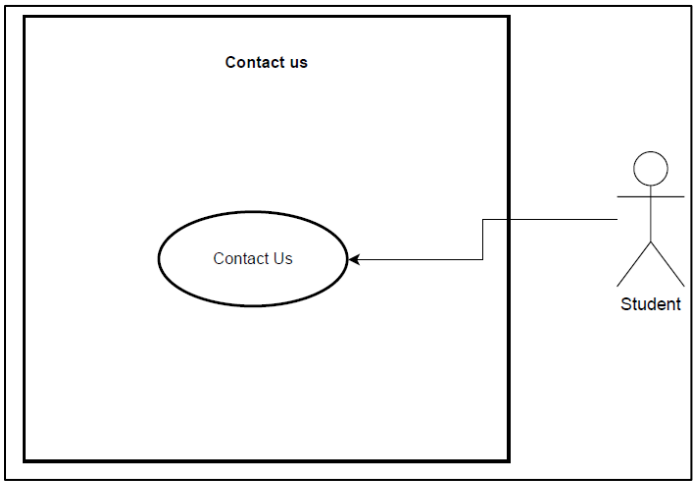

Figure A.10 Contact us Use case

Description: Student will be able to contact the system by contacting with the admin.

2.2.6 Control Post Use Case

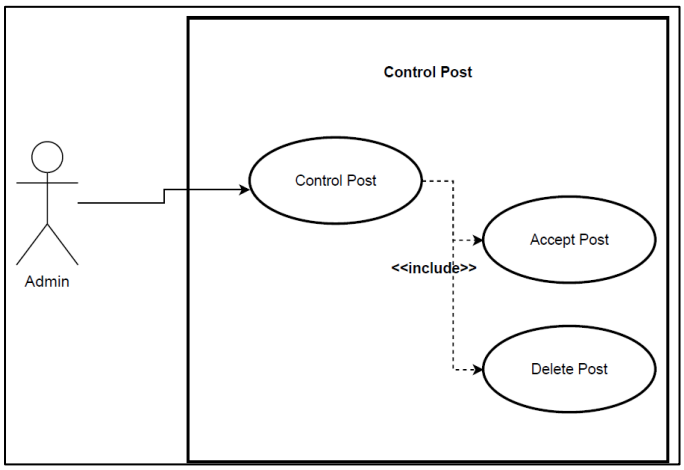

Figure A.11 Control Post Use case

Description: Admin will control the posts, by accepting and deleting the posts.

2.2.7 Logout Use Case

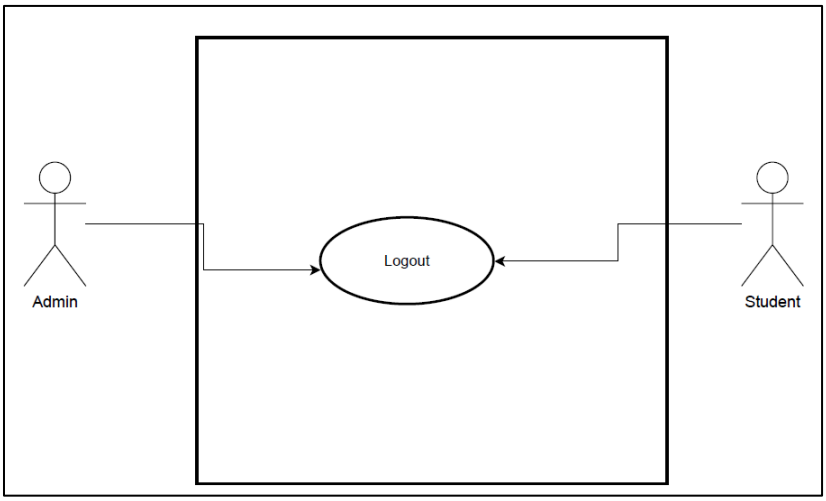

Figure A.12 Logout Use case

Description: The logout for both users in the system is the same.

2.3 User Characteristics

2.4 Constraints

Most laptops and desktop computers that support HTML, CSS, PHP, and Java Script should be able to use the system.

User Interface: Navigating the website is far too easy and natural. A user-friendly interface with simple navigation should allow users to utilize all the system's features.

Security constraints: There is a good effort made to ensure the security of this system; students cannot register themselves. Each student needs to have their own login for the website.

2.5 Assumption and Dependencies

1. Availability of key project team members: All key project team members are available and equipped to work on the project.
2. Availability of the budget: The estimated budget is complete and precise.
3. Accurate scheduling: The project may be completed on time and the deadlines and milestones are attainable.
4. Performance of vendors, suppliers, and contractors: You can always get the tools and supplies you need.

2.6 Apportioning of Requirements

If the servers are down or the database is not connected, users from other universities won't be able to access the system.

3. Specific Requirements

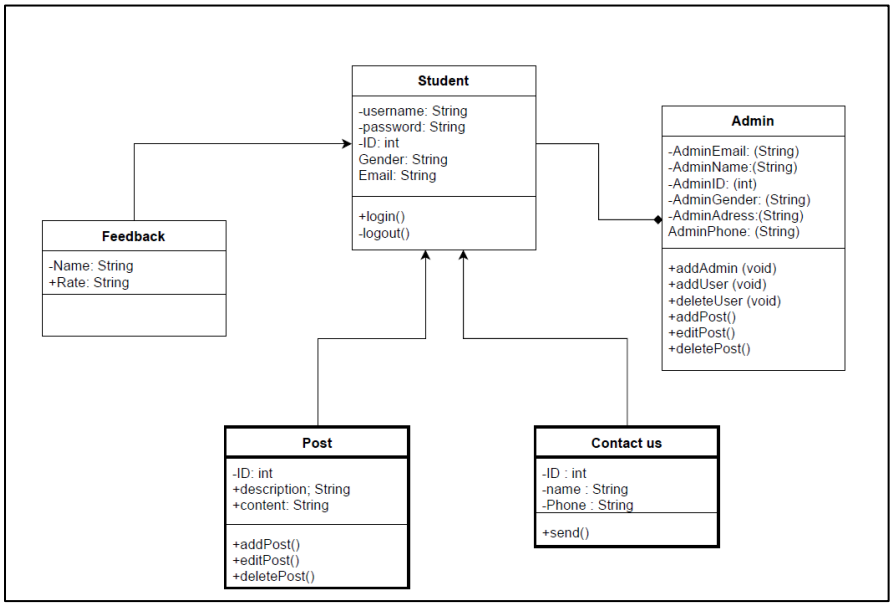

Figure A.13 <Qaiwan Blog System>

3.1 System Features

3.1.1 Module <user module>

3.1.1.1 UC01: Use Case <Register>

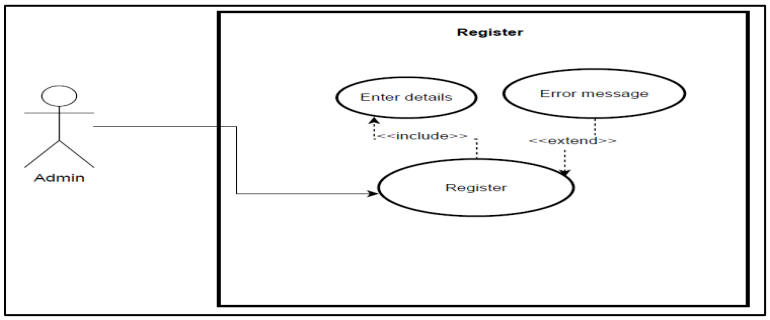

Figure A.14 Use case Diagram <Register >

Table A.1 Use Case Description <Register>

Use Case ID:	UC-01		
Use Case Name:	Register		
Created By:	Paiwand Hadi	**Last Updated By:**	Paiwand Hadi
Date Created:	14/1/2023	**Last Revision Date:**	15/1/2023
Actors:	Admin		
Description:	The use case talks about how the admin register to the website.		
Pre-conditions:	1. The admin must have the access to the internet. 2. The admin must access the website.		
Flow of events:	1. The admin opens the website in the internet browser. 2. The admin clicks on the Register button. 3. The admin will fill up the form and they will send the registration form. 4. Then the click on register button. 5. The system will send the inputs to the data base. 6. If registration is successful, the admin will be informed. 7. The admin receives notification that the registration has failed if the register is not completed.		
Exception:	1. If the email exists, the system gives an error that the email already in use.		

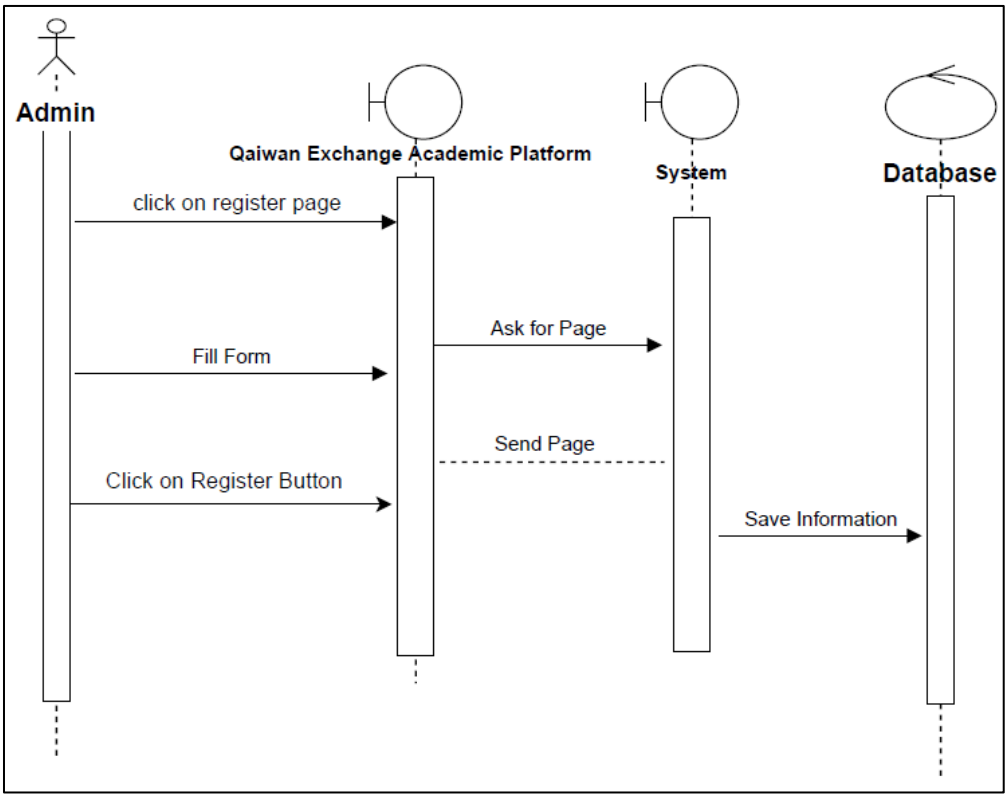

Figure A.15 System Sequence Diagram <Register>

3.1.1.2 UC02: Use Case <Login>

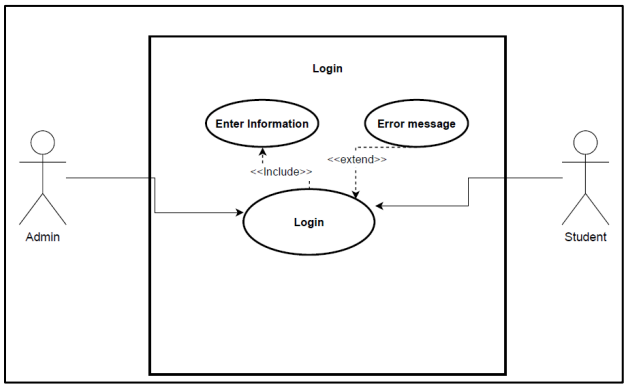

Figure A.16 System Sequence Diagram <Login>

Table A.2 Use Case Description <Login>

Use Case ID:	UC-02		
Use Case Name:	Login		
Created By:	Paiwand Hadi	**Last Updated By:**	Paiwand Hadi
Date Created:	14/1/2023	**Last Revision Date:**	15/1/2023
Actors:	Admin, Student		
Description:	The use case talks about how the admin and user Login to the website.		
Pre-conditions:	1. The admin and user must have the access to the internet. 2. The admin and user must access the website. 3. The student must get register by the admin.		
Flow of events:	1. The admin and user open the website in the internet browser. 2. The admin and user Enter the Username and password. 3. The system validates the username and the password. 4. The username and password will be verified by the system. The system will show the website's main page if the login and password are valid. The system will show an error notice if the username or password are wrong.		
Exception:	1. The home page will change based on the admin login or user.		

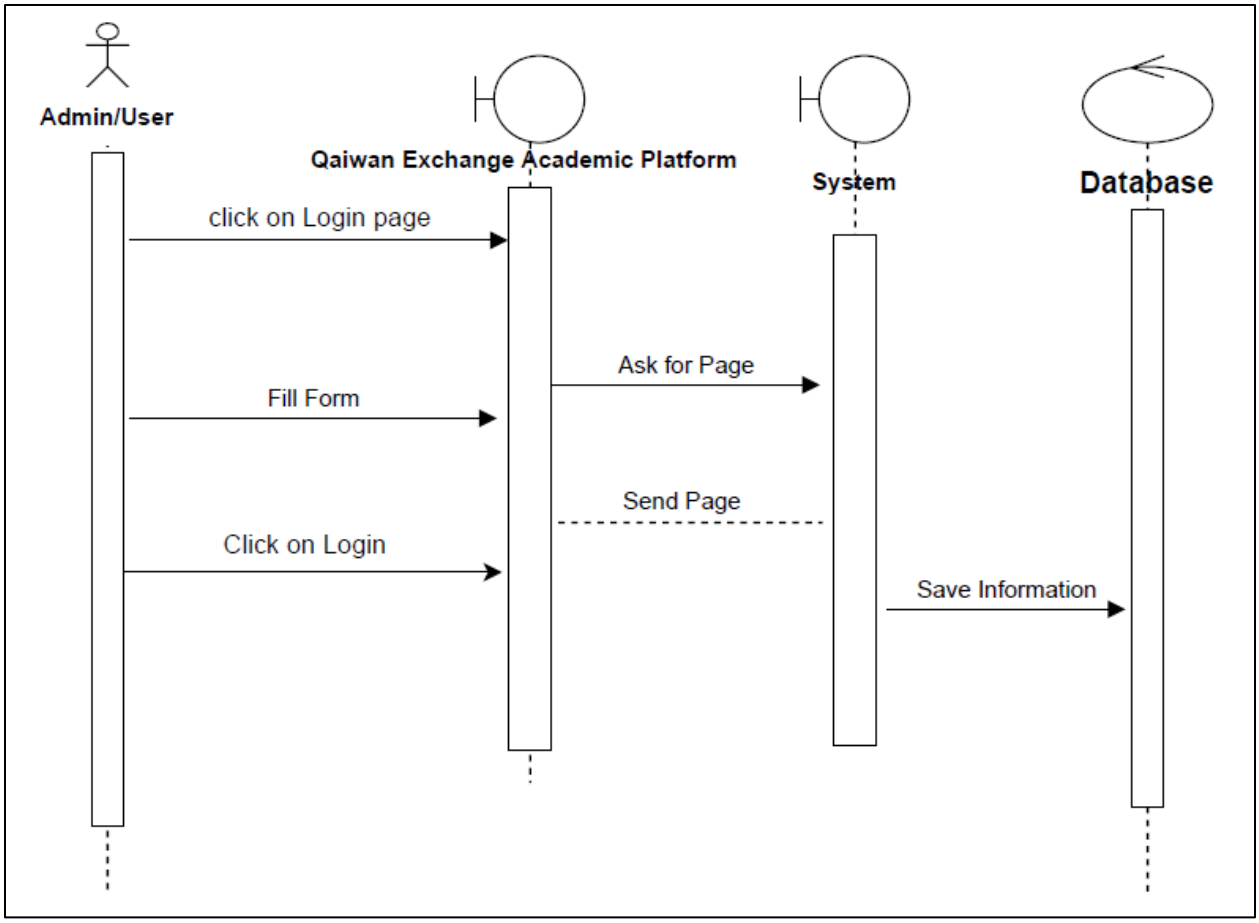

Figure A.17 System Sequence Diagram <Login>

3.1.1.3 UC03: Use Case <Search>

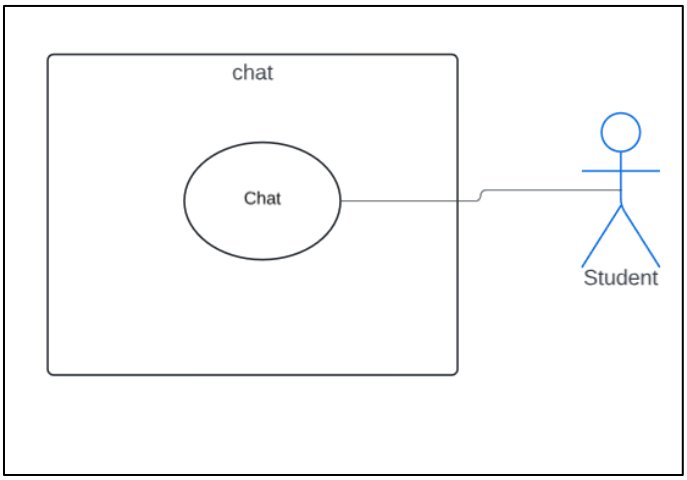

Figure A.18 Use Case Diagram <chat>

Table A.3 Use Case Description <Search>

Use Case ID	UC-03		
Use Case Name	Chat		
Created By	Paiwand Hadi	**Last Updated By:**	Paiwand Hadi
Last Updated By	18/6/2024	**Last Revision Date:**	20/6/2024
Actors	Student		
Description	The use case describes how users can initiate and use the chat feature on the website to communicate with others.		
Pre-condition	1. The user must have access to the internet. 2. The user must access the website. 3. The user must be logged in to the website.		
Flow of events	1. The user logs into the website. 2. The user clicks on the chat icon located in the website's interface. 3. The user selects a contact or group to chat with from the list. 4. The user types a message in the chat input box. 5. The user clicks the send button or presses the Enter key. 6. The system sends the message to the selected contact or group and displays it in the chat window. 7. The system notifies the recipient(s) of a new message.		

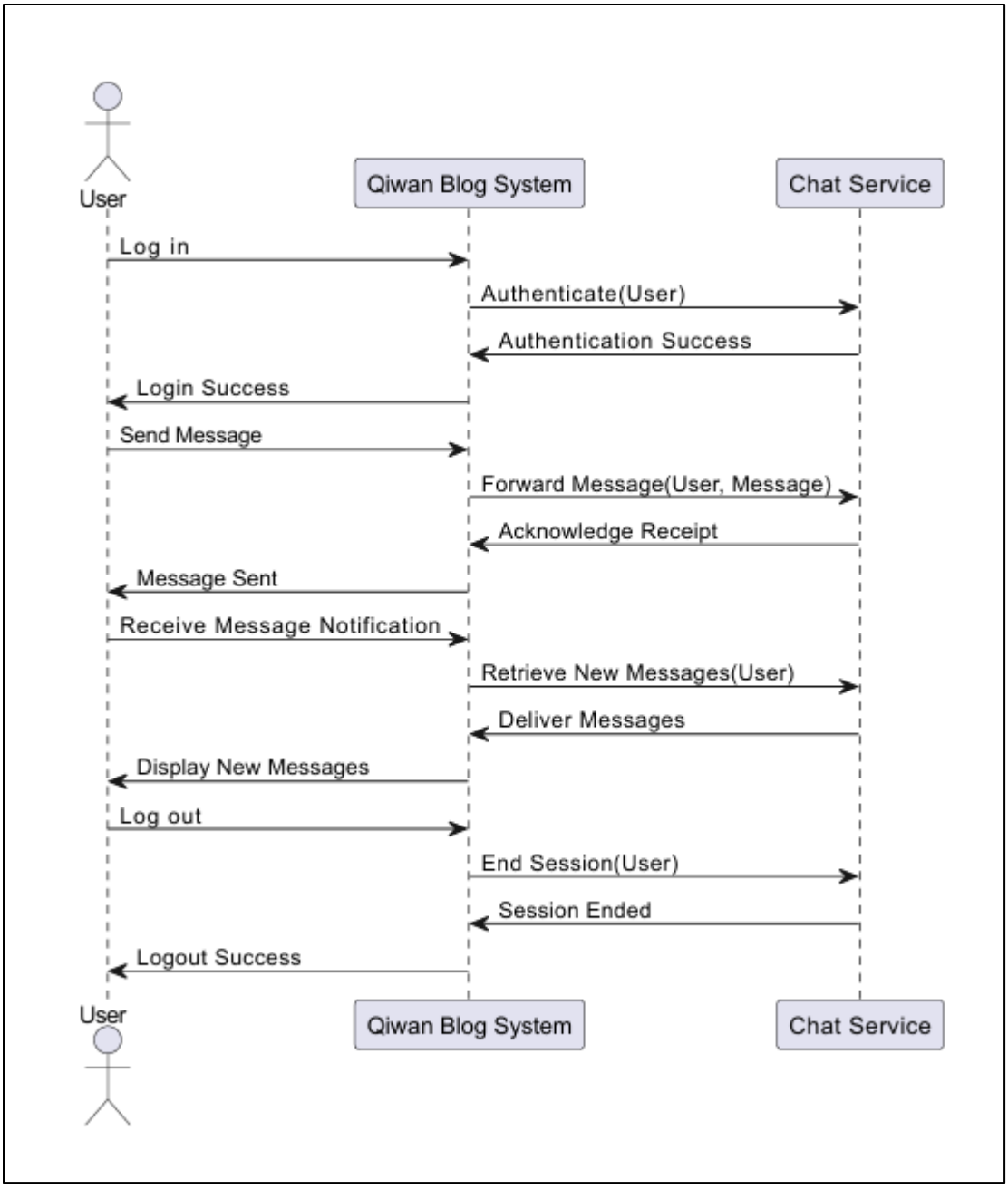

Figure A.19 System Sequence Diagram <Search>

3.1.1.4 UC04: Use Case < Add Post>

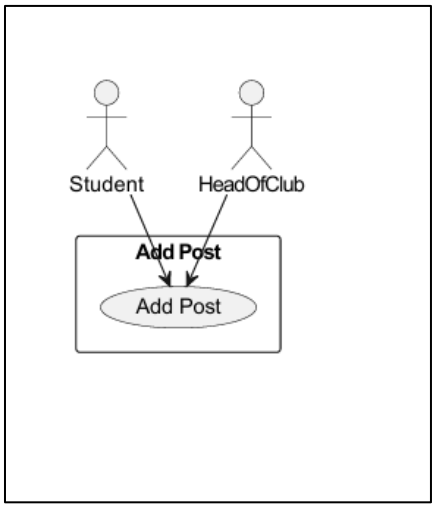

Figure A.20 Use Case Diagram <Add Post>

Table A.4 Use Case Discerption <Add Post>

Use Case ID:	UC-04		
Use Case Name:	Add Post		
Created By:	Paiwand Hadi	**Last Updated By:**	Paiwand Hadi
Date Created:	14/6/2024	**Last Revision Date:**	15/6/2024
Actors:	Head of club, Student		
Description:	The use case describes the process where an head of club or student can add a post to the website.		
Pre-conditions:	1. The Head of club and student must have access to the internet. 2. The Head of club and student must access the website. 3. The Head of club and student must be logged in to the website.		
Flow of events:	1. The Head of club and student must login to the website. 2. The Head of club or student navigates to the section for adding a post. 3. The Head of club or student fills in the required fields for the post (e.g., title, content, attachments). 4. The admin or student submits the post. 5. The system saves the post and displays it on the website.		
Exception:	1. If the Head of club or student is not logged in, the system will prompt the user to log in before accessing the add post feature. 2. If required fields are missing or invalid, the system will display an error message and prompt the user to correct the information.		

3.1.1.5 UC05: Use Case <Contact>

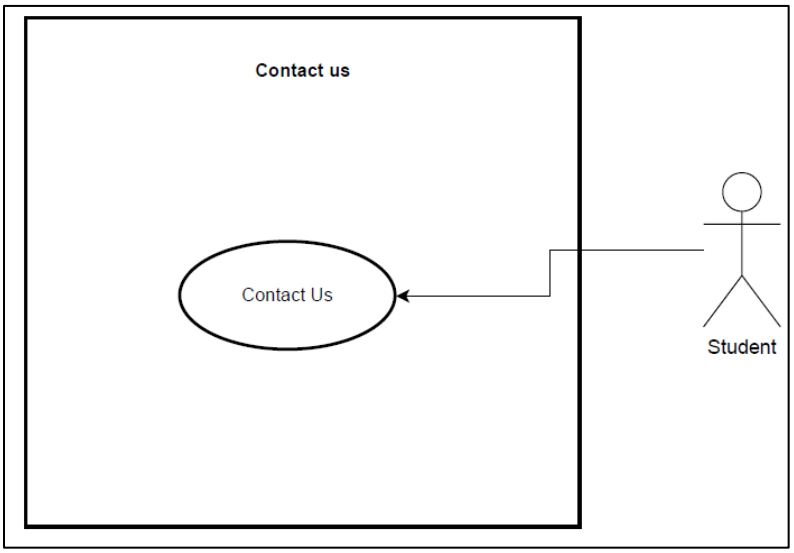

Figure A.21 Use Case Diagram <Contact>

Table A.5 Use Case Description <Contact us>

Use Case ID:	UC-05		
Use Case Name:	Contact us		
Created By:	Paiwand Hadi	**Last Updated By:**	Paiwand Hadi
Date Created:	14/1/2023	**Last Revision Date:**	15/1/2023
Actors:	Student		
Description:	The use case talks about how the users can contact the admins throw out the website.		
Pre-conditions:	2. The user must have the access to the internet. 3. The user must access the website. 4. The User must be logged in to the website 5. The user clicks on contact page 6. The user enter the required text		
Flow of events:	7. The users must login to the website. 8. The users will click on the contact us page. 9. The user will be able to see a text to fill in.		
Exception:	10. the system will not show any error is the process was successful.		

3.1.1.5 UC05: Use Case <Control Post>

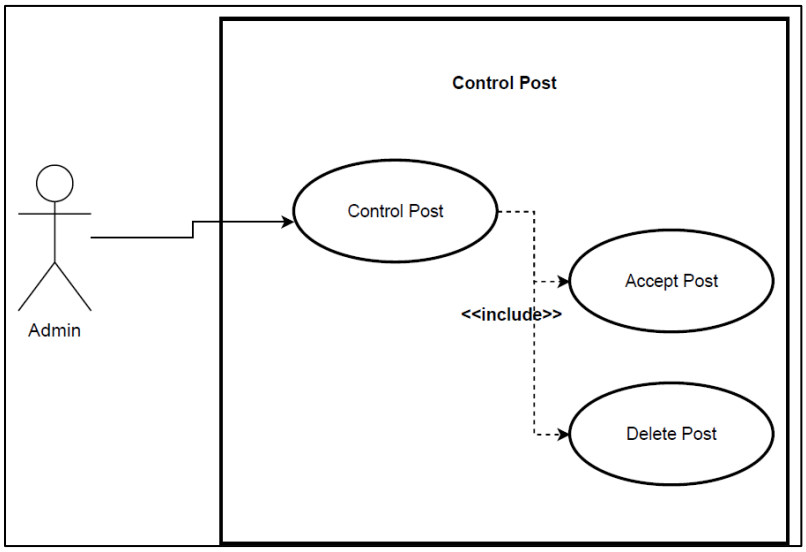

Figure A.22 Use Case Diagram <Control Post>

Table A.6 Use Case Discerption <Control Post>

Use Case ID:	UC-05		
Use Case Name:	Control post		
Created By:	Paiwand Hadi	**Last Updated By:**	Paiwand Hadi
Date Created:	14/1/2023	**Last Revision Date:**	15/1/2023
Actors:	Admin		
Description:	The use case talks about how the admin can control the users post.		
Pre-conditions:	2. The admin must have the access to the internet. 3. The admin must access the website. 4. The admin must be logged in to the website 5. The admin clicks on control post 6. The admin chooses between accept or reject post.		
Flow of events:	7. The admin must login to the website. 8. The admin will click on control post to be redirected to the page. 9. The admin will see two options to choose between.		
Exception:	10. the system will not show any error is the process was successful.		

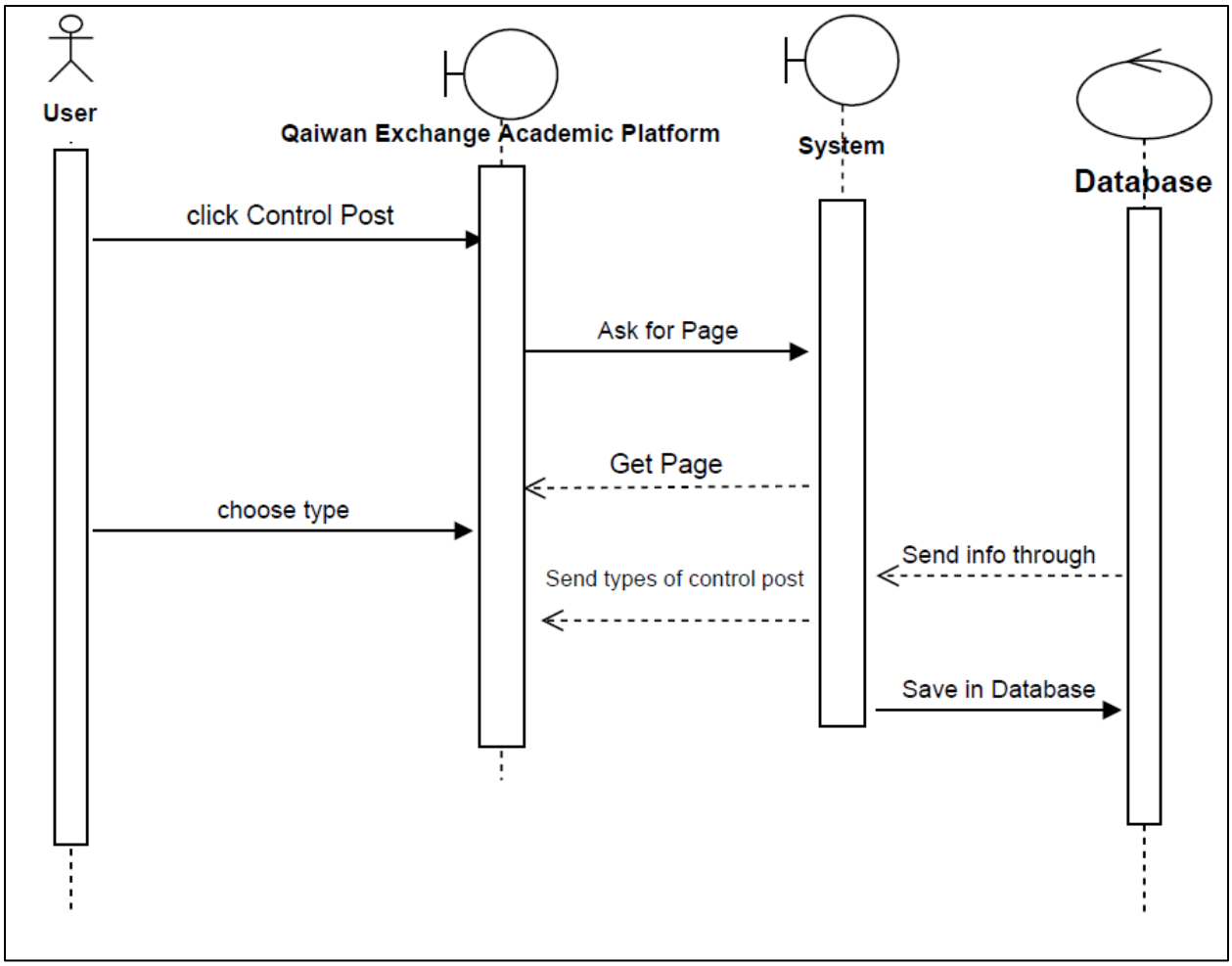

Figure A.23 System Sequence Diagram <Control Post>

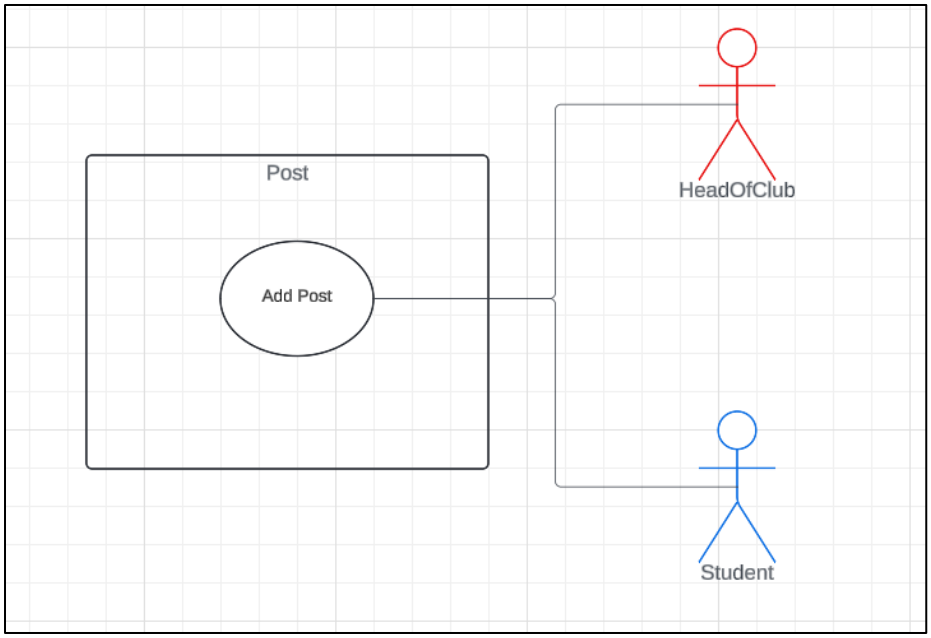

Figure A.24 Use Case Diagram <Add Post>

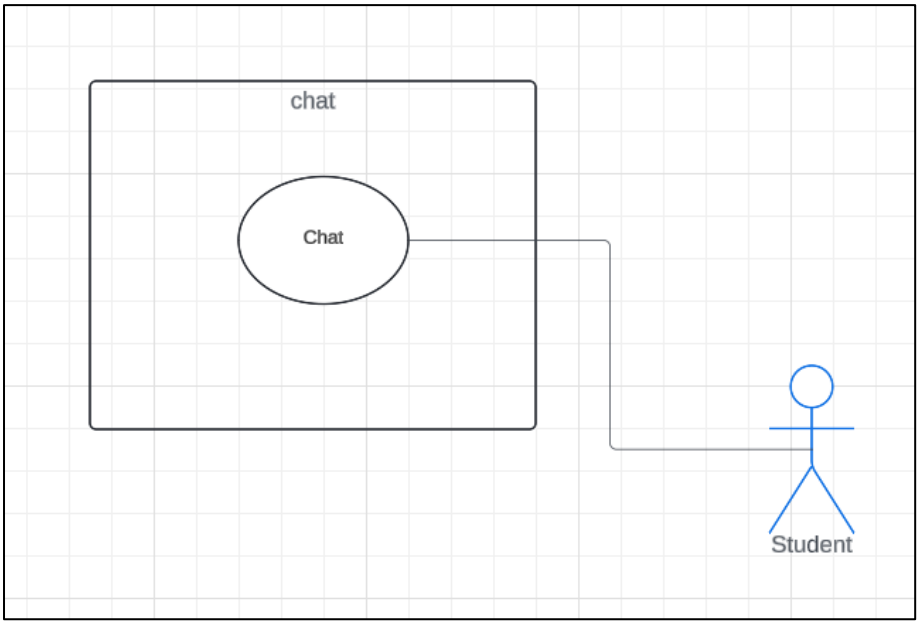

Figure A.25 Use Case Diagram <chat>

3.2 Performance Requirements

Considering that the system would be web-based. Both internet and high-speed internet connection are necessary.

3.3 Design Constraints

To create a website, the system makes use of many pieces of software. A list of the system's software is provided below:

- The system has a user-friendly interface because to the integration of HTML, CSS, and Tailwind.
- The data is stored in a MySQL database, which was created for the system.

3.4 Software System Attributes

Availability: The system will be accessible, and all operations will be completed without interruption from the internet.

Usability: The system is simple to use and navigate in the manner that is often followed without delay.

Using MySQL services, the system makes sure that user information is secure in the database.

APPENDIX B

SOFTWARE DESIGN DESCRIPTION (SDD)

1. Introduction

1.1 Purpose

The architecture and intricate design of the Qaiwan Blog System website are described in this SDD Purpose. The SDD is introduced in part one of this publication, the system architectural design is shown in part two, and the comprehensive description is presented in part three. This paper serves as a comprehensive design guide for a piece of software. It provides details on a product's abilities and the creator's goals.

1.1 Purpose

This SDD outlines the first part, which includes the introduction, scope, definition of acronyms, references, and overview; part two, which consists of the architectural model for the system being designed; and part three, which consists of the entity relationship diagram, data dictionary, and user interface design for the database being designed.

1.3 Definitions, Acronyms and Abbreviation

SDD: Software Design Description

1.4 Overview

This article discusses the architecture of the system using system analysis. The system's data design, which describes the type of data model used in this system and contains the entity relationship diagram (ERD) and data dictionary, is also included in this document. and the primary function interfaces of the system, which allow for a clearer view of the website.

2. System Architectural Design

2.1 Architecture Model

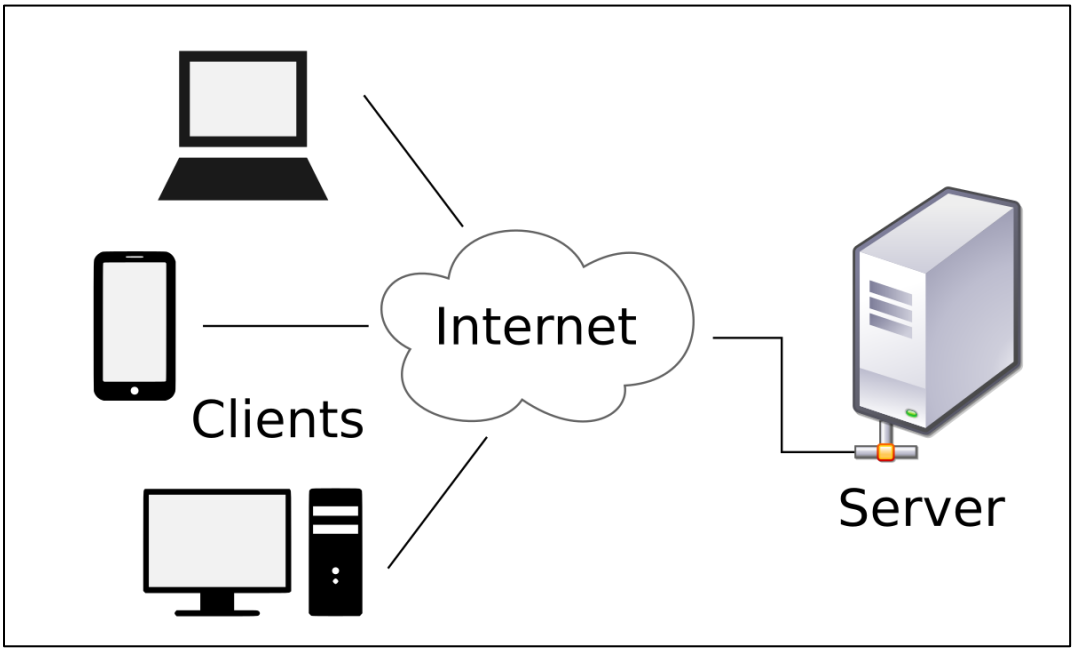

Figure B.1 System Architecture

3. Database Design

3.1 Entity Relationship Diagram (ERD)

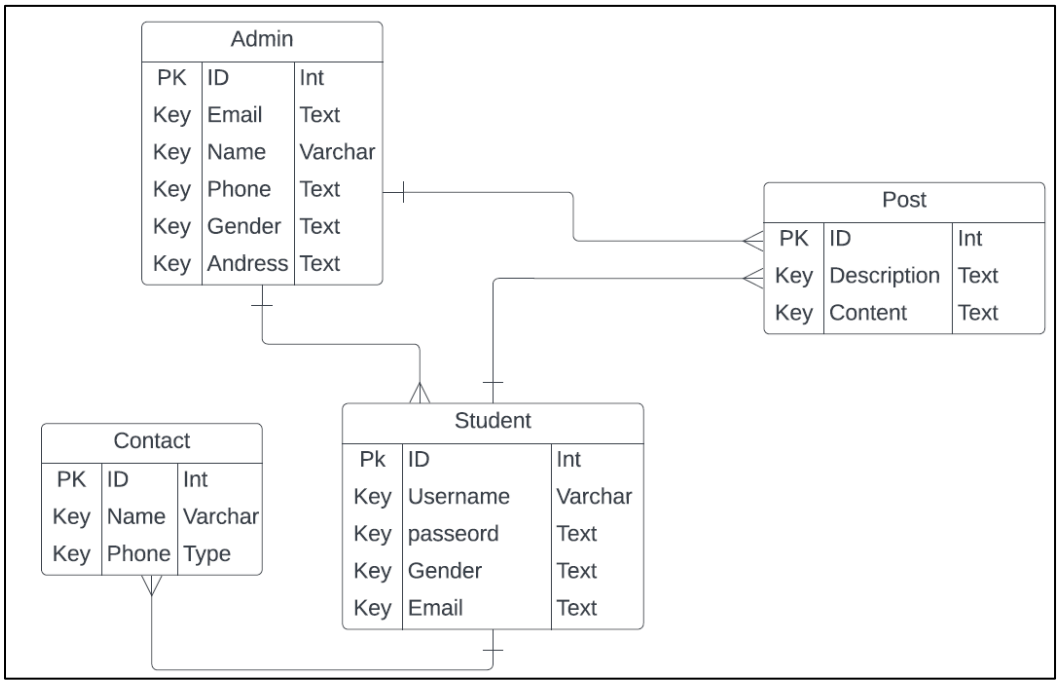

Figure B.2 ERD Diagram (Qaiwan Blog System)

3.2 Data Dictionary

Table B.1 Data dictionary 1

Table	Attribute	Type	Length	PK/FK	NULL
ADMIN	A_ID	INT	30	PK	
	A_EMAIL	VARCHAR	350		
	A_CODE	INT	30		

STUDENT	S_ID	INT	30	PK	
	S_EMAIL	VARCHAR	350		
	S_CODE	INT	30		
Search	SR_ID	INT	30		
	SR_INFO	VARCHAR	350		
CONTROL POST	P_ID	INT	30	FK	
	P_INFO	VARCHAR	350		
	P_TYPE	VARCHAR	350		
	P_DATE	DATE			
FEEDBACK	F_ID	INT	30		
	F_INFO	VARCHAR	350		
PROFILE	P_ID	INT	30	PK	
P_INFO	VARCHAR	350			

Table B.2 Data dictionary 2

Table	Attribute	Type	Length	PK/FK	NULL
ADMIN	A_ID	INT	30	PK	
	A_EMAIL	VARCHAR	350		
	A_CODE	INT	30		
STUDENT	S_ID	INT	30	PK	
	S_EMAIL	VARCHAR	350		
	S_CODE	INT	30		
Search	SR_ID	INT	30		
	SR_INFO	VARCHAR	350		
CONTROL POST	P_ID	INT	30	FK	
	P_INFO	VARCHAR	350		
	P_TYPE	VARCHAR	350		
	P_DATE	DATE			
FEEDBACK	F_ID	INT	30		
	F_INFO	VARCHAR	350		

PROFILE	P_ID	INT	30	PK	
P_INFO	VARCHAR	350			

3.3 User Interface Design

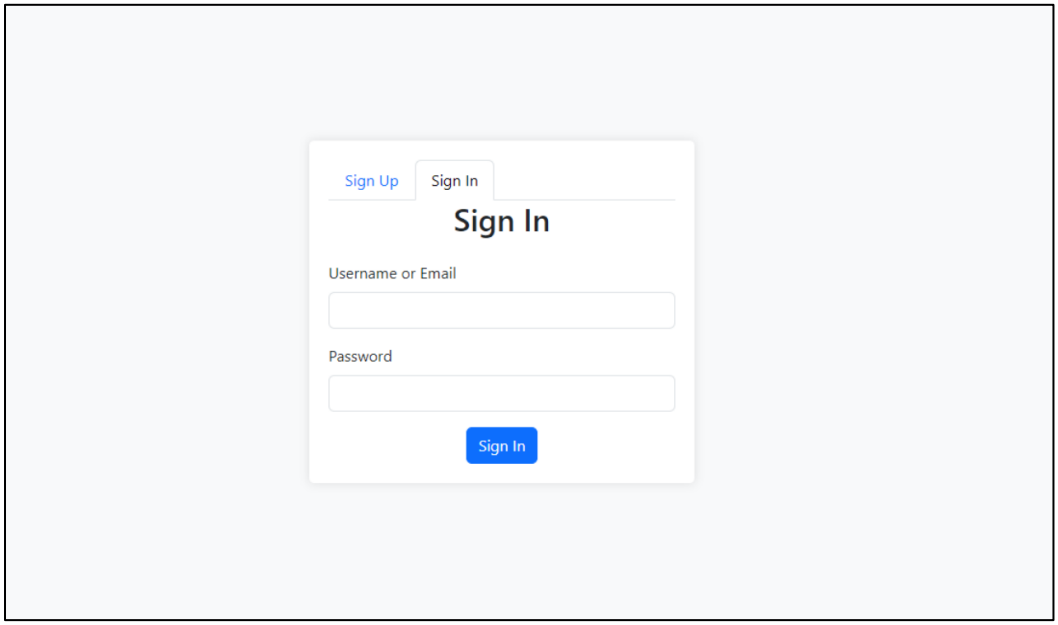

Figure B.3 Login page (Admin)

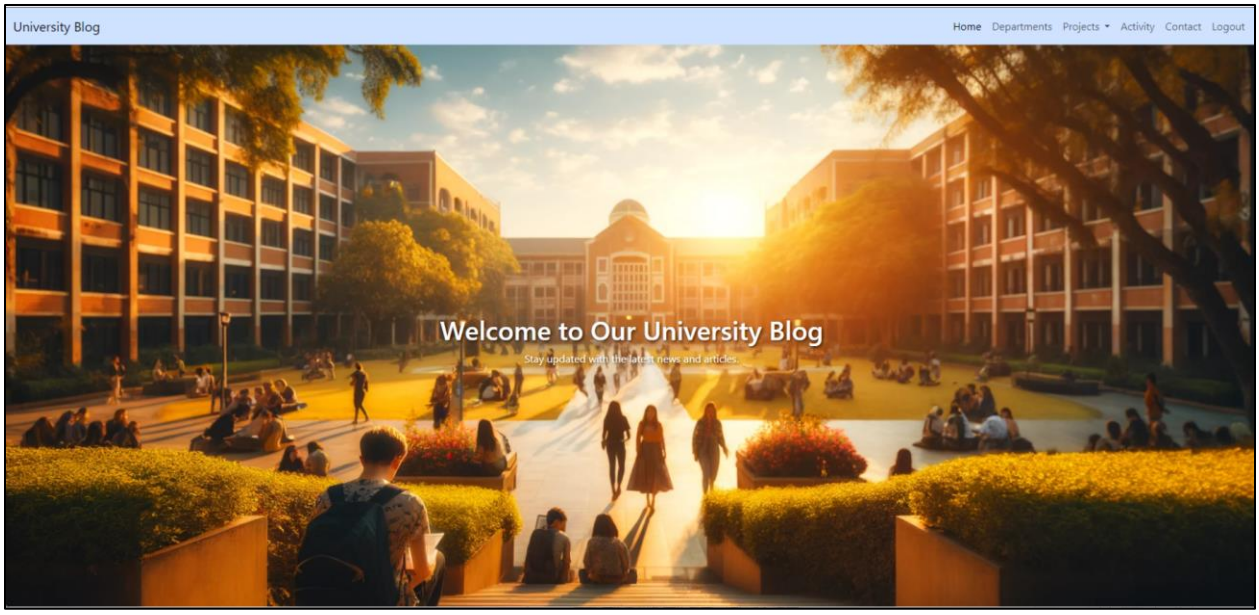

Figure B.4 Home page

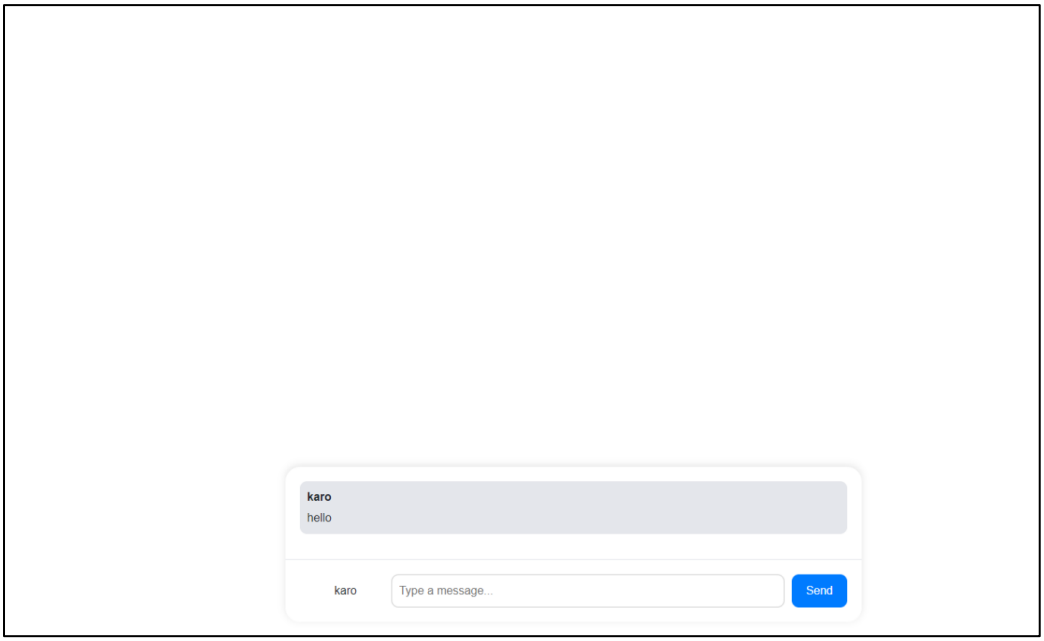

Figure B.5 chat

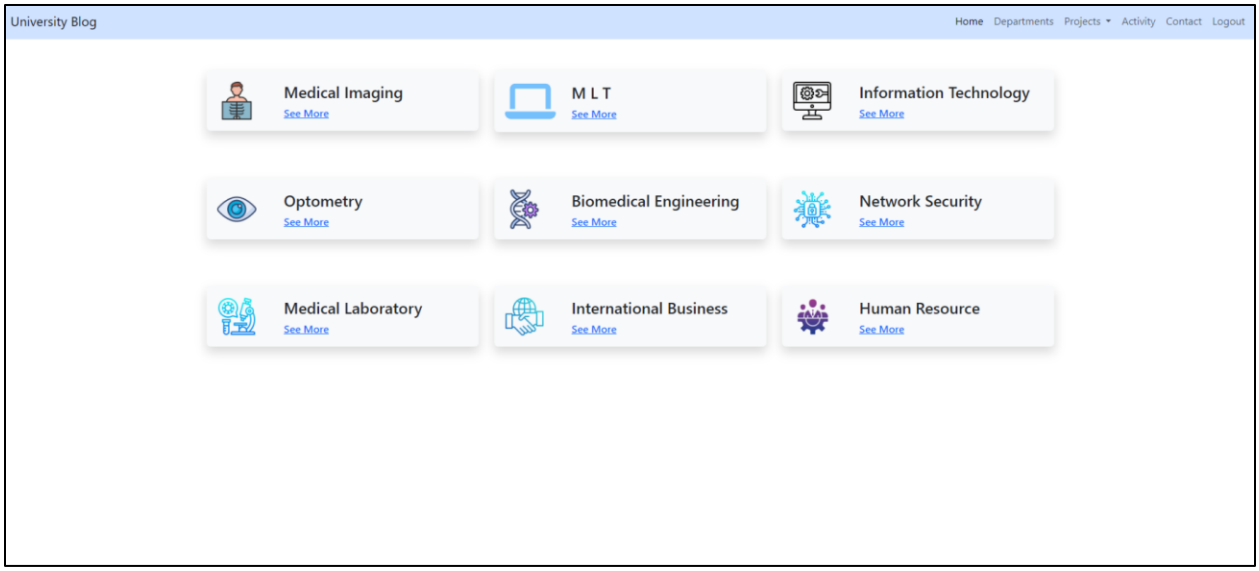

Figure B.6 Departments

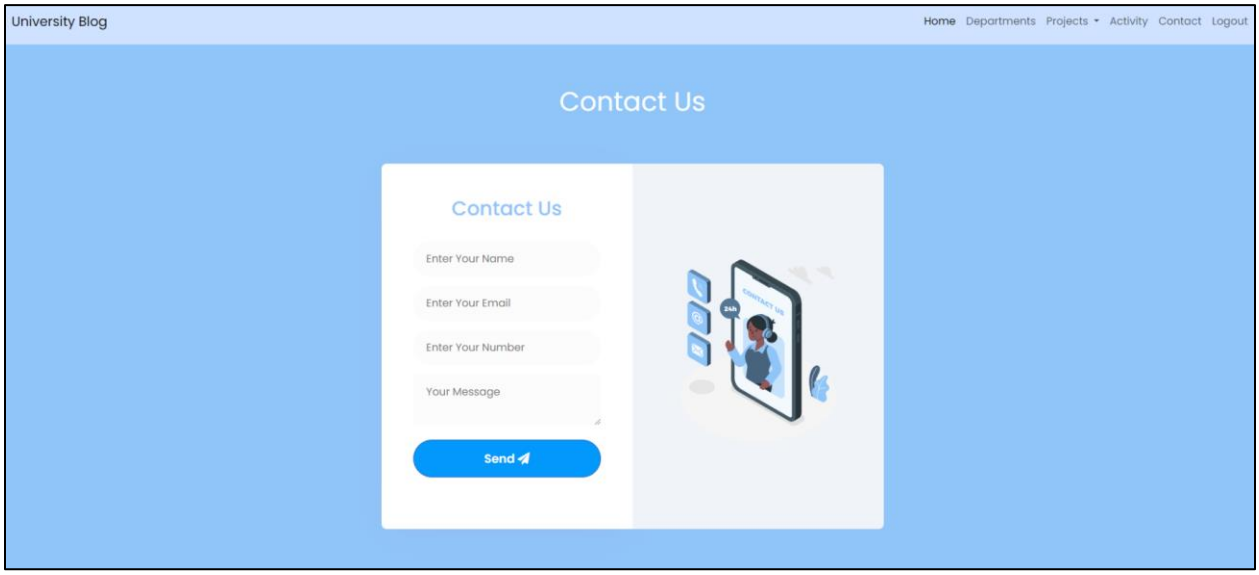

Figure B.7 Contact Us

APPENDIX C

SOFTWARE TESTING DOCUMENT (STD)

1. Introduction

1.1 Purpose

Each stage of the development of a software product, especially a website, is crucial, but system testing is extremely crucial. Before launching the website, it is crucial to test it to ensure that everything functions perfectly. We tested this website using three techniques during development: user acceptability testing, white box testing, and black box testing.

1.2 Scope

This STD is about testing the system, and the system will be testing by the Qaiwan universities students.

1.3 Definitions, Acronyms and Abbreviation

STD: Software Testing Document

1.3 Overview

The website's STD is introduced in this paper, and in the second section, we cover the three testing techniques that were utilized to test the website: user acceptability testing, white box testing, and black box testing.

2. Test Cases, Data and Expected Results

2.1 Testing

The website is now complete and functional, but in order to have a decent website, you must test it to see if the input you provide results in the intended output or not.

2.1.1 Black Box Testing

Black boxing is a method for evaluating the performance of the system and testing your program. In this method, the tester chooses a function, provides inputs, and tests the function's output to determine if it succeeded or failed.

Table C.1 Black box testing (Register Page)

Input	Expected Result	Actual Result	Status
Username, password, email Valid	Successful Register, Showing the Login page	Successful Register, Showing the Login page	pass
username, password and email, Invalid	unsuccessful register and showing error message	unsuccessful register and showing error message	pass
Password match	Successful Register, Showing the Login page	Successful Register, Showing the Login page	pass
Password does not match	unsuccessful register and showing error message	unsuccessful register and showing error message	pass
Left out required Field	User should fill out the fields	User should fill out the fields	pass

Table C.2 Black box testing (Login page)

Input	Expected Result	Actual Result	Status
username and password valid	Successful to login Showing the home page	Successful to login Showing the home page	pass
Invalid username and password	unsuccessful login and showing error message	unsuccessful login and showing error message	pass
Left out required Field	User should fill out the fields	User should fill out the fields	pass

2.1.2 White Box Testing

White-box testing is a kind of testing that looks at how a system works on the inside. This kind of testing looks at how much a code statement, branch, path, or condition is used. White-box testing is a term for testing at a low level.

Table C.3 White box testing <login Page>

Use Case Name	Login
Use Case ID	UC01
Description	The use case talks about how the admin and user Login to the website.
Pre-Condition	The user must have an account on the website.
Date	11- Feb - 2023
Tester:	Paiwand Hadi

Table C.4 White box testing <login Page>

Input	Expected Result	Actual Result
username and password valid	Session created and redirected to Homepage page	Session created and redirected to Homepage page
wrong username or password	Display error message	Display error message

2.1.3 User Testing

User testing is the process of putting a website or app's features and user interface to the test by having real people do certain tasks in real life. For testing, the users are regular people who are testing the Qaiwan Blog System website.

Table C.5 User Testing <Contact Us>

Tester: Paiwand Hadi		
Date: 11/2/2023		
Module: Contact us		
Instruction	Expected Result	Result
1. Click on Contact us page. 2. Fill out the fields. 3. Click Send Button	3- Show the waiting icon. 4- Show successful message	pass

Table C.6 User Testing <Add club >

Tester: Paiwand Hadi		
Date: 18/6/2024		
Module: Add Club		
Instruction	Expected Result	Result
1. Open the website. 2. Log in to the website. 3. Navigate to the "Clubs" section. 4. Click on "Add Club". 5. Fill in the required fields (e.g., club name, description, etc.). 6. Click on "Submit". 7. Verify if the new club appears in the club list.	Website is successfully opened. User is successfully logged in. "Clubs" section is displayed. Add Club form is displayed. Required fields are filled in correctly. Club is successfully added and confirmation is displayed. New club is listed in the club section.	pass

Table C.7 User Testing <chat>

Tester: Paiwand Hadi		
Date: 19/6/2024		
Module: Chat		
Instruction	Expected Result	Result
6. Open the website. 7. Log in to the website. 8. Click on the chat icon. 9. Select a contact or group. 10. Type a message.	Message is sent and displayed in the chat window. Message is typed in the input box.	pass

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Date: 20 - Aug - 2024