

**ONLINE SYNCHRONISED ENTERTAINMENT SYSTEM  
JOYTIME**



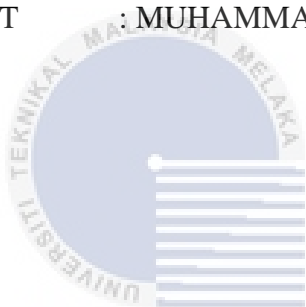
**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**



## DECLARATION

I hereby declare that this project report entitled  
**ONLINE SYNCHRONIZED ENTERTAINMENT SYSTEM JOYTIME**  
is written by me and is my own effort and that no part has been plagiarized  
without citations.

STUDENT : MUHAMMAD ASNAWI BIN HASHIM Date : 10 JUN 2021



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I hereby declare that I have read this project report and found

this project report is sufficient in term of the scope and quality for the award of  
Bachelor of Computer Science (Software Development) with Honours.

SUPERVISOR : PROFESSOR DR MOHD KHANAPI BIN ABD GHANI Date 12/9/2021

\_\_\_\_\_

## DEDICATION

From the deepest depth of my heart, I dedicate my piece of work ultimately to my beloved parents who always be in my mind all the time, keeping me stable mentally and emotionally with massive number of encouragements. Next is special appreciation to all my lecturers that have taught me, granting me the knowledges on this system and documentation entirely. Next is to my friends who have assisted me while I am working on my project either directly or indirectly.



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My greatest gratitude to my beloved parents, who have always been with me, in mind and heart, continuously supported me and give me numerous encouragements for to complete my system. Their prayers and support are undoubtedly the best thing that keep me going from the starting to the closure of this semester. My project would not be at least as simple as this if it is not because of them.

The last but not least, thousands of thanks I bid to all my friends that have shown me the way out from my problems and have been there during my tough times. Every single assistance that I get either directly or indirectly that help me move onwards with to my project until the completion of it is deeply appreciated.

## ABSTRACT

Online Synchronised Entertainment System or simply JOYTIME is a web-based application which is developed for the purposes of entertainment ultimately. An entertainment website displays several types of media like texts, music, and video. There are lot of them but usually, each website consists of one particular media. As a prime example, we have Wattpad which provides online books for its users, Viu and Netflix for its users to watch dramas, movies, and television show. Therefore, the users need to make an account for each website for different type of media. A video watcher needs to change for another website to be a reader for a book. YouTube which provides better functionality presentation which show two types of media which is video and music. The question is, what if there are three types of media in one website? Briefly, JOYTIME is a website which provides three types of media in a same website. Feel like reading book, change to book directory, feel like listening to music, go to music directory with a click. This system is built with Sublime Text 3 and Laragon. All the codes were coded in the Sublime Text 3 which is a shareware cross-platform source code editor natively supports many programming and markup languages, functions can be added by users with community-build plugins and maintained under free-software licenses. Laragon is a universal development environment that is lightweight, isolated, quick, and powerful for multiple language like PHP, Node.js, Python, Java, Go, and Ruby. This website will grant the users more leisurely approach to multiple type of media for relaxing and entertaining themselves.

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## ABSTRAK

Sistem Hiburan Diselaraskan Atas Talian atau JOYTIME adalah satu aplikasi berasaskan web yang dibina terutamanya untuk tujuan hiburan. Sebuah laman sesawang hiburan akan mempamerkan beberapa jenis media seperti teks, muzik, dan video. Laman sesawang seperti ini banyak didapati di internet tetapi biasanya, setiap satu laman sesawang mempunyai satu jenis media sahaja. Sebagai contoh. Wattpad menyediakan buku-buku secara atas talian untuk penggunaannya, Viu dan Netflix adalah untuk penggunaannya menonton drama, filem dan siaran televisyen. Oleh itu, setiap pengguna perlu mencipta satu akaun untuk setiap satu laman sesawang yang mempunyai jenis media yang berbeza. Seorang penonton video perlu beralih ke laman sesawang yang lain untuk menjadi pembaca buku. YouTube menyediakan fungsi yang lebih baik dengan menyediakan dua jenis media iaitu video dan muzik. Persoalannya, bagaimana jika ada suatu laman sesawang dengan tiga jenis media sekaligus? Sistem Hiburan Diselaraskan Atas Talian adalah suatu laman sesawang yang menyediakan tiga jenis media sekaligus. Pengguna boleh memilih untuk menonton video, mendengar muzik dan membaca buku hanya dengan satu ketik. Sistem ini dibina dengan Sublime Text 3 dan Laragon. Seluruh kod diprogramkan di Sublime Text 3, sebuah penyunting kod sumber perisian perkongsian rentas-platform yang berfungsi menyokong pelbagai bahasa pengaturcaraan dan bahasa penanda, fungsi boleh ditambah oleh pengguna dengan pemasangan binaan komuniti dan ia dikekalkan dibawah lesen perisian percuma. Laragon adalah sebuah persekitaran pembinaan universal mudah alih, terasing, cepat dan berkuasa untuk pelbagai bahasa perisian seperti PHP, Node.js, Python, Java, Go, dan Ruby. Laman sesawang ini akan memberikan penggunaannya pendekatan yang lebih selesa dan mudah untuk pelbagai jenis media sekaligus untuk menenangkan diri dan berhibur.

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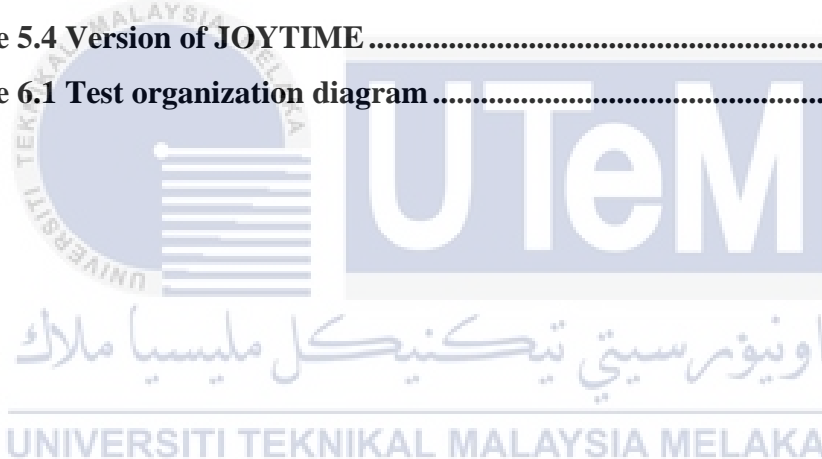
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**LIST OF ABBREVIATIONS**

**FYP** - **Final Year Project**



**LIST OF ATTACHMENTS**



## CHAPTER 1: INTRODUCTION

### 1.1 Introduction

JOYTIME is a website used for entertainment purposes such as Netflix, Tonton and Viu. JOYTIME will enable the admin to upload the contents. JOYTIME shall presents 3 types of entertainment. Those are video, music and book. Basically, there are two user, admin, and client. The admin will upload all the contents for the client. The client can rate the contents based on their satisfaction. Both admin and client have to login into their respective account to use the system. The rated content will have ranking to show the most popular contents based on the types and categories.

### 1.2 Problem Statement

People must change websites to look for according to types of entertainment they want.

- Not all people can remember the name of every other website for them to find the entertainment.
- User of entertainment websites do not want to wait for long connection time with other websites that most probably from different server.
- Every time a user wants to use the websites, they have to login to every website when they change.

### 1.3 Objective

1. To create a combined entertainment website, providing simpler approach to users.
2. To investigate the satisfaction and effectiveness of a combined entertainment to user.
3. To provide simpler way of user to have their entertainment on only one website.

### 1.4 Scope

Basically, there are two users for the system and six modules developed in the system.

#### 1.4.1 Users

- Admin

Admin is the user that will manage most of the contents in the system as add, edit, and delete any content. Admin also capable of receiving feedbacks and replying to them, view users.

- Client

Client is the end-user for the system, like a customer, they can view the contents, rate, and update their profiles. As client can be categorised to two which are registered and non-registered, an unregistered client can only send feedback to the admin.

#### 1.4.2 Modules

- i. Authentication

Authentication module is used by both users to be validate and verified into the system. The user needs to register as a first-time user. The users

that have registered as users will need to enter username and passwords to be verified. The logout function which kills the session of a particular user also considered in this module.

ii. Profile

Profile module is used by both admin and client. This module functioned as biodata editor for the users, generally for them to update their information, and update their profile picture into their personal profiles.

iii. Rate and Rank

Rate and rank are for the client and system functionality. The client can rate the content by clicking on 'LIKE' button for each content. After the rating is given the clients, the system will automatically calculate the total amount of rating for each content and can be rank as in sorting by rating.

iv. Content Management

Content management is the main function for admin to add, update, or delete the content from the system. The user can view the content by type in form of list.

v. Password Recovery

Password recovery is a module used by both admin and client. When the user unable to login their account because the forgot the password, this module will send them a link to change their password though email.

vi. Client Management

Client management is used by the admin. The admin can view the list of users, freeze any user, or kick them if they have been inactive for a long time.

vii. Friend

Friend module is used by the client. The client can view the profile of another user and add them as friend in JOYTIME called JoyMate. Client can also remove the user from their friend list.

viii. Chat

Chat module is used by the client. The client can create conversations with another user than they have add as friend.

ix. Share Moment

Share Moment module is used by client. The client can share their thoughts by posting them on the post board. They can add or delete the post. Client can also share any content as recommendation to their moments. Every post can be commented.

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## 1.5 Project Significance

The significance of this project is when there is a website that can provides more media which means, more utility to the user, there should easier for them to enjoy their time without waiting so much for another browser to load just because they want to rad book from watching video or watching video from listening to music. JOYTIME shall ease its user by displaying its most charming qualities which is the availability of three types of media compared to the other websites.

## 1.6 Expected Output

This project shall have the user to find their favourite kind of entertainment just in one website either it is the videos, or music or books, they shall find it if it has



been added to the database. The user does not have to remember lots of other kind of website name to change their favourite kind of entertainment,

## 1.7 Conclusion

JOYTIME is introduced for more leisurely and easy for the user to do any of their favourite media content. This system is expected to be find on the website and have no specific restrictions to any users.



## **CHAPTER 2: LITERATURE REVIEW AND PROJECT METHODOLOGY**

### **2.1 Introduction**

This section will be focusing on the details and expectations on the subject and the new scheme related to the project. After several findings and research, the outcome of the brainstorming would be set as criteria for the project. This section includes project methodology and project specifications which include the requirements for software and hardware. The final chapter will represent the timetable and milestones of the project.

### **2.2 Facts and Findings**

Fact and finding are involved with the data gathering process. Information finding included in this section is the finding and research from several published application and analysis related to this project. This approach is simply straightforward due to accessible data on the internet which did stir up the curiosity on considering the true, best, and relevant information from most of them. A divergence of all the details would be deemed after the gathering of facts and evidence.

#### **2.2.1 Domain**

JOYTIME is built for website which consist of two users, admin, and client. The web domain is more practical and universal for both admin and clients.

#### **2.2.2 Existing System**

This section reviews the existing website of application that similar in terms of the project idea mostly used by target audience.

### 2.2.2.1 Wattpad

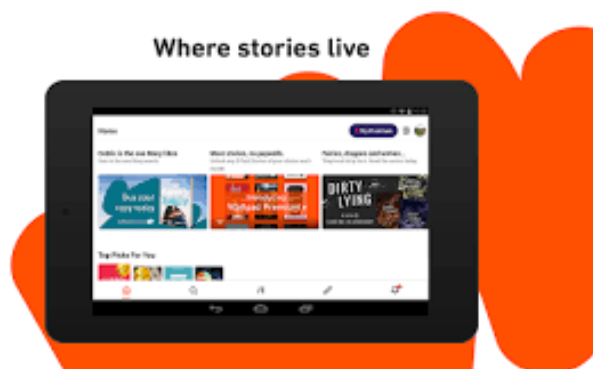


Figure 2.1 Wattpad



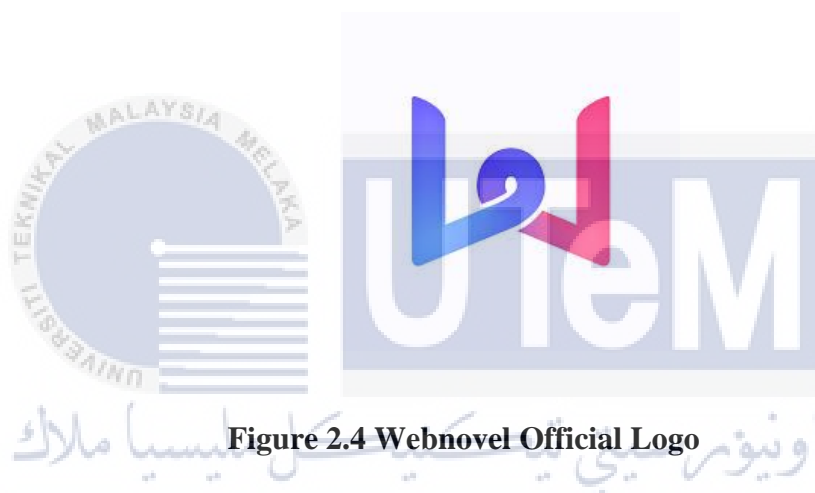
Figure 2.2 Wattpad Official Logo

Wattpad is a social storytelling platform where users connect with user's favourite writers, read, and write original stories. Wattpad works on both web-based and native mobile application which mainly purposed as online book reading platform for every book lover with multiple categories, genre, and language on its platform. Wattpad presents numerous amounts of novel which is attainable from the user themselves who writes on the platform only. There is no book from outside sources like physical one in the application, all the novels are solely written by the user of in the apps. Research found 85% of Wattpad's 45 million-plus readers are between the ages of 13 and 30. 50% are under the age of 18 (internetmatters.org, June 10<sup>th</sup>, 2020).

### 2.2.2.2 WebNovel



**Figure 2.3 Webnovel**



**Figure 2.4 Webnovel Official Logo**

Webnovel is a free software that allows users to read a variety of books from various genres. While user may read the novels without creating an account, it is recommended that you create an account and log in to fully enjoy the program. A user can also write their own stories, pretty much as Wattpad. Webnovel is available as android application and web site. User can have done payment for a better service with various feasibilities to read the books.

### 2.2.2.3 Netflix



Figure 2.5 Netflix



Figure 2.6 Netflix Official Logo

Netflix is a subscription-based streaming service that allows the registered users as members to watch numerous TV shows and movies. Same as Wattpad, Netflix works with any internet-connectable device mainly for computers and mobile. Netflix provided immense number of videos with multiple categories, genres, and languages from various countries. The movies included in Netflix are from cinema top movies, best tv shows even Netflix original movies.

### 2.2.2.4 Viu



Figure 2.7 Viu



Figure 2.8 Viu logo

Viu is a streaming service that allows the users to watch various drama series, short films and reality shows without registering into the system. The website works on any internet-connected device. Appears as the same as Netflix, Viu provides immense number of videos with multiple categories, genres, and languages from Malay, Korean, Tamil, Bollywood, Thai, Japanese, Chinese, Indonesian, and other Asian Movies.

### 2.2.2.5 Spotify

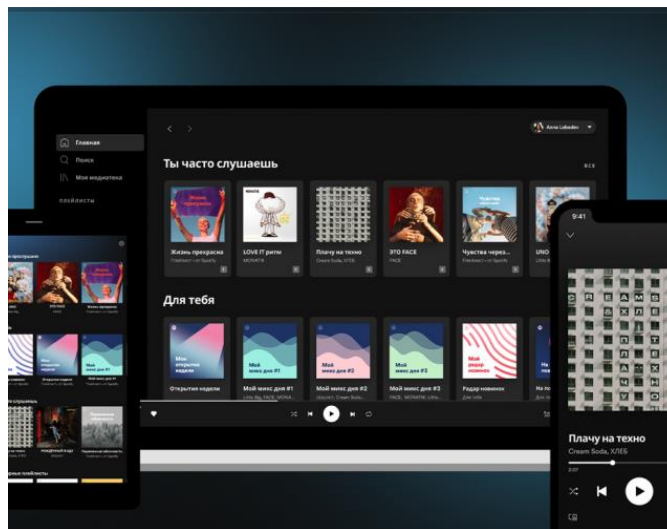


Figure 2.9 Spotify



Figure 2.10 Spotify Official Logo

Spotify is a music, podcast, and video streaming service that offers users access to millions of songs and other material from around the world. Basic services, such as playing music, are free, but users may subscribe to Spotify Premium for a fee with more service. Spotify is a streaming music service that may be accessed via a website or a mobile app. It allows users to search for and play music, albums, and podcasts across a data or Wi-Fi network. Users may also make playlists, store favourite songs to a library, and even download songs to their devices so they can enjoy while they are offline.

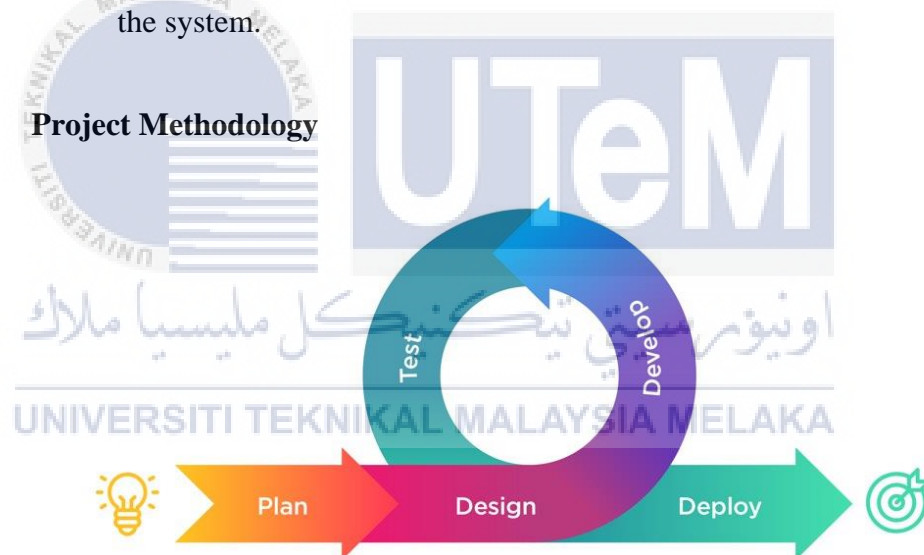
### 2.2.3 Technique

Several techniques that I have been applied to identify the problems and comes up with idea is listed below.

- Observation – Observation was carried out during the use of the system itself, finding what good about it what not, then idea about how to overcome it derive from various observation on various system.
- Conversation – Conversation is done just by asking for opinion of someone, hearing their thought about the current system.
- Research – Research is applied by searching on the internet and other relevant sources about the currents system, trends, and requirements for the system.

2.3

### Project Methodology



**Figure 2.11 Agile model**

Project methodology that I have been used during the progress of this system is Agile Software Development Cycle. Agile is the contradictory of the Waterfall method. As the name implies, this method favors a fast and flexible approach to achieve the goal. There are no fixed stages in the method, it provides more freedom to experiment on the system and incremental changes. Thus, this method is suitable for more creative and innovative ideas to be added. By referring on the figure 2.11, there are seven main stages started with planning.



Within planning stage, I have been finding the information and creating the general idea for the system to be develop. Second is design stages where I started designing the ERD, flowcharts, and the interface design for the user by sketch. Third is develop stage where I started the programming of the system by part and connection to the database.

The fourth stage is test where I test the completed part to see the result. If the part does not seem to reach the result I wanted or there is something less about it, I will de redesigning it which, go back to the design stage and it will keep looping on design stage, develop stage and test stage until I finally satisfied with the result then, the final stage, deployment stage will be done where I can deliver the completed system as the final product for presentation.

Today, enterprises need a high level of software competency to deliver exceptional digital experiences in a hypercompetitive world. And they need to attract and keep great talent to build great software. Agile development helps enterprises do both. (Sacolick, 2020)

## 2.4 Project Requirements

To develop this project, the system will need several requirements which will be detailed in this section.

### 2.4.1 Software Requirements

- Sublime Text 3 – A shareware cross-platform source code editor for implementing the codes.
- Laragon - A universal development environment localhost server for compiling to native code so they run much faster than Docker & Virtual Machines.
- Draw.io - Diagrams.net which is formerly known as draw.io, is a free online diagram software for designing flowcharts, ERD, etc.

## 2.4.2 Hardware Requirements

- Laptop – The main hardware which is used for the whole project including early design of system, research, and analysis, ERD making, flowcharts, coding, compiling, making report.

## 2.4.3 Other Requirements

Other requirements that needed aside from the software and hardware is:

- Internet Access

## 2.5 Product Schedules and Milestones

Activity / Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.0 Proposal Preparation	■	■													
1.1 Proposal Submission															
1.2 Proposal Amendment															
2.0 Planning			■												
3.0 Requirement Gathering and Analysis				■	■										
4.0 Design						■									
5.0 Implementation								■	■	■	■				
5.1 Develop Source Code								■	■	■	■				
5.2 Integration											■	■			
6.0 Testing													■	■	
6.1 Integration Testing													■	■	
6.2 System Testing													■		
7.0 Project Demo and Repair													■	■	■
8.0 Final Presentation PSM 1															■

Figure 2.12 Gantt Chart

By figure 2.12, the Gantt chart I have developed, I have distributed my workload by division to ease the work accordingly by the deadline for each task. This way, I can reduce stress while keep moving with the progress of the system until the end of the semester. Each division have been calculated and personally arranged for from my best time to approach the system at the right time with the right mood. A wrong choice or arrangement for Gantt chart won't be useful as the Gantt chart is not worth following.

## 2.6 Conclusion

This chapter discuss and analyze about the existing system in the market that give the information to users. Other than that, this chapter also stated about the domain of this project and the methodology that is used to develop this project. The next chapter will discuss more details about requirement analysis which consist of project requirement, software requirement and hardware requirements.



## CHAPTER 3: ANALYSIS

### 3.1 Introduction

This chapter will address the topic and evaluation of specifications of the new program. The strategy at this appraisal point is to define the issue and to grab from the existing scheme and all the relevant criteria that should be improved. It will have some illustrations to demonstrate how the new program operates. This section would review some of the practical criteria as well as other non-functional ones and all the things needed to build the system.

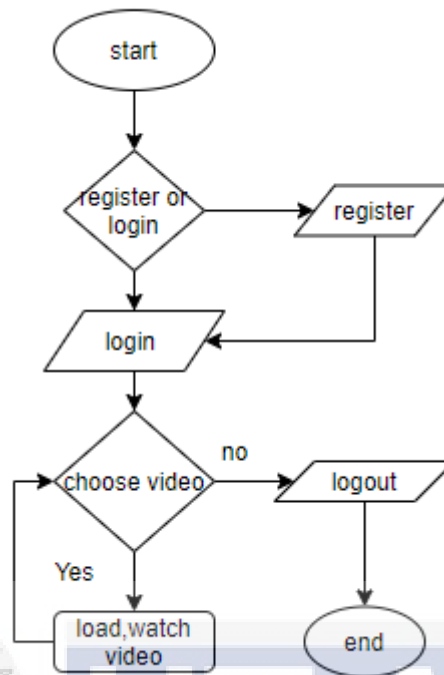
### 3.2 Problem Analysis

In problem analysis, we will investigate the issue, the cause of it and how to solve the problem. This is done to identify improvements to systems, processes, procedures, designs and culture to fulfil none other but the requirements of users.

This section will elaborate the existing problems that existed in the current system. The current approach needs more movement and shifting over websites thus more time needed to go to another page.

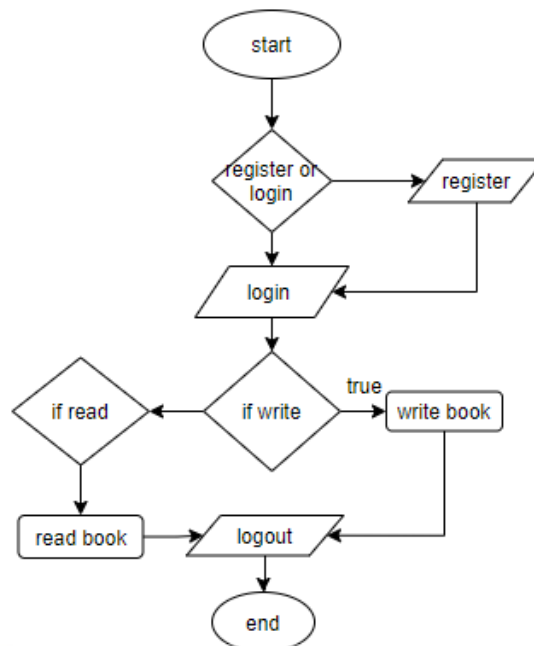
- i. Changing to another website need more time to click and type on the name, including waiting for it to respond.
- ii. Sometimes people tend to forget a website they have used to enjoy the content like unpopular video, music, or book sites.

### 3.2.1 Overview of current system



**Figure 3.1 Video website flow**

Generally, an entertainment website with one type media could only have a simple flow as shown in both above figures. Based on figure 3.1, it shows the flow of a video website based on Netflix. The user will be entering the system by login as member, but if they a first timer, the user needs to have an account by register. There are also several websites that does not need to register like Viu. Right after entering the system, the user can choose the video they want to watch, until finally, the stop watching logout or just went out by closing the websites. Thus, the flow ends there.



**Figure 3.2 Book Website flow**

For figure 3.2 which shows a book website flow based on Wattpad. The user will have login into their account or register as a new user. Upon entering the system, the user can either write their own novel or read other people novel, they can continue reading until they want to stop and go out from the system thus marked their end of flow.

### 3.2.2 Proposed System

As people love a simple with more functionality, these websites can be further improvised. When a website can contain more than just one media entertainment, it can provide more leisurely use and reduce more time than changing to another website.

#### 3.2.2.1 Proposed System Structured (Module Description)

There are nine modules in total that have been proposed:

- i. Authentication

Purpose: To enable authentication process for the users.

Definition: This module will be used by both client and admin. The function included is login, logout, and register.

ii. Profile

Purpose: To enable the user to edit their own information.

Definition: This module will be used by admin and client. The module enable user to update their biodata.

iii. Rate and rank

Purpose: To enable rating for the content and rank them based on rating.

Definition: This module will be used by client only. The user can click on a like button and the amount of like on the content will be count as rate and the rate will automatically rank the content in user's sorting section.

iv. Content Management

Purpose: To enable management on the content.

Definition: This module will be used by the admin. The admin can insert, update, or delete any content with this module. The user also can insert new categories into the system for filter.

v. Password Recovery

Purpose: To enable the user rewrite new password and cannot login.

Definition: This module will be used by admin and client. The user can click on the forgot password to receive a link for changing their password to a new one.

vi. Client Management

Purpose: To enable the viewing of the client.

Definition: This module will be used by admin. The user can view the list of clients in the system, suspend their account or even kicked them after being inactive for a long time. The user can also receive feedback from the clients and reply to their emails.

## vii. Friends

Purpose: To enable friendly interaction with other users by adding as friends in the system.

Definition: This module will be used by client. The user can add another user as their friend called Joymate. They can view the list of Joymate and can remove them from the list.

## viii. Chat

Purpose: To enable conversation with another user.

Definition: This module will be used by the client. The user can have a conversation with Joymate in the system.

## ix. Share Moment

Purpose: To enable interaction between all users.

Definition: This module will be used by client. The user can create a moment on the post board in the system. They can add another as much as they want and can delete them. The user can also share the contents they like to their moments. Every moment can be commented by other users.

### 3.3 Requirement Analysis

This section covers elaboration on analysis of data requirements, functional requirements, and non-functional requirements.

#### 3.3.1 Data Requirement

Every time a data is being inserted. The type and attributes of it must be set to avoid confusions on the database and make it easier to be called anytime in the system. Table 3.1 displays the list of modules with the specified data input that are used in the system.

**Table 3.1 JOYTIME modules**

Module	Function	Data Input	Data Output	Data stored



Authentication	Register	Enter information of the user as username, email and etc.	The user will see successful register message.	All user's input data in the registration form.
	Login	Enter the username and password.	The user will see successful login message and send to profile page.	No data is stored.
	Logout	No data input.	Successful logout message and sent to the main page.	No data is stored.
Profile	Edit profile	User input their information they want to update at their biography.	Successful update message popup.	The information updated in the form is updated.
Rate and rank	Rate	No data input.	The like message popup.	The count of rate for the content will

				be added into the database.
	Rank	No data input.	The system will display the rank the content with highest rating first.	No data stored.
Content management	Add	Admin enters the data of the content to be inserted.	The system will display successfully added popup message.	The content data is stored, and the file of the content will be saved in system folder.
	Update	Admin enters the data to be updated about the content.	The system will display successfully update popup message.	The content data is updated, and the file of the content will be saved in system folder.
	Delete	No data input.	The system will display	

			successfully delete popup message.	No data stored.
Forgot password	Verify username	User enters their username.	The system will send a link to their email.	No data stored.
	Change password	User enters their new password.	The system will send the user to main page after a success password change message.	The new password will be updated.
Client management	View User	No input data.	The user will see the list of the user.	No data stored.
	Reply feedback	The user will input the message to be replied to the client that send the message.	Successful send popup will be displayed.	No data stored.

	Freeze or Activate Account	No input data.	The successful suspend or activate popup appear.	The status of the user will be updated in the database as freeze or active user.
	Kick user	No input data.	Successful delete user message will be displayed.	No data stored.
Friends	Add user as friend	No input data.	The user successfully adds another user as friend.	The added friend data will be stored in database.
	Remove user from friend	No input data.	The user successfully removes another user from the friend list.	The removed friend data will be update in the database.
Chat	Start conversation	No input data.	The user will be redirected to the chat page after	No data stored.

			choosing the friend they want to chat with.	
	View conversation	No data input.	The user can view the conversations between him/she with another user.	No data stored.
	Enter Conversation	User will input conversation to chat with each other.	The chat will be successfully sent to the chat.	The input conversation is saved to database.
Share moments	View moment	No input data	The user can see the moments by another users.	No data stored.
	Add moment	The user will input data to be post in the moment.	The moments will be shared to the moment board.	The moments data will be stored in the database.

	Delete moment	No input data.	The post will be successfully deleted.	The moments data will be deleted from the database.
	Recommend content	No input data.	The content that is shared will be added to the moment board.	The input data will be stored in the database.
	Comment	The user will input data to comment on the particular post.	The comment will appear at the comment box.	The comment will be updated in the database.

**Table of data process**

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### 3.3.1.1 Data Dictionary

- Admin

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(2)		No		auto_increment			
password	varchar(20)		No					
username	varchar(50)		No					

**Table 3.2 Admin table**

- Book

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
book_id	int(2)		No		auto_incre ment			
book_title	varchar(100)		No					
book_link	varchar(150)		No					
author	varchar(100)		No					
publisher	varchar(100)		No					
upload_date	varchar(20)		No					
update_date	datetime		No	CURREN T_TIMES TAMP				
category	varchar(20)		No					
genre	varchar(20)		No					
language	varchar(20)		Yes	NULL				
description	varchar(300)		No					
rating	int(5)		Yes	NULL				

Table 3.3 Book table

- Bookrate

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
book_id	int(5)		No			-> book.book_id ON UPDATE RESTRICT ON DELETE RESTRICT		
userid	int(3)		No					

Table 3.4 Bookrate table

- Category

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
category_id	int(3)		No		auto_incre ment			
category_name	varchar(20)		No					
type_id	int(1)		No			-> type.type_id ON UPDATE RESTRICT ON DELETE RESTRICT		

Table 3.5 Category table

- Chat

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
friend_id	int(3)		No					
chat_message	varchar(500)		No					
chat_date	datetime		No					

**Table 3.6 Chat table**

- Comment

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
comment_id	int(3)		No		auto_increment			
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
post_id	int(3)		No			-> post.post_id ON UPDATE RESTRICT ON DELETE RESTRICT		
comment	varchar(200)		No					
comment_date	datetime		No					

**Table 3.7 Comment table**

- Feedback

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(3)		No		auto_increment			
name	varchar(100)		No					
email	varchar(100)		No					
subject	varchar(40)		No					
content	varchar(300)		No					
send_date	datetime		No	CURRENT_TIMESTAMP				

**Table 3.8 Feedback table**

- Friend



Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
friend_id	int(3)		No					

**Table 3.9 Friend table**

- Genre

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
genre_id	int(3)		No		auto_in- crement			
genre_name	varchar(20)		No					
type_id	int(1)		No			-> type.type_id ON UPDATE RESTRICT ON DELETE RESTRICT		

**Table 3.10 Genre table**

- Language

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
language_id	int(3)		No		auto_in- crement			
language_name	varchar(20)		No					
type_id	int(1)		No			-> type.type_id ON UPDATE RESTRICT ON DELETE RESTRICT		

**Table 3.11 Language table**

- Music

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
music_id	int(2)		No		auto_incremen t			
music_title	varchar(100)		No					
music_link	varchar(150)		No					
artist	varchar(50)		No					
publisher	varchar(50)		No					
language	varchar(20)		No					
category	varchar(20)		No					
genre	varchar(20)		No					
upload_date	varchar(20)		No					
update_date	datetime		Yes		CURREN T_TIMES TAMP			
rating	int(5)		Yes		NULL			

**Table 3.12 Music table**

- Musicrate

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
music_id	int(2)		No			-> music.music_id ON UPDATE RESTRICT ON DELETE RESTRICT		
userid	int(3)		No					

**Table 3.13 Musicrate table**

- Playlist

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
type_id	int(3)		No			-> type.type_id ON UPDATE RESTRICT ON DELETE RESTRICT		
content_id	int(3)		No					
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
save_date	datetime		No					

**Table 3.14 Playlist table**

- Post

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
post_id	int(3)		No		auto_increment			
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
content	varchar(300)		No					
picture	varchar(150)		Yes	NULL				
post_date	datetime		No					

Table 3.15 Post table

- Type

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
type_id	int(1)		No		auto_increment			
type_name	varchar(12)		No					

Table 3.16 Type table

- User

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
userid	int(3)		No		auto_increment			
username	varchar(20)		No					
password	varchar(20)		No					
firstname	varchar(15)		No					
lastname	varchar(15)		No					
birthday	varchar(20)		Yes	NULL				
email	varchar(40)		No					
biography	varchar(300)		Yes	NULL				
profilepic	varchar(100)		Yes	NULL				
status	varchar(10)		No					
date_register	date		Yes	NULL				
last_active	date		Yes	NULL				

Table 3.17 User table

- Video

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
vid_id	int(2)		No		auto_incre ment			
vid_title	varchar(100)		No					
vid_link	varchar(150)		Yes	NULL				
image	varchar(100)		Yes	NULL				
publisher	varchar(50)		No					
summary	varchar(300)		No					
upload_date	varchar(20)		No					
update_date	datetime		Yes	CURREN T_TIMES TAMP				
category	varchar(20)		Yes	NULL				
genre	varchar(50)		No					
language	varchar(20)		Yes	NULL				
rating	int(5)		Yes	NULL				

**Table 3.18 Video table**

- Videorate

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
vid_id	int(5)		No			-> video.vid_id ON UPDATE RESTRICT ON DELETE RESTRICT		
userid	int(3)		No					

**Table 3.19 Videorate table**

### 3.3.2 Functional Requirement

This section will specify the functions of the system, how it records, compute, trans- forms, and transmits data. Basically, the requirements divided by the modules. Table 3.2 displays the functional requirements table which consist of the division by module, the functional requirements, id, and the description for each requirement.

**Table 3.20 Functional Requirements Table**

Module	Functional Requirement	FR ID	Description

Authenticate	Login	FR01	The user shall login into the system by inserting their username and password. The system will verify the data and if it is valid, the user will be brought to the user's homepage and the session start. If the data is wrong, error box will be displayed.
	Register	FR02	A first-time user will have to register before entering the system. The user will be prompted to insert their basic credentials including username and password. The password will first be checked to be the same with the confirmation password inserted before fully process into the database.
	Logout	FR03	The user that clicks to the logout button will be send to the homepage and their session will be destroyed.
Profile	Edit profile	FR04	The user can edit their profile at the profile page or home page for user after log in. They can update almost all credential during register and cad upload their image or change their password. The data that about to be updated is Null thus the user does not have to update everything. The username can be updated but the system will be checked either the new username has been used by another user or not.

Rate and rank	Rating	FR05	The client can rate their liked content, like movies or music or books by clicking the like button. The system will update the id of the user and the content id that they liked into the database,
	Ranking	FR06	The rating that given by the user will be processed by the system to rank the content when the user tries to sort by rating.
Content Management	Add content	FR07	Admin can insert new content by inserting the information and the file. The file must follow the prepared format, or it will be rejected. The succeeded attempt will be kicked in the data into database and save the content file in specific folder in the system file.
	Update Content	FR08	An admin can update the information of the added content or even change the content file itself. The system will do the checking for either the file is there or not, the system will delete the old file and be replaced with the new one.
	Delete Content	FR09	A content can be deleted by admin by clicking delete button. The admin will be asking once again before the content be deleted once for and for all.
	Retrieve link	FR10	The user will insert their username in a form then the system will search the

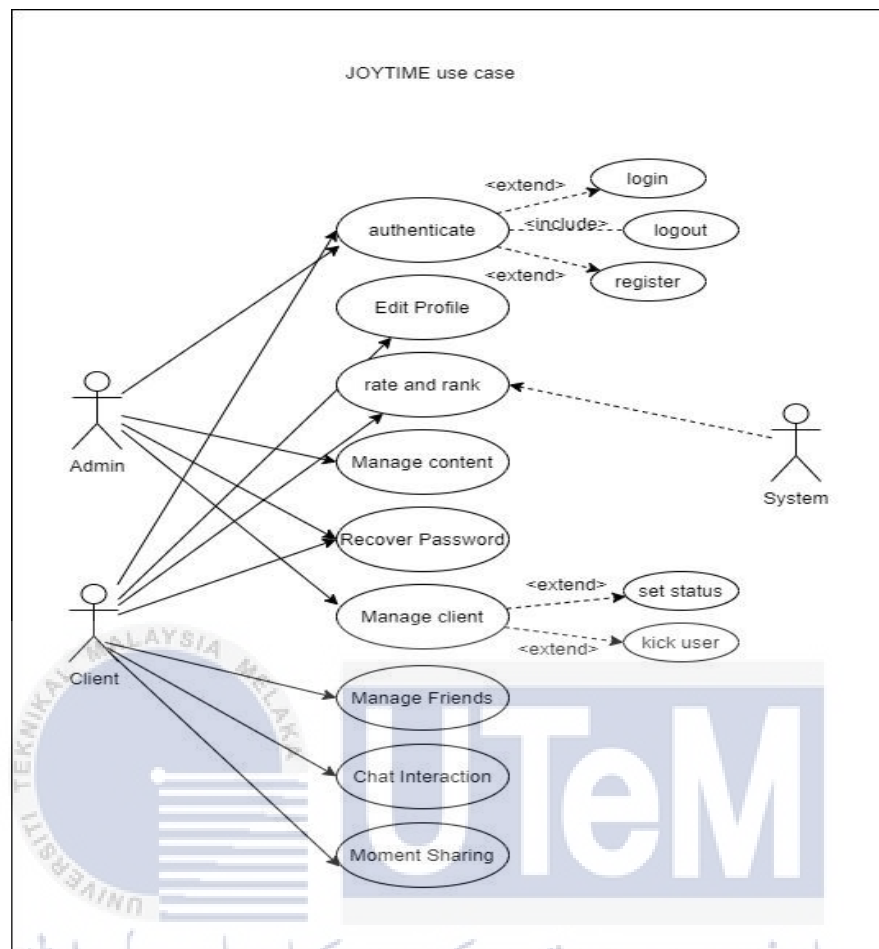
Password Recovery			email of the username and send a link to change password page.
	Change Password	FR11	The user will click on the link and send to the change password page. The user can change their password and the system will automatically update the password into the database.
Client Management	View User	FR12	The admin can view the user is the form of list which sorted by the system.
	Set Status	FR13	The list of users will have a status button. The admin can click on the button. If admin pushed on a 'active' button, the system would prompt to freeze the account. If the admin clicks on the 'freeze' button, the button will reverse the freeze, making the user active again.
	Delete User	FR14	If the admin clicked on an inactive button, the user will be kicked from the database forever. This user usually has been not using the system for a long time so the system will calculate the duration of they are not being active and if it's too long, the stasis will be automatically changed to inactive.
	Reply Feedback	FR15	The admin can reply the feedback received from the user. The admin click on the reply button and the system will prompt the admin to insert a reply message. The system will then send the

			confirmed message to the email of the specific user.
Friends	Add user as friend	FR16	The client can add another user by clicking on the “add Joymate” button on the specific user page. The system will notify the user when the add is successful. The user will be directed to the profile page.
	Remove user from friend	FR17	The client can remove a friend from the friend list by clicking on the “remove Joymate” on the friend’s profile page. The system will notify when the removal is success. The user will be redirected to the profile page.
Chat	Start conversation	FR18	The client can click on chat button on the top bar and choose one of their friends to chat with. The user will be redirected to the chat page after choosing.
	View conversation	FR19	The client can view the conversation of between the client and the friends.
	Enter Conversation	FR20	The client can input message to the input box and click on send to send the message. The message will appear on the chat box area.
Share moments	View moment	FR21	The client can view the moment posted by other user on the moment board on user index page.



	Add moment	FR22	The client can add new moment on the moment board by clicking on “+” icon on the moment board either at index page or profile page. The system will add the new moment to the moment board when the post is succeeded.
	Delete moment	FR23	The client can delete their own posted moment by clicking on trash icon on the posted moment on their profile page. The moment will be deleted the user confirms the deletion.
	Recommend content	FR24	The client can share the content from video, music, or book to the moment board by clicking on share button on each content page as recommended content.
	Comment	FR25	The clients can put comment in comment box for all post in the moment board.

### 3.3.2.1 Use Case Diagram



**Figure 3.3 Use case diagram for JOYTIME**

Based on figure 3.16, the use case diagram shown the overview for the system. JOYTIME will have three actor which are client, Admin and system. There are nine main use case which each represents each module. The name of the use case is as stated in the diagram and the specification will be explained later in use case specification section.

### 3.3.2.2 Activity Diagram

#### (a) Admin

Admin is the user that manage all the data for the contents which include videos, music, and books. Admin can add, update, or delete the content. The admin can kick, freeze or activate the account of a user. The admin can generate a report for general data of the system.

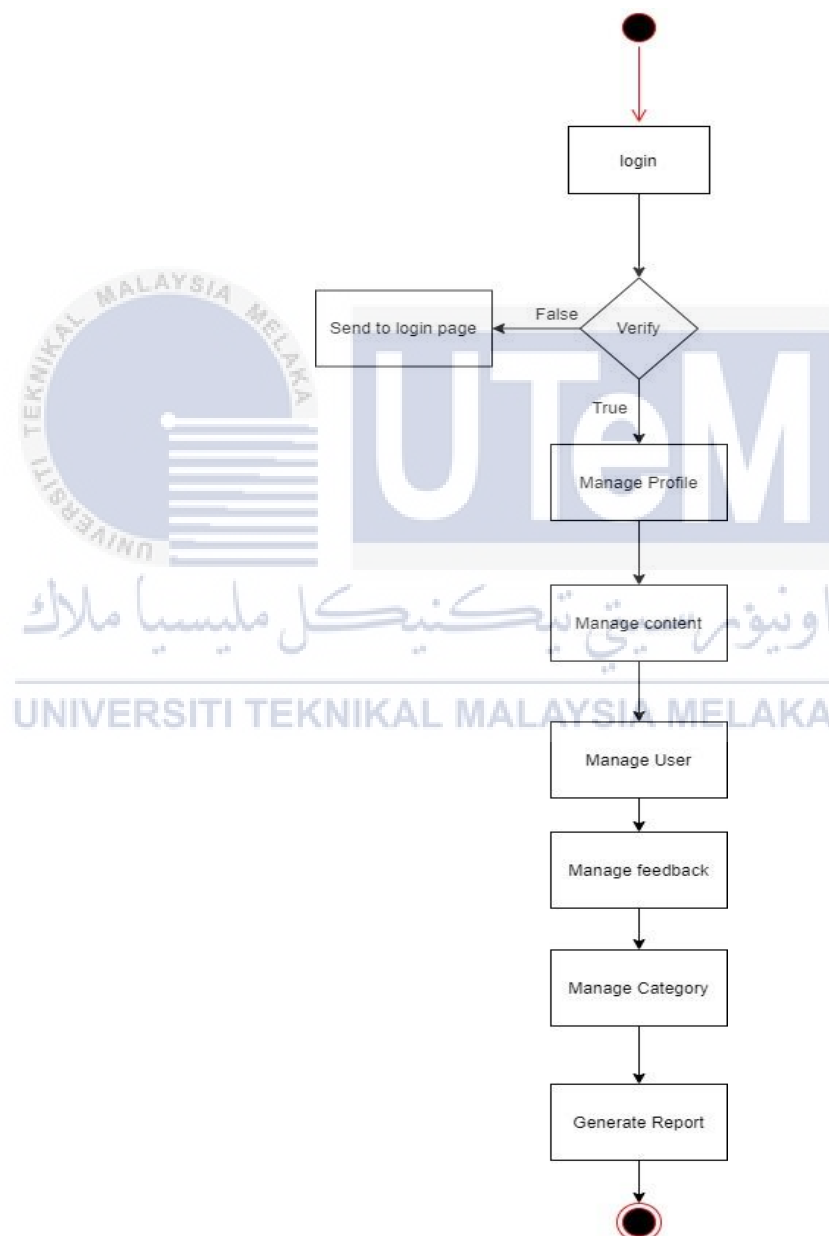
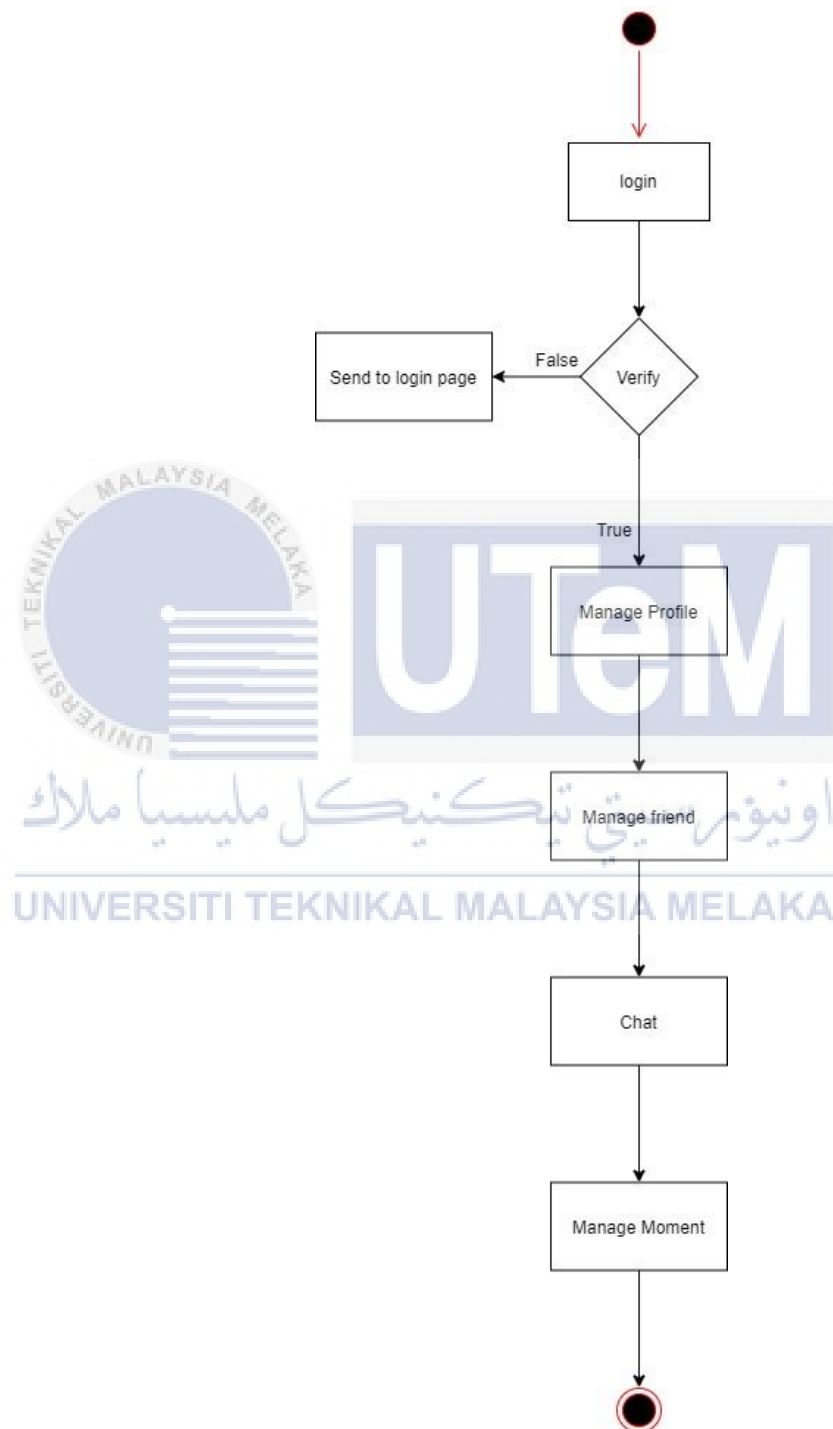


Figure 3.4 Admin activity diagram

(b) *Client*

Client is the end user that will use the system to watch the contents, manage profiles, add other user as friends, chat, and post moments.



**Figure 3.5 Client activity diagram**

### 3.3.2.3 Use Case Specification

In this section, we will specify the details for every use case mentioned in the previous section including the description, the condition before and after the use case, actors involved, the flow of event including the primary, alternative and exception event. Next, the ‘include’ and ‘extend’ use case also included in this section followed by the rules, constraints, and comments. Lastly, we provide the user interface for the use cases.

#### 3.3.2.3.1.1 Use case authenticate

**Table 3.21 Authenticate**

Use case ID	01
Use case name	Authenticate
Description	The use case describes the process of sign up, sign in and sign out.
Pre-condition	Enter username and password.
Post-condition	Successful login into the user account.
Actors	Admin, Client.
Flow of events	
Primary flow	<ol style="list-style-type: none"> <li>1. The actor will go click the sign in button at the main page or click to sign up button to register. [A1: Register]</li> <li>2. The actor will input their username and password into the login form.</li> <li>3. The system will verify the username and password. [E1: Verify login]</li> <li>4. The actor enters the main page of their account.</li> <li>5. The actor can click on logout button. [A2: Logout]</li> <li>6. End of use case.</li> </ol>
Alternative flow	<p>A1: Register</p> <ol style="list-style-type: none"> <li>1. The actor will input their credential into the registration form.</li> <li>2. The system will validate the information.</li> <li>3. The actor will be registered and go back to main page.</li> <li>4. The use case continues.</li> </ol> <p>A2: Logout</p> <ol style="list-style-type: none"> <li>1. The system will kill the session of the actor.</li> <li>2. The actor will be logged out from the system.</li> <li>3. The actor arrives at the main page.</li> <li>4. Use case continues.</li> </ol>
Exceptional flow	<p>E1: Verify login</p> <ol style="list-style-type: none"> <li>1. The system will display error message for failed attempt to log in.</li> </ol>

	2. The use case continues.
Include use case	1. Login 2. Register
Extend use case	1. Logout
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

## 3.3.2.3.1.2 Profile

**Table 3.22 Edit profile**

Use case ID	02
Use case name	Edit Profile
Description	The use case describes the process of the user to edit their profile.
Pre-condition	Log in into the system.
Post-condition	Successful update profile information.
Actors	Client
Flows of events	
Primary flow	<ol style="list-style-type: none"> <li>1. The use case starts when actor click on 'edit profile' button.</li> <li>2. The actor will fill the information form to according to the respective s information type that they desire to edit.</li> <li>3. The system will process the data to be edited. [E1: Verify Data]</li> <li>4. The profile of the actor will be updated.</li> <li>5. End of use case.</li> </ol>
Alternative flow	Not applicable
Exceptional flow	E1: Verify Data <ol style="list-style-type: none"> <li>1. The system will prompt an error message if the data cannot be updated.</li> <li>2. The use case continues.</li> </ol>
Include use case	Not applicable
Extend use case	Not applicable
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

## 3.3.2.3.1.3 Rate and rank

**Table 3.23 Rate and rank**

Use case ID	03
Use case name	Rate and rank
Description	The use case describes about the rating process and the ranking process.
Pre-condition	Log in into the system.

Post-condition	The rate and rank are implemented.
Actors	Client, System
Flows of events	
Primary flow	<ol style="list-style-type: none"> <li>1. The use case starts when actor click on the 'like' button.</li> <li>2. The system will update the number of rates of the content by increasing the rate to the content.</li> <li>3. The 'like' button turned to 'unlike'. [A1: Unlike]</li> <li>4. The actor will see the number of rating changes.</li> <li>5. The actor can go back to the main list page for the content.</li> <li>6. The actor can sort the content list. [A2: Sort by rating]</li> <li>7. The use case ends.</li> </ol>
Alternative flow	<p>A1: Unlike</p> <ol style="list-style-type: none"> <li>1. The actor can click on the 'unlike' button.</li> <li>2. The system will update the number of rates by decreasing it.</li> <li>3. The use case continues.</li> </ol> <p>A2: Sort by rating</p> <ol style="list-style-type: none"> <li>1. The actor chooses to sort by rating.</li> <li>2. The system will sort the content by highest rating at the top, basically like ranking the content.</li> <li>3. The use case continues.</li> </ol>
Exceptional flow	Not applicable
Include use case	Not applicable
Extend use case	Not applicable
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

#### 3.3.2.3.1.4 Content management

**Table 3.24 Manage content**

Use case ID	04
Use case name	Manage content
Description	The use case describes the process of managing the contents.
Pre-condition	Log in into the system.
Post-condition	The contents are implemented successfully.
Actors	Admin
Flows of events	
Primary flow	<ol style="list-style-type: none"> <li>1. The use case starts when the actor at any contents main list page.</li> <li>2. The actor will click on add, edit, and delete icon.</li> <li>3. If the actor clicks on add icon, the actor will go to the add content page.</li> <li>4. The actor will insert the data for a content into the form.</li> <li>5. The system will process the data. [E1: Verify added data]</li> <li>6. The content will be added to system.</li> </ol>

	<ol style="list-style-type: none"> <li>7. If the actor clicks on edit icon, the actor will go to the edit page.</li> <li>8. The actor inserts the data to be updated for the specified content.</li> <li>9. The system will process the data to be updated. [E2: Verify update data]</li> <li>10. The content information will be updated.</li> <li>11. If the actor clicks on the delete icon, the actor will go to the delete page.</li> <li>12. The actor will click on the delete button.</li> <li>13. The system will display a delete confirmation modal to confirm the delete.</li> <li>14. The actor can choose to click on delete or cancel [A1: Cancel] button.</li> <li>15. The actor will click on delete button.</li> <li>16. The system will delete the record and the data for the content.</li> <li>17. The use case ends.</li> </ol>
Alternative flow	<p>A1: Cancel</p> <ol style="list-style-type: none"> <li>1. The actor will click on the cancel button.</li> <li>2. The modal disappeared from the screen.</li> <li>3. The use case continues.</li> </ol>
Exceptional flow	<p>E1: Verify added data</p> <ol style="list-style-type: none"> <li>1. The system will prompt an error message if the data cannot be added.</li> <li>2. The use case continues.</li> </ol> <p>E2: Verify update data</p> <ol style="list-style-type: none"> <li>1. The system will prompt an error message if the data cannot be updated.</li> <li>2. The use case continues.</li> </ol>
Include use case	Not applicable
Extend use case	Not applicable
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

### 3.3.2.3.1.5 Password recovery

**Table 3.25 Recover password**

Use case ID	05
Use case name	Recover password
Description	The use case describes the process of the recovering the forgotten password.
Pre-condition	-
Post-condition	Successful change password.
Actors	Client, admin
Flow of events	



Primary flow	<ol style="list-style-type: none"> <li>1. The use case starts when the user clicks on forgot password button at the sign in page.</li> <li>2. The actor will be redirected to a forgot password page.</li> <li>3. The actor will enter their username into the form.</li> <li>4. The system will verify the username in the system. [E1: Verify data]</li> <li>5. The system will send a link to the email of the username.</li> <li>6. The actor will open their email and click the link.</li> <li>7. The actor will be redirected to a change password page.</li> <li>8. The actor will insert their new password to be change.</li> <li>9. The actor will reenter their new password for confirmation.</li> <li>10. The system will update the new password into the database after the actor submit the form.</li> <li>11. The actor is sent to the main page.</li> <li>12. The use case ends.</li> </ol>
Alternative flow	Not applicable
Exceptional flow	<p>E1: Verify data</p> <ol style="list-style-type: none"> <li>1. The system will display error message if the username is not found.</li> <li>2. The use case continues.</li> </ol>
Include use case	Not applicable
Extend use case	Not applicable
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

### 3.3.2.3.1.6 User management

UNIVERSITI TEKNOLOGI MALAYSIA MELAKA **Table 3.26 Manage user**

Use case ID	06
Use case name	Manage user
Description	The use case describes the process of managing the user.
Pre-condition	Login into the system.
Post-condition	Successfully implemented changes.
Actors	Admin.
Flows of events	
Primary flow	<ol style="list-style-type: none"> <li>1. The use case starts when the actor at the user list page.</li> <li>2. The actor will see the list of users with status button indicates the client's status.</li> <li>3. The actor can click to the 'active', 'freeze' or 'inactive' button.</li> <li>4. If the actor clicks the 'active' button, the button will turn to 'freeze' button.</li> <li>5. The system will set the client status from active to freeze.</li> </ol>

	<ol style="list-style-type: none"> <li>6. If the actor clicks the 'freeze button, the button will turn to 'active' button.</li> <li>7. The system will change the status of the client from freeze to active.</li> <li>8. If the actor clicks on the 'inactive' button, the system will prompt a message box to kick the client or not. [A1: Cancel]</li> <li>9. The actor will click on the confirm button.</li> <li>10. The system will delete the record of the client.</li> <li>11. The use case ends.</li> </ol>
Alternative flow	<p>A1: Cancel</p> <ol style="list-style-type: none"> <li>1. The actor will click on the cancel button.</li> <li>2. The message box will disappear.</li> <li>3. The use case continues.</li> </ol>
Exceptional flow	Not applicable
Include use case	Not applicable
Extend use case	<ol style="list-style-type: none"> <li>1. Set status</li> <li>2. Kick user</li> </ol>
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

### 3.3.2.3.1.7 Manage Friends

**Table 3.27 Manage Friends**

Use case ID	07
Use case name	Manage Friends
Description	The use case describes the process of managing friends in JOYTIME.
Pre-condition	Login into the system.
Post-condition	Successfully implemented changes.
Actors	Client.
Flows of events	
Primary flow	<ol style="list-style-type: none"> <li>1. The use case starts when the actor at the index page.</li> <li>2. The actor can see the profile picture on each moment posted by another user.</li> <li>3. The actor clicks on the profile picture and will be directed to the clicked user profile page.</li> <li>4. The actor can see either "add Joymate" button or "remove Joymate" button.</li> <li>5. If the user is not yet added as friend, the button will appear as "add Joymate", if the user is already added as Joymate, the button will appear as "remove Joymate".</li> <li>6. If the actor clicks on the "add Joymate" button, the system will display confirmation modal to confirm the process.</li> </ol>

	<ol style="list-style-type: none"> <li>7. The actor can click on “add” button, the system will update into friends table in database and a successful message will appear. [A1: Cancel]</li> <li>8. The actor will be redirected to his/her profile page.</li> <li>9. If the actor clicks on the “remove Joymate” button, the system will display a confirmation box to confirm the removal.</li> <li>10. The actor can click on “remove” button to confirm the removal and the system will update it in the database and finally display a successful message. [A1: Cancel]</li> <li>11. The actor will be redirected to the profile page.</li> <li>12. The use case ends.</li> </ol>
Alternative flow	<p>A1: Cancel</p> <ol style="list-style-type: none"> <li>1. The actor will click on the cancel button.</li> <li>2. The modal will disappear.</li> <li>3. The use case continues.</li> </ol>
Exceptional flow	Not applicable
Include use case	Not applicable
Extend use case	Not applicable.
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

### 3.3.2.3.1.8 Chat Interaction

**Table 3.28 Chat Interaction**

Use case ID	08
Use case name	Chat Interaction
Description	The use case describes the process of interacting with other user through chat function.
Pre-condition	Login into the system.
Post-condition	Successfully have a chat with another user.
Actors	Client
Flows of events	
Primary flow	<ol style="list-style-type: none"> <li>1. The use case starts when the actor is on any page of the website.</li> <li>2. The actor will click on the top bar and find a “chat” through a dropdown list.</li> <li>3. The actor clicks on the “chat” button.</li> <li>4. The system will display a modal with list of users that have been added as Joymate.</li> <li>5. The actor can click on the “chat” button beside the in each of the listed Joymate.</li> <li>6. If the actor clicks on the “chat” button, the actor will be redirected to the chat page. [A1: Cancel]</li> <li>7. The user chat views the conversation in the chat box area.</li> </ol>

	<ol style="list-style-type: none"> <li>8. The user can enter message to the chosen Joymate but entering message in the input box and click on the “send” button.</li> <li>9. The system will send the message to database to be stored and at the same time display it in the chat box.</li> <li>10. The use case ends.</li> </ol>
Alternative flow	<p>A1: Cancel</p> <ol style="list-style-type: none"> <li>1. The actor will click on the cancel button.</li> <li>2. The modal will disappear.</li> <li>3. The use case continues.</li> </ol>
Exceptional flow	Not applicable
Include use case	Not applicable
Extend use case	Not applicable.
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

### 3.3.2.3.1.9 Moment Sharing

**Table 3.29 Moment Sharing**

Use case ID	09
Use case name	Moment Sharing
Description	The use case describes the process of managing friends in JOYTIME.
Pre-condition	Login into the system.
Post-condition	Successfully implemented changes.
Actors	Client.
Flows of events	
Primary flow	<ol style="list-style-type: none"> <li>1. The use case starts when the actor at the index page.</li> <li>2. The actor can view the moment posted by another user.</li> <li>3. The actor can click on the “+” button to add a new moment.</li> <li>4. If the actor clicks on the “+” button, the system will display a modal for the actor to put their thoughts into the input box and picture to add.</li> <li>5. The user can click on the “post” button to confirm and send the moment to the moment board. [A1: Cancel]</li> <li>6. The system will store the data into database and display it on the moment board.</li> <li>7. The actor can delete their posted moment by clicking on trash bin icon on the profile page.</li> <li>8. When the actor clicks on the trash bin icon, the system will display a confirmation box.</li> <li>9. If the actor clicks on confirm, the system will delete the moment. [A1: Cancel]</li> </ol>

	<ol style="list-style-type: none"> <li>10. If the actor at any of content page, the actor can share about the content on their moment board by clicking on “share” button.</li> <li>11. If the user clicks on the “share” button, the system will kick the data into database as moment and post in on the moment board.</li> <li>12. The user can add comments to any moments that are posted by any user by entering the comments in the input box and click on “send” button.</li> <li>13. When the “send” button is clicked, the system will instantly update comment in database and display it in the comment box.</li> <li>14. The use case ends.</li> </ol>
Alternative flow	<p>A1: Cancel</p> <ol style="list-style-type: none"> <li>1. The actor will click on the cancel button.</li> <li>2. The modal will disappear.</li> <li>3. The use case continues.</li> </ol>
Exceptional flow	Not applicable
Include use case	Not applicable
Extend use case	Not applicable.
Rules	Not applicable
Constraints	Not applicable
Comments	Not applicable

### 3.3.3 Non-Functional Requirement

Non-functional requirements are those that specify criteria for judging a system's operation rather than specific behaviours, and requirements that impose constraints on the design or implementation, such as performance requirements, quality standards, security, or design constraints.

**Table 3.30 Non-functional requirement**

Requirements	Description
Usability	The system shall have simple interface, user-friendly navigation to each part.

Security	The system will be possessed basic standard of security to avoid sudden intrusion that possibly caused by outsider.  <ul style="list-style-type: none"> <li>- A session id for the each of the user pages.</li> <li>- A key id of a content for the specified page.</li> </ul>
Compatibility	The system is compatible on any laptop screen.
Capacity	The system store files should be able to store a lot of media files.

### 3.3.4 Other Requirement

This section will be showing the other requirements that can be considered essential in the system.

Table 3.31 Other requirements

Software	Hardware
Microsoft Windows 10	Personal Laptop
Sublime Text 3	
Laragon	RAM
Draw.io	

### 3.4 Conclusion

This chapter explains all the requirements gathered during the analysis process. Functional requirements, non-functional requirements, and data requirements have all been thoroughly discussed. All the analyses requirements will then be transferred to the design stage to produce all of the required designs, including database, software, and hardware design, which will be extensively discussed in the following chapter.



## CHAPTER 4: DESIGN

### 4.1 Introduction

Design is the transformation of an idea into a configuration, plan, and drawing that contributes to how the system appears to users. There are numerous aspects to design, such as the design of the user interface, the design of the system, and the design of the database stored in the system. All three designs are critical in defining how the system will function before it is implemented.

### 4.2 High-Level Design

High-Level design is concerned with the overall system design, as well as the system architecture and database design. The architecture diagram depicts the overall structure of a system, identifying the main components that would be developed for the product as well as the interfaces.

#### 4.2.1 System Architecture

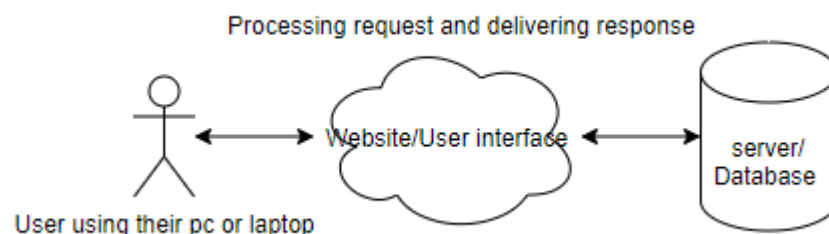


Figure 4.1 Web based two tier System Architecture.



Many clients can connect to the server application and request information from the server using the website as an intermediary in this client–server model. Based on figure 4.1, the server must process these requests and respond to the client who initiated the request, not to any other client. If the network is functioning properly and the server can keep up with responding to all requests, a 'split' application will provide roughly the same level of service as the monolithic version. This straightforward client–server architecture is also known as a 'two-tier architecture.'

The main content information can be stored centrally on the server and easily updated. This enables other 'centralised' information, such as each content in the system, to be maintained and sent to clients. Users of the client will find it much easier and smaller to use than the entire application. At the same time, the company will have better control and will be able to monitor usage of the server application itself, for example. A web browser is a common application client that uses HTTP to access server applications such as those found on websites. The use of a web browser as the client end of an application is intriguing because the browser is usually provided by a third party. This means that application developers must rely on agreed-upon standards for the client component's behaviour.

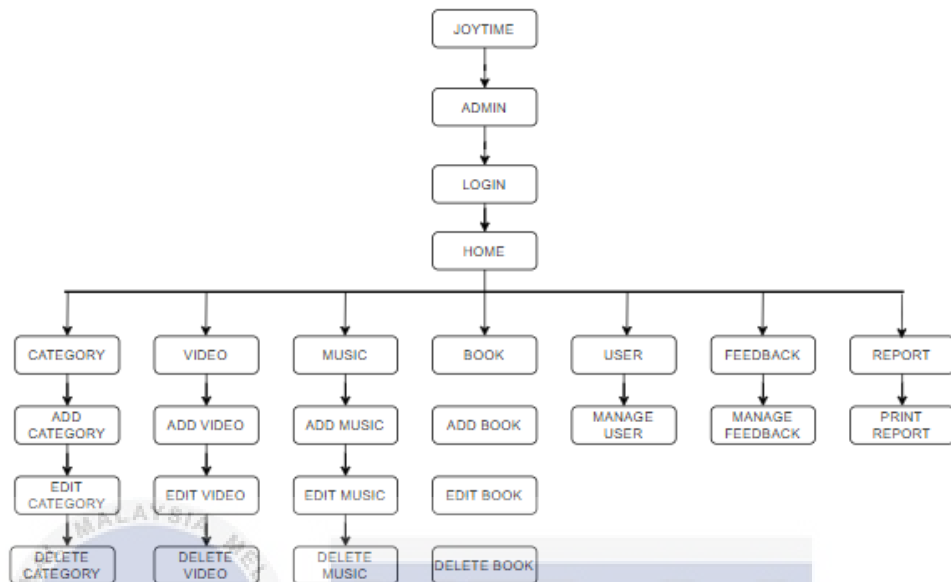
As this system is two-tier, the interaction between the system and user is easy enough to be understand. Based on the figure 4.1, the user will interact with the website through a graphical user interface by requesting login into the system. The interface will receive the request from the user and connect to the server to pass the request. The server will process the request and send responses to the user. A user will enter the system with their username and password, then a session is created for them. During this session, any data they request as request to changing profile, request to rate, any request shall be processed and for every logical request from the user will be responded. A successful logic request is like when a client user want to login enter their own account. The system will allow it by verifying its status as user.

#### **4.2.2 User Interface Design**

This section covers all the system's user interface designs, including navigation design, input design, and output design. Each user interface design will be accompanied by an image of a screenshot.

### 4.2.2.1 Navigation Design

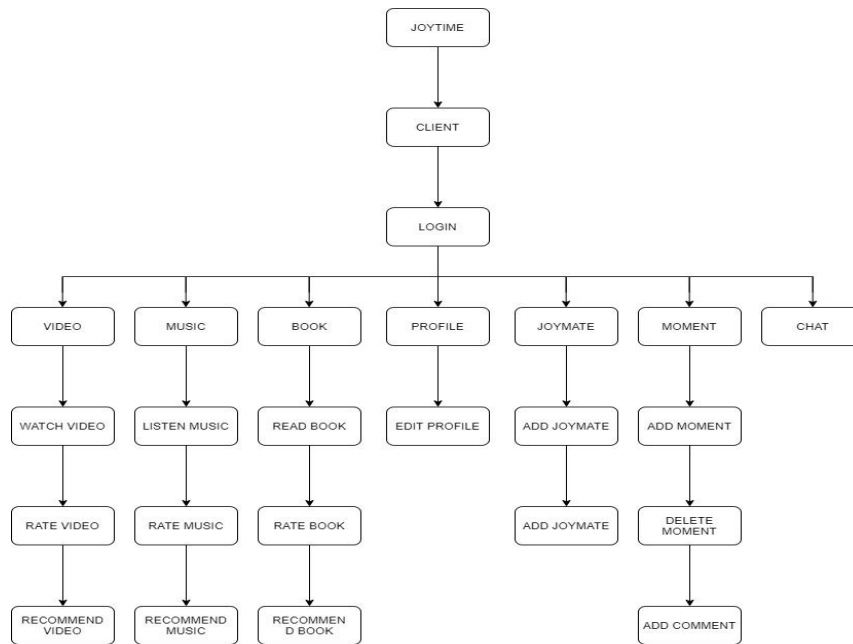
- Admin Flow



**Figure 4.1 Admin flow**

As in the figure 4.1, the diagram shows the flow of the admin in the system starting from login into the system. The admin will be sent to the admin main page. The admin will then have various functions such as category, management of contents which include video, music and book, user management, feedback, and report.

- Client flow



**Figure 4.2 Client flow**

As in the figure 4.2, the diagram shows the flow of the client in the system starting from login into the system. The client will be sent to the client main page. The client will then have various functions such as enjoy contents which include video, music and book, client interaction as Joymate, chat, moment sharing and profile management.

#### 4.2.2.2 Input Design

Table 4.1 displays the design for input in table form, divided by the interface/form, field name, GUI control/Field, and validation control. The inputs will all be show with the UI design for each part.

**Table 4.1 Input design table**

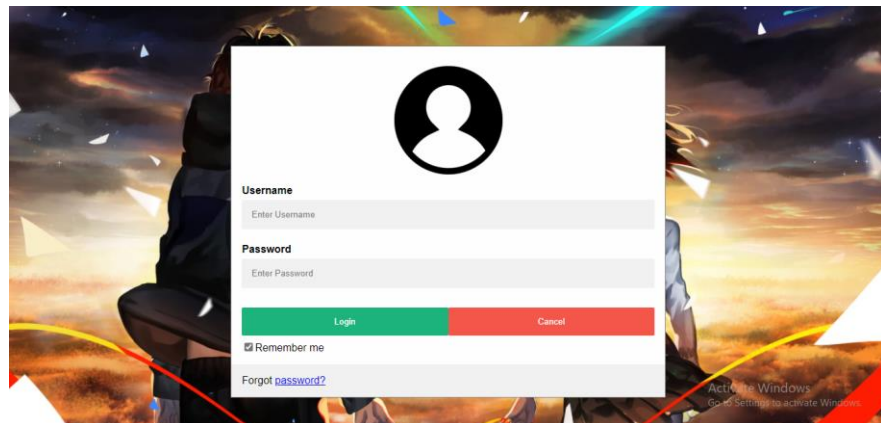
Interface/Form	Field Name	GUI Control/Field	Validation Control
Login	Username	Text	Not null

	Password	Password	Not null
Register	First name	Text	Not null
	Last name	Text	Not null
	Username	Text	Not null
	Email	Email	Not null
	Birthday	Date	Null
	Password	Password	Not null
	Password Confirmation	Password	Not null
Forgot password	Username	Text	Not null
	New password	Password	Not null
	New password confirmation	Password	Not null
Feedback	Name	Text	Not null
	Email	Email	Not null
	Subject	Text	Not null
	Message	Text	Not null
Video	Title	Text	Not null
	Publisher	Text	Not null
	Category	Selection	Not null
	Genre	Selection	Not null
	Language	Selection	Not null
	Summary	Text	Not null

	Poster	File	Not null
	File	File	Not null
Music	Title	Text	Not null
	Artist	Text	Not null
	Publisher	Text	Not null
	Category	Selection	Not null
	Genre	Selection	Not null
	Language	Selection	Not null
	File	File	Not null
Book	Title	Text	Not null
	Author	Text	Not null
	Publisher	Text	Not null
	Category	Selection	Not null
	Genre	Selection	Not null
	Language	Selection	Not null
	Summary	Text	Not null
	File	File	Not null
Category	Name	Text	Not null
	Type	Selection	Not null
Genre	Name	Text	Not null
	Type	Selection	Not null

Language	Name	Text	Not null
	Type	Selection	Not null
Profile	Username	Text	Null
	First name	Text	Null
	Last name	Text	Null
	Birth date	Date	Null
	Biography	Text	Null
	Profile picture	File	Null
	New password	Password	Null
	New confirmation password	Password	Null
Chat	Message	Text	Null
Post	Text	Text	Null
	Picture	File	Null
Comment	Message	Text	Null

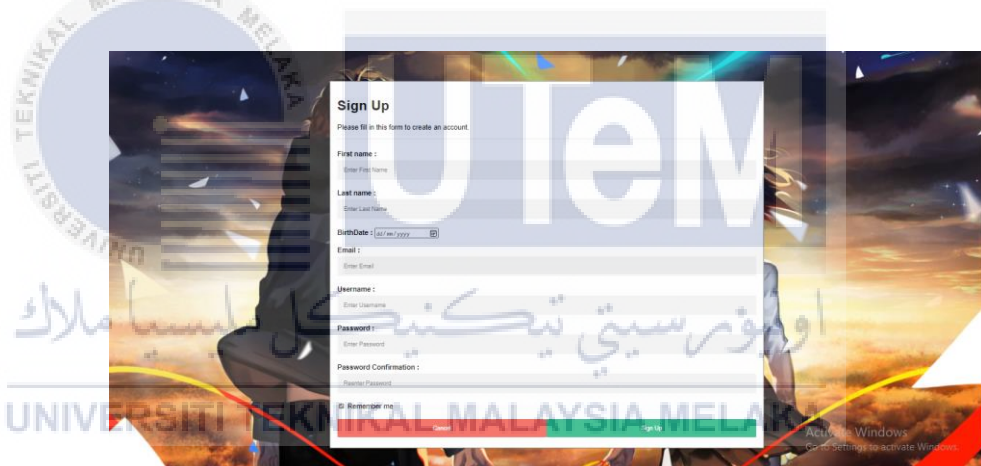
i. Login



**Figure 4.3 Input login**

Figure 4.3 show the input login image for user.

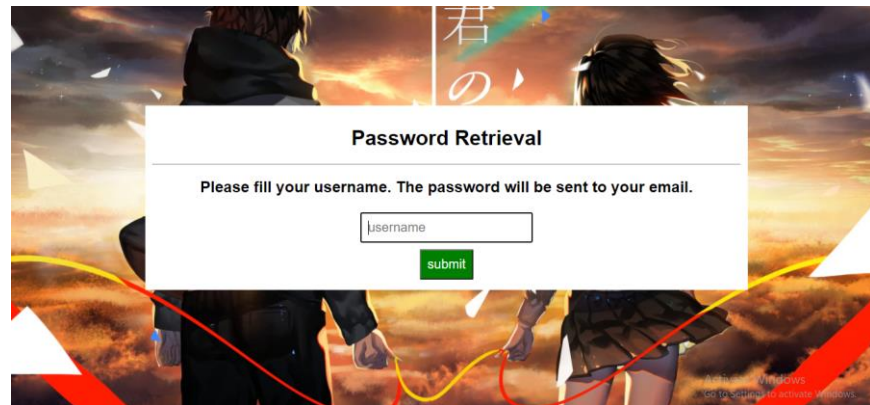
ii. Register



**Figure 4.4 Input register**

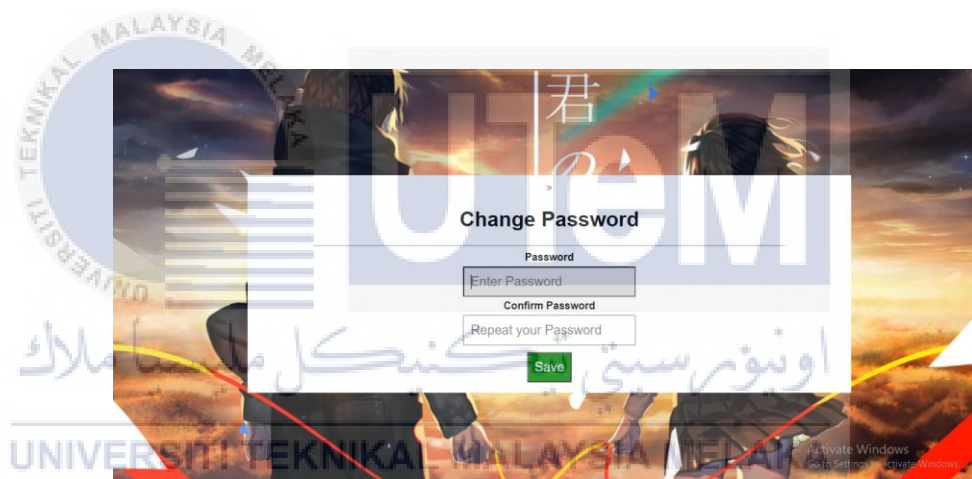
Figure 4.4 show the input register image for user.

iii. Forgot password.



**Figure 4.5 Input forgot password (username)**

Figure 4.5 show the input forgot password image for user.

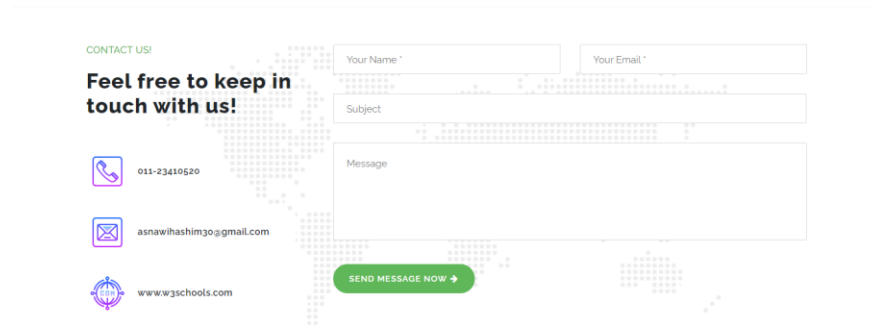


**Figure 4.6 Input change password**

Figure 4.6 show the input change password image for user.

iv. Feedback





CONTACT US!

**Feel free to keep in touch with us!**

011-23410520

asnawihashim30@gmail.com

www.w3schools.com

Your Name \*

Your Email \*

Subject

Message

SEND MESSAGE NOW →

**Figure 4.7 Input feedback**

Figure 4.7 show the input feedback image for user.

v. Video



ayrtme.com

Welcome Admin

Home

Manage Content

Manage User

Report

**Add New Video!**

Add the content information in the forms below.

Title

video file

Poster

Publisher

Category

Genre

Language

Summary

summary...

Poster File Choose File No file chosen

Video File Choose File No file chosen

Back Reset Submit

**Figure 4.8 Input video**

Figure 4.8 show the input video data image for admin.

vi. Music

**joytime-admin**

Welcome Admin

Home  
Manage Content  
Manage User  
Report

**Add New Music!**  
Add the content information in the forms below.

Title: music file

Artist: Artist

Publisher: Publisher

Category: [Dropdown]

Genre: [Dropdown]

Language: [Dropdown]

Music file: Choose File No file chosen

Back Reset Submit

**Figure 4.9 Input music**

Figure 4.9 show the input music data image for admin.

vii. Book

**joytime-admin**

Welcome Admin

Home  
Manage Content  
Manage User  
Report

**Add New Book!**  
Add the content information in the forms below.

Title: Book file

Author: Author

Publisher: Publisher

Category: [Dropdown]

Genre: [Dropdown]

Language: [Dropdown]

Summary: [Text Area]

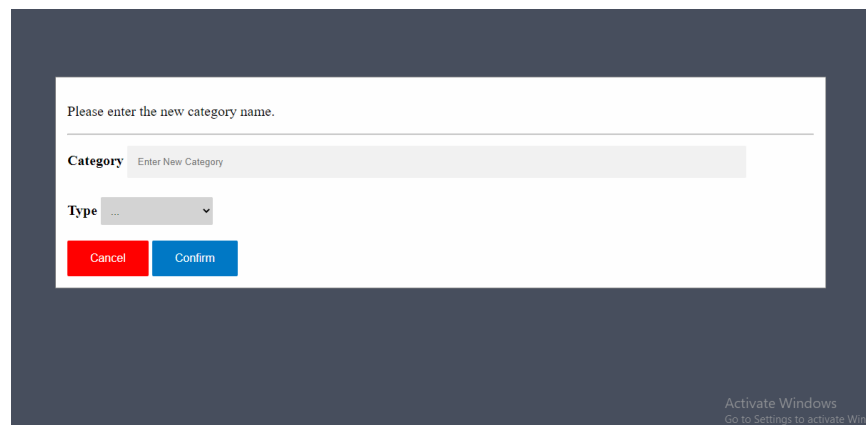
Book file: Choose File No file chosen

Back Reset Submit

**Figure 4.10 Input book**

Figure 4.10 show the input book data image for admin.

## viii. Category



Please enter the new category name.

Category

Type

Activate Windows  
Go to Settings to activate Windows

**Figure 4.11 Input category**

Figure 4.11 show the input category image for admin.





The image shows a web form titled "Edit your Biography" with a close button (X) in the top right corner. The form contains several input fields:

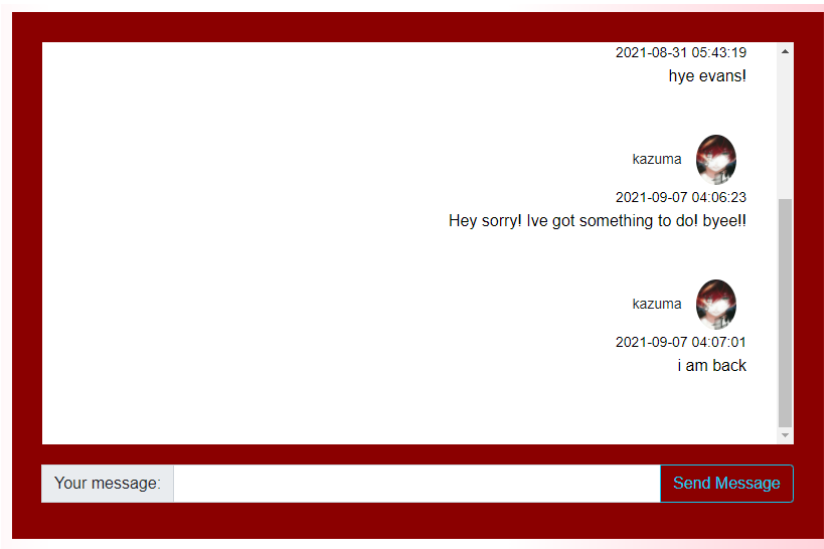
- A "Username" field with a placeholder "@".
- A "Name" section with two sub-fields: "First name" and "Last name".
- A "Birthday" field with a placeholder "dd/mm/yyyy" and a calendar icon.
- A "Biography" text area containing the text "Hye, im kazuma and i love to watch videos!".
- A "Choose File" button next to the text "No file chosen".
- A "Renew Password" section with three input fields: "Old Password" and "New Password".

The form is overlaid on a background featuring the logo of Universiti Teknikal Malaysia Melaka (UTeM) and its name in Arabic script.

**Figure 4.12 User profile input**

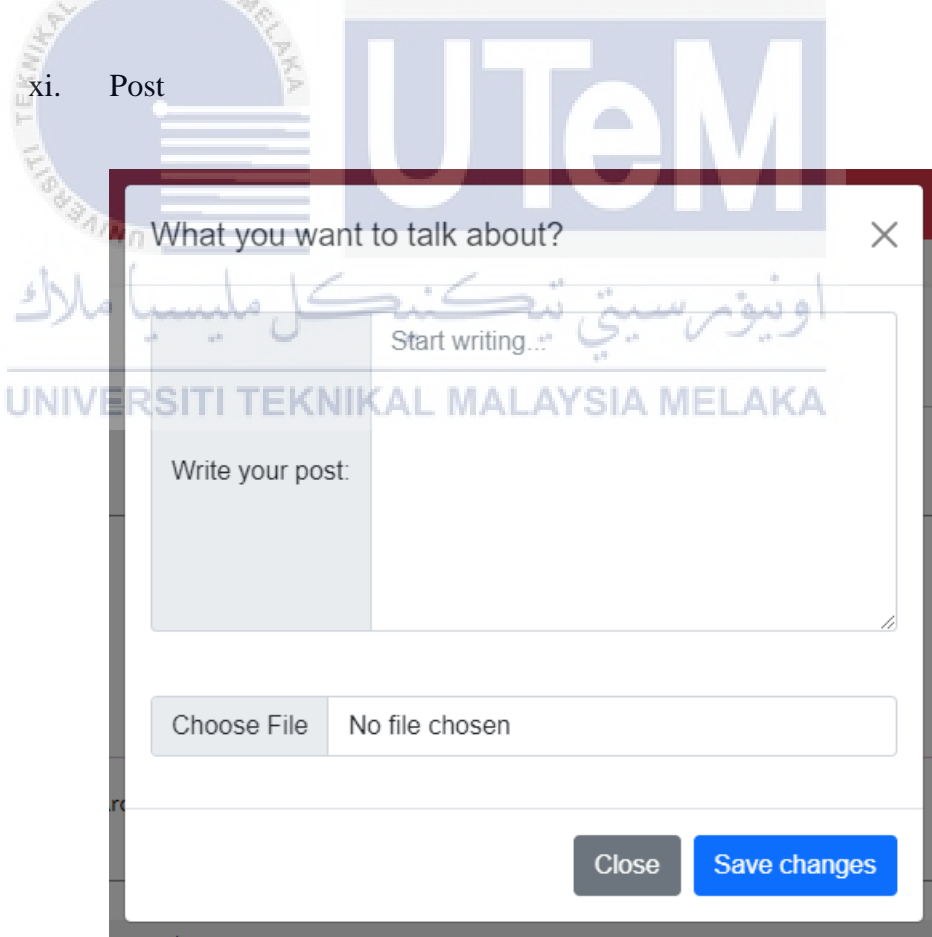
Figure 4.12 show the input profile edit image for user.

- x. Chat



**Figure 4.13 Chat Input**

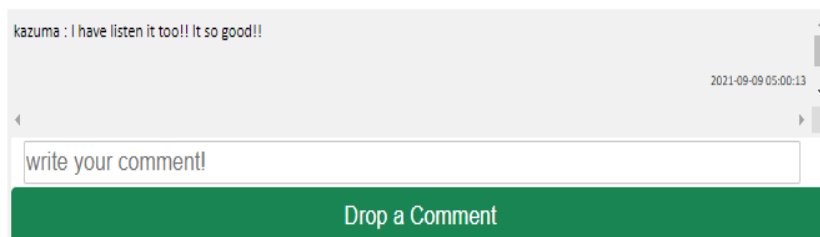
Figure 4.13 show the input for chat between clients.



**Figure 4.14 Post Input**

Figure 4.14 show the input text and input file for post function.

xii. Comment



**Figure 4.15 Comment input**

Figure 4.15 shows the input for comment.

#### 4.2.2.3 Output Design

Table 4.2 shows the design for output on each process in the system divided by the form, output component and description.

**Table 4.2 Output design table**

Form	Output Component	Description
Login	Success – go to profile page.	After the user entered their username and password, the system will response with appropriate action after verifying the data.
Register	Display a message box	The newly registered user will receive a message box upon succeed

		registering of failed registering.
Forgot password	<ol style="list-style-type: none"> <li>1. Display message box</li> <li>2. Link sends to email.</li> <li>3. The link sent by system will bring to another page.</li> </ol>	When a username is inserted into form, the system will send a link to the user email to go to a change password page.
Feedback	Display successful send feedback message box	Client will receive notification box after send a message to the system.
User	<ol style="list-style-type: none"> <li>1. Display the list of users.</li> <li>2. Display freeze message box.</li> <li>3. Display activates message box.</li> <li>4. Display kicked message box.</li> </ol>	Admin can see the list of users. The admin can either freeze, activate or kick the account of the user.
Video	Display successful add video message box	After admin successfully add the input into the

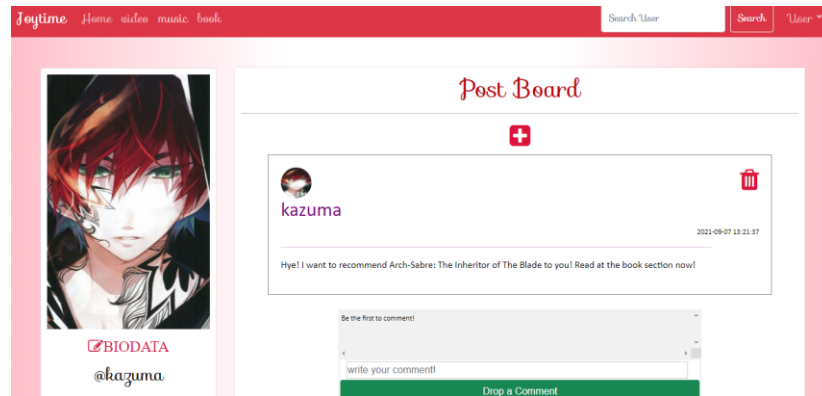
		form and entered the database, the notification will be displayed.
Music	Display successful add/update music message box	After admin successfully add the input into the form and entered the database, the notification will be displayed.
Book	Display successful add/update book message box	After admin successfully add the input into the form and entered the database, the notification will be displayed.
Category	Display successful add/update category message box	The admin will insert new category and upon succeeding the message box will appeared.
Profile	Display successful add video message box	After users succeed updating their profile, the system will be replied with successful notification.
Report	<ul style="list-style-type: none"> <li>- Display charts and total of data counted.</li> <li>- Chart can be print as pdf of hardcopy</li> </ul>	The system will count the total of users etc. also generate charts. The generated chart can be printed out or save as pdf.



Friend	<ul style="list-style-type: none"> <li>- Display the button name for “add Joymate”.</li> <li>- Display the button name for “remove Joymate”.</li> </ul>	<p>The system will add another user as “Joymate” if the user clicks on “add Joymate” button. Then the button will be change to “remove Joymate” as to remove the added Joymate from the friend list.</p>
Chat	<ul style="list-style-type: none"> <li>- Display the chat</li> </ul>	<p>The system will receive the message after the user send it. The system will instantly display the chat in the chat box.</p>
Post	<ul style="list-style-type: none"> <li>- Display the moment that is posted.</li> <li>- Display the Comment.</li> </ul>	<p>The system will display the posted moments. On every posted moment, user can add comment. The system will display the comment that have also been send.</p>

i. Login

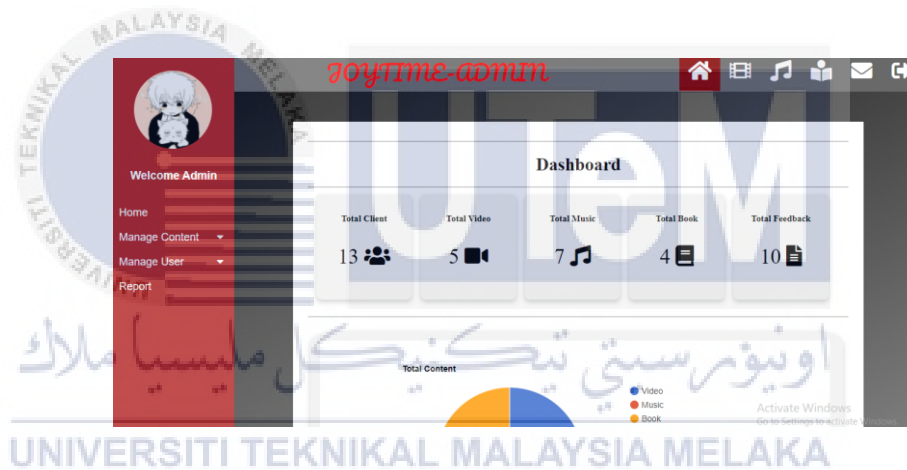
Client Account



**Figure 4.16 Client profile account**

Figure 4.16 show the main page login output image for client.

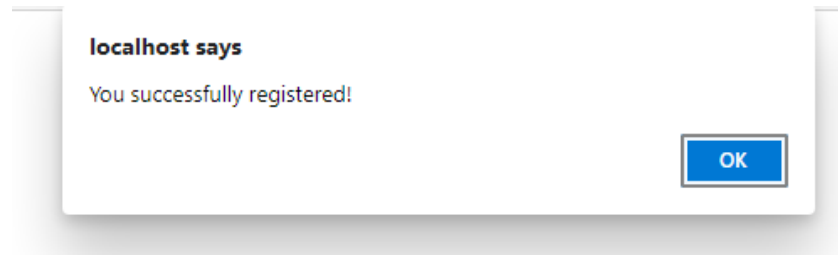
#### Admin Account



**Figure 4.17 Admin account output**

Figure 4.17 show the main page login output image for admin.

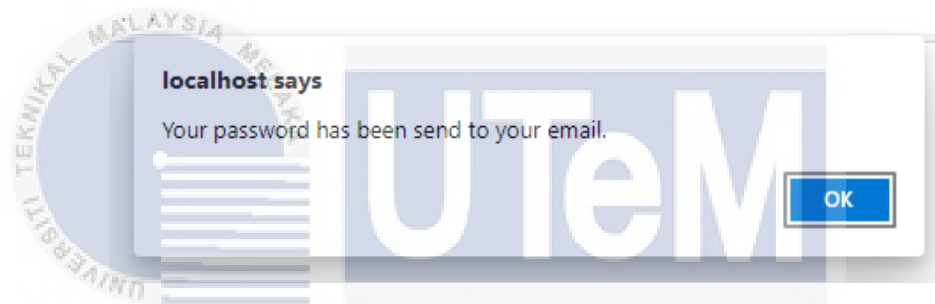
- ii. Register



**Figure 4.18 Register output**

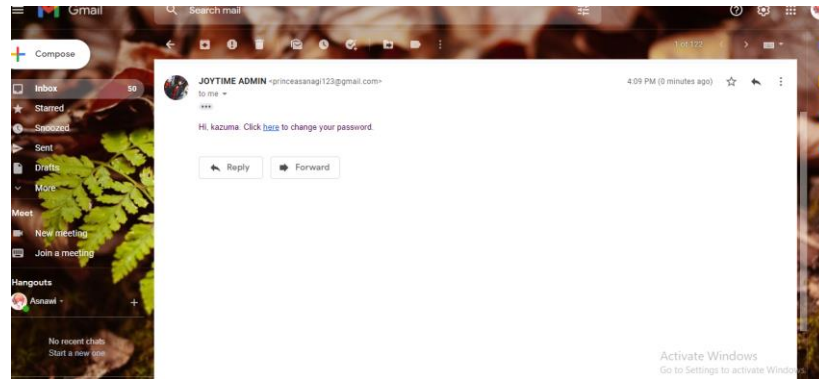
Figure 4.18 show the register output image for client.

iii. Forgot password.



**Figure 4.19 Forgot password email send notification output.**

Figure 4.19 show the forgot password email send notification output image for user.



**Figure 4.20** Forgot password email output.

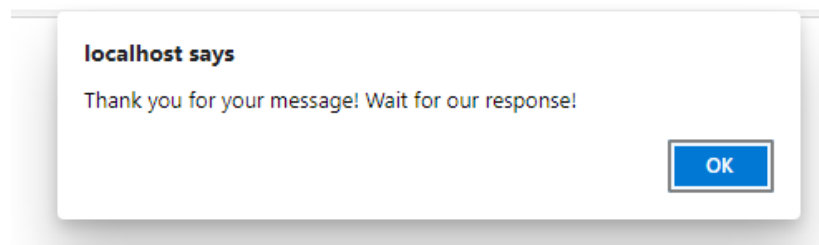
Figure 4.20 show the forgot password email output image for user.



**Figure 4.21** Changed password notification output.

Figure 4.21 show the change password notification output image for user.

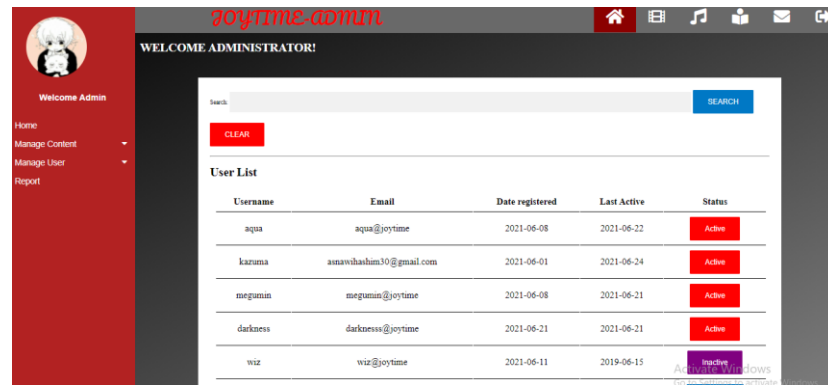
iv. Feedback



**Figure 4.22** Feedback notification output

Figure 4.22 show the feedback notification output image for user.

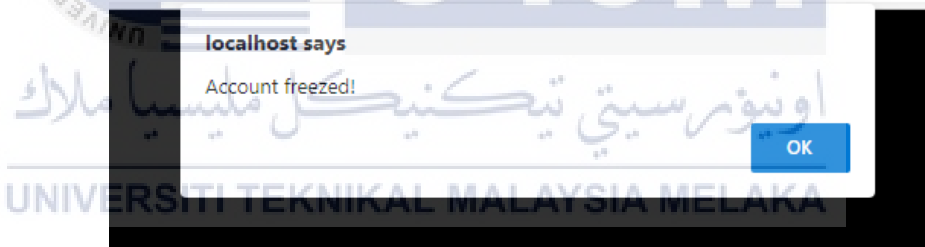
v. Users



Username	Email	Date registered	Last Active	Status
aqua	aqua@joytime	2021-06-08	2021-06-22	Active
kazuma	amawhahim30@gmail.com	2021-06-01	2021-06-24	Active
megumin	megumin@joytime	2021-06-08	2021-06-21	Active
darkness	darkness@joytime	2021-06-21	2021-06-21	Active
wiz	wiz@joytime	2021-06-11	2019-06-15	Inactive

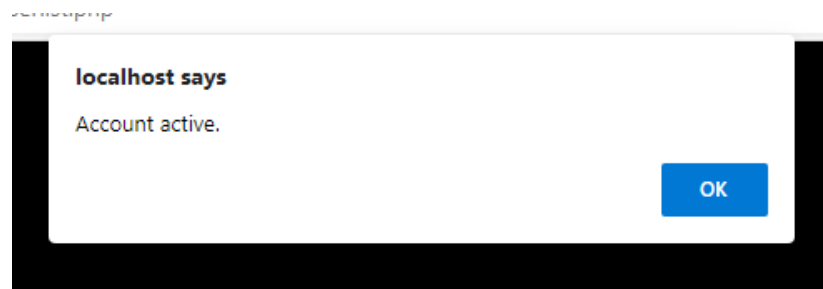
**Figure 4.23 User list**

Figure 4.23 show the user list output image for admin.



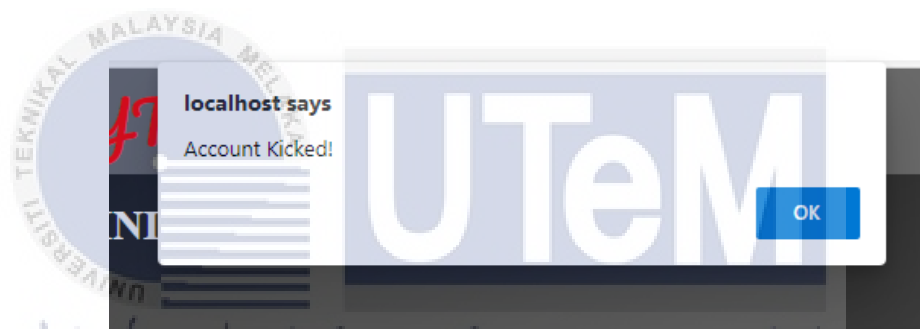
**Figure 4.24 Freeze user output**

Figure 4.24 show the freeze user output image for admin.



**Figure 4.25 Activate user output.**

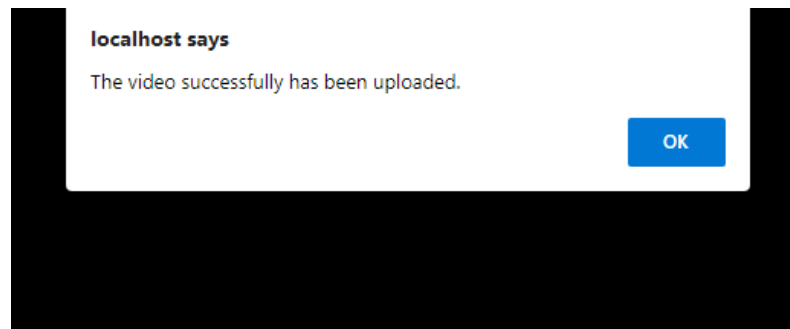
Figure 4.25 show the activate user output image for admin.



**Figure 4.26 Kick user output**

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Figure 4.26 show the kick user output image for admin.



**Figure 4.27 Video add output.**

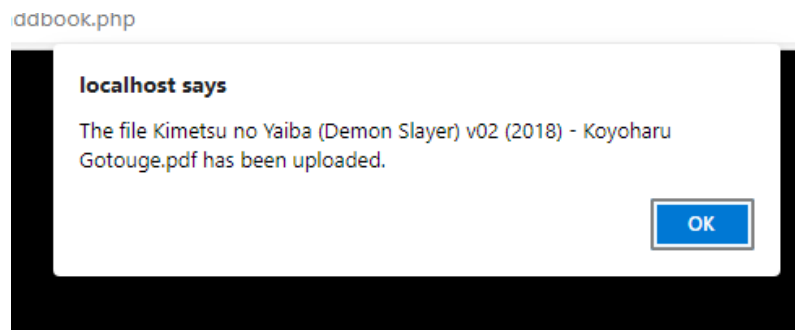
Figure 4.27 show the video add output image for admin.



**Figure 4.28 Music add output.**

Figure 4.28 show the music add output image for admin.

viii. Book



**Figure 4.29 Book add output.**

Figure 4.29 show the book add output image for admin.

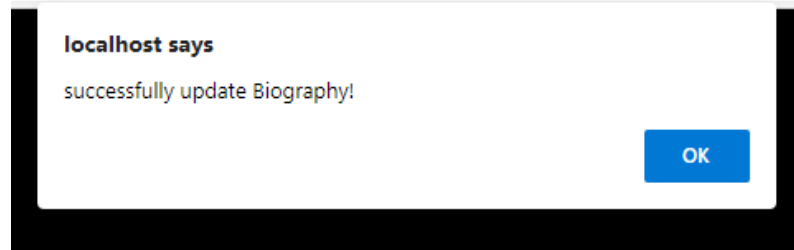


**Figure 4.30 Category add output.**

Figure 4.30 show the category add output image for admin.

x. Profile





**Figure 4.31 Profile update output**

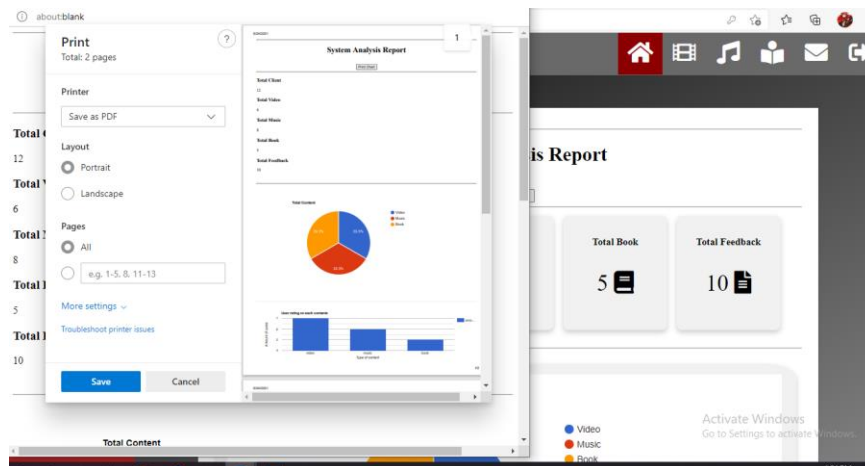
Figure 4.31 show the profile update output image for admin.

xi. Report



**Figure 4.32 Report output**

Figure 4.32 show the report output image for admin.



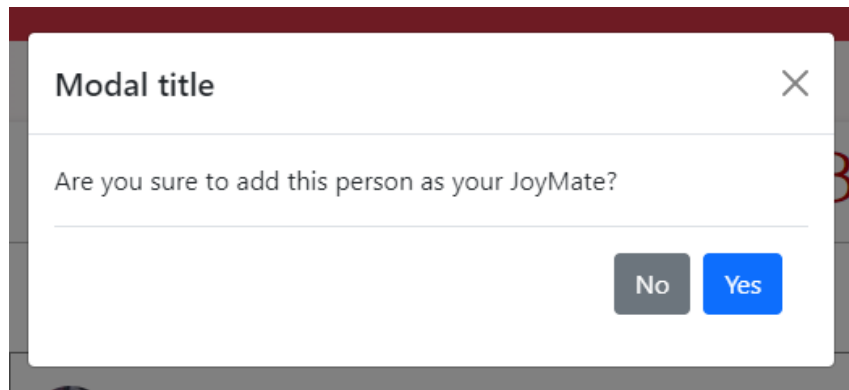
**Figure 4.33 Print report**

Figure 4.33 show the print report output image for admin.



**Figure 4.34 Add friend**

Figure 4.33 show the button for “add friend” which is before a user add another user as Joymate.



**Figure 4.35 Confirmation modal**

Figure 4.34 shows the confirmation modal for the user to add another user as Joymate or not.



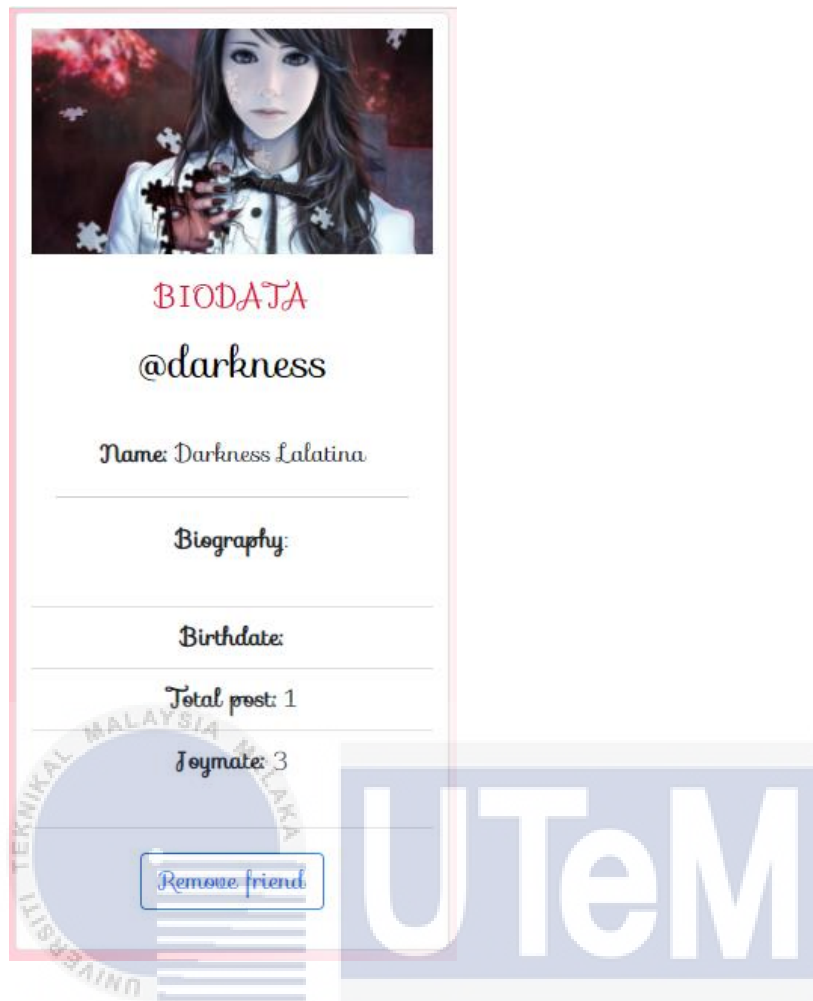


Figure 4.36 Remove friend

Figure 4.35 show the “remove friend” button after the user has successfully confirm to add the user to his Joymate list.

### xiii. Chat

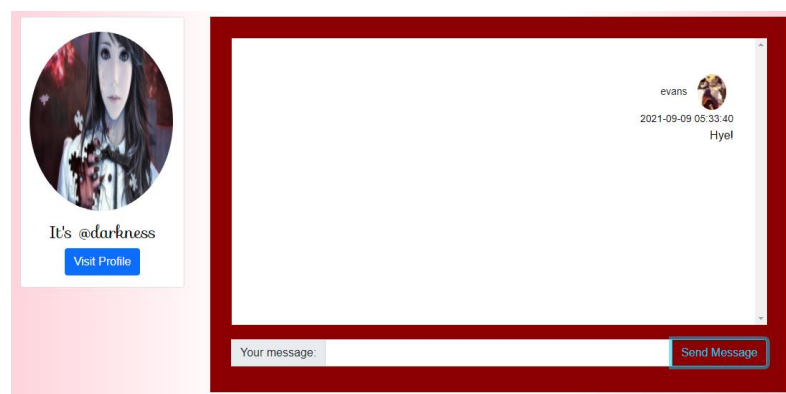
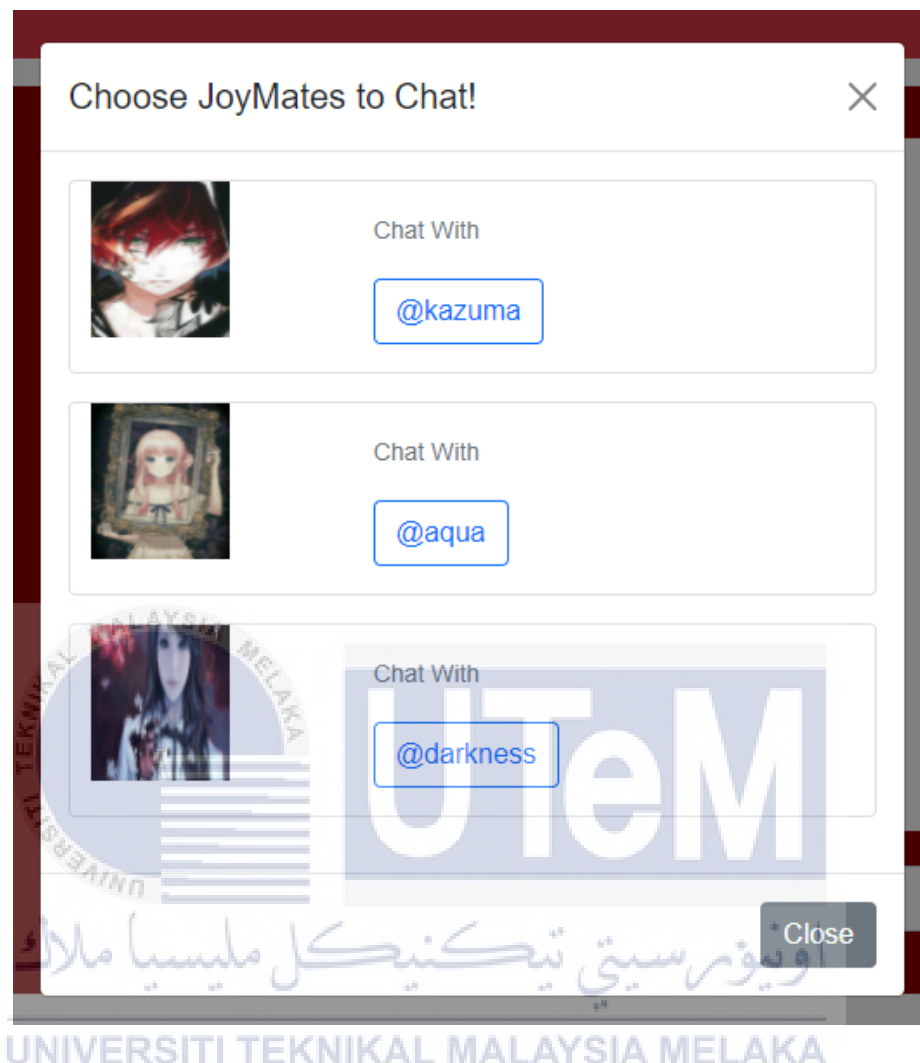


Figure 4.37 Chat

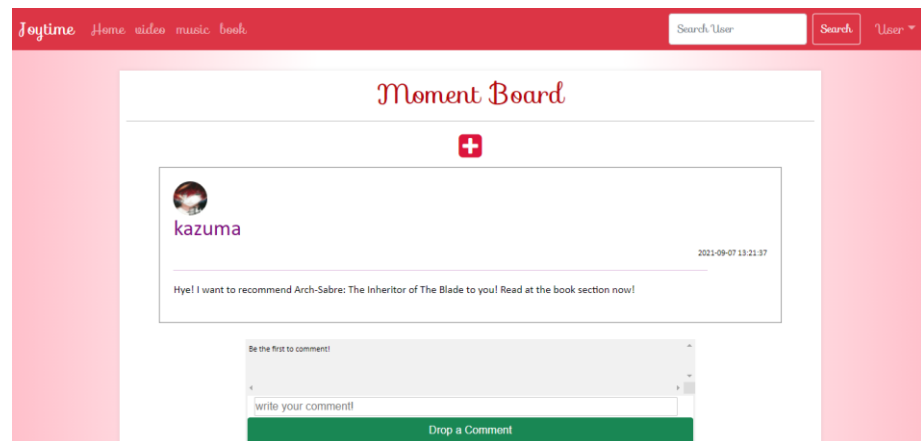
Figure 4.36 shows the chat bot for the user to chat with Joymate.



**Figure 4.38 Choose friend**

Figure 4.57 show the output of the user to choose who to chat.

xiv. Post



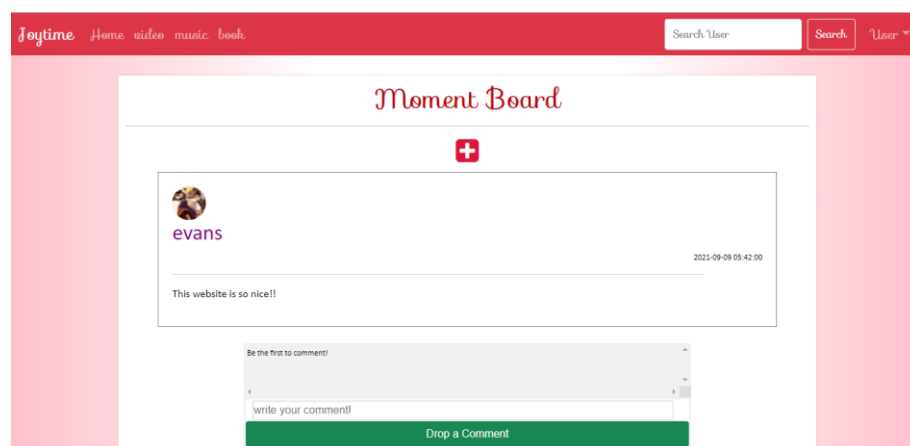
**Figure 4.39 Overview of moment board**

Figure 4.39 shows the moment's board for the user to see moments of another user or their own.



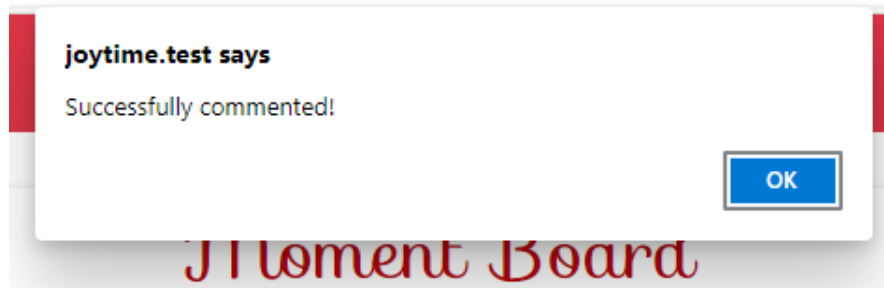
**Figure 4.40 Upload post successful**

Figure 4.40 shows the successful attempt to upload a moment.



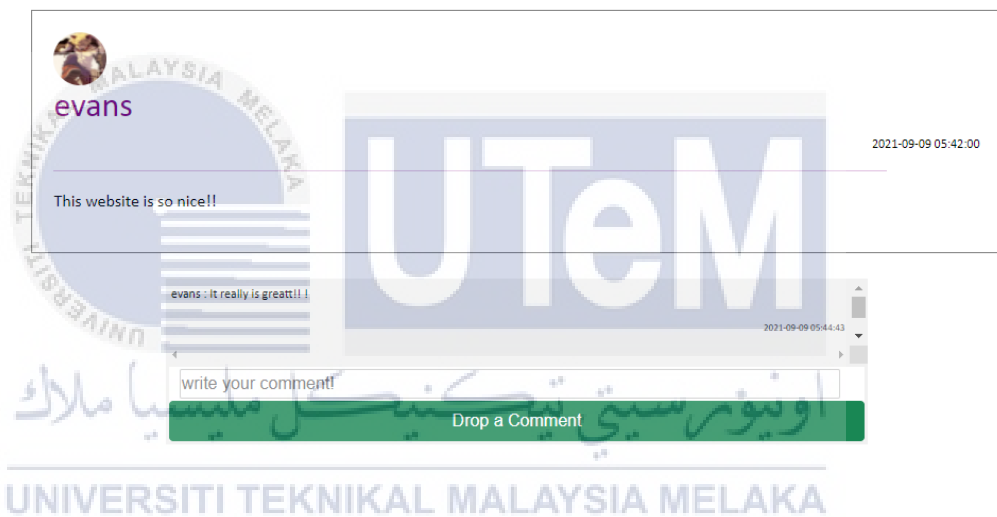
**Figure 4.41 Latest uploaded moment**

Figure 4.41 shows the last updated moments by user.



**Figure 4.42 Successful comment**

Figure 4.42 show the comment that is successfully uploaded.



**Figure 4.43 Last comment**

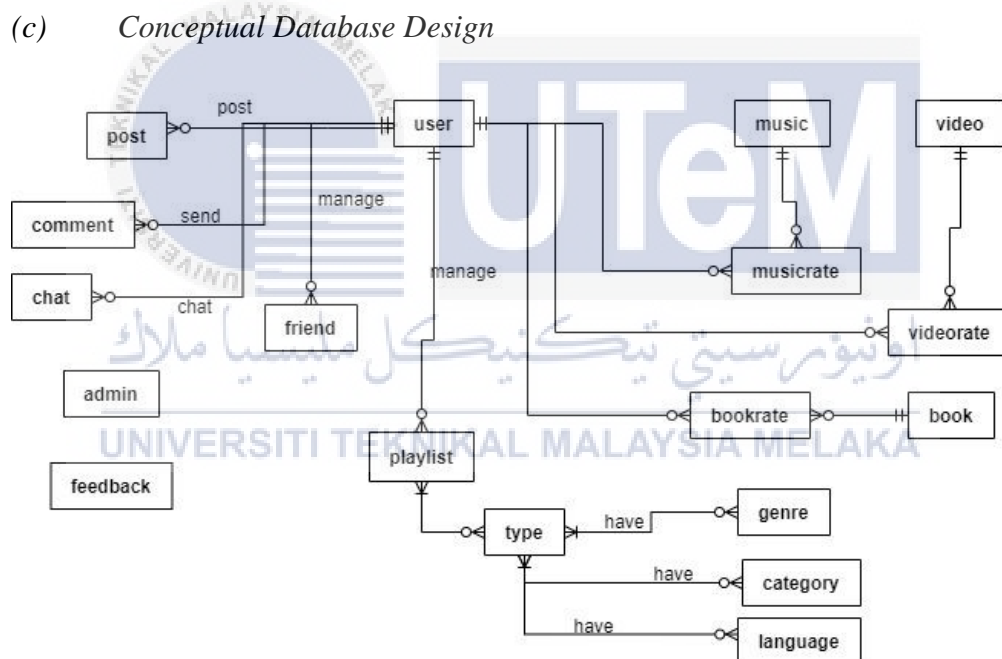
Figure 4.43 show the latest comment that is uploaded and displayed inside the comment box under the moment box.

### 4.2.3 Database Design

The process of creating a detailed data model for a database is known as database design. It was successfully created using Entity Relationship Diagram (ERD). The conceptual and physical design of the database will be included in this design.

#### 4.2.3.1 Conceptual and Logical Database Design

The conceptual design stage is the first step in the design process. The conceptual design of a database only includes the important entities and the relationships between the entities. Logical diagram will go into greater detail about each table in the database. The entities and relationships between the entities, primary keys and foreign keys, and the database will be normalised.



**Figure 4.44 Conceptual database design**

Figure 4.31 shows the conceptual database design for the system which have been created after several changes while making the system throughout the semester.



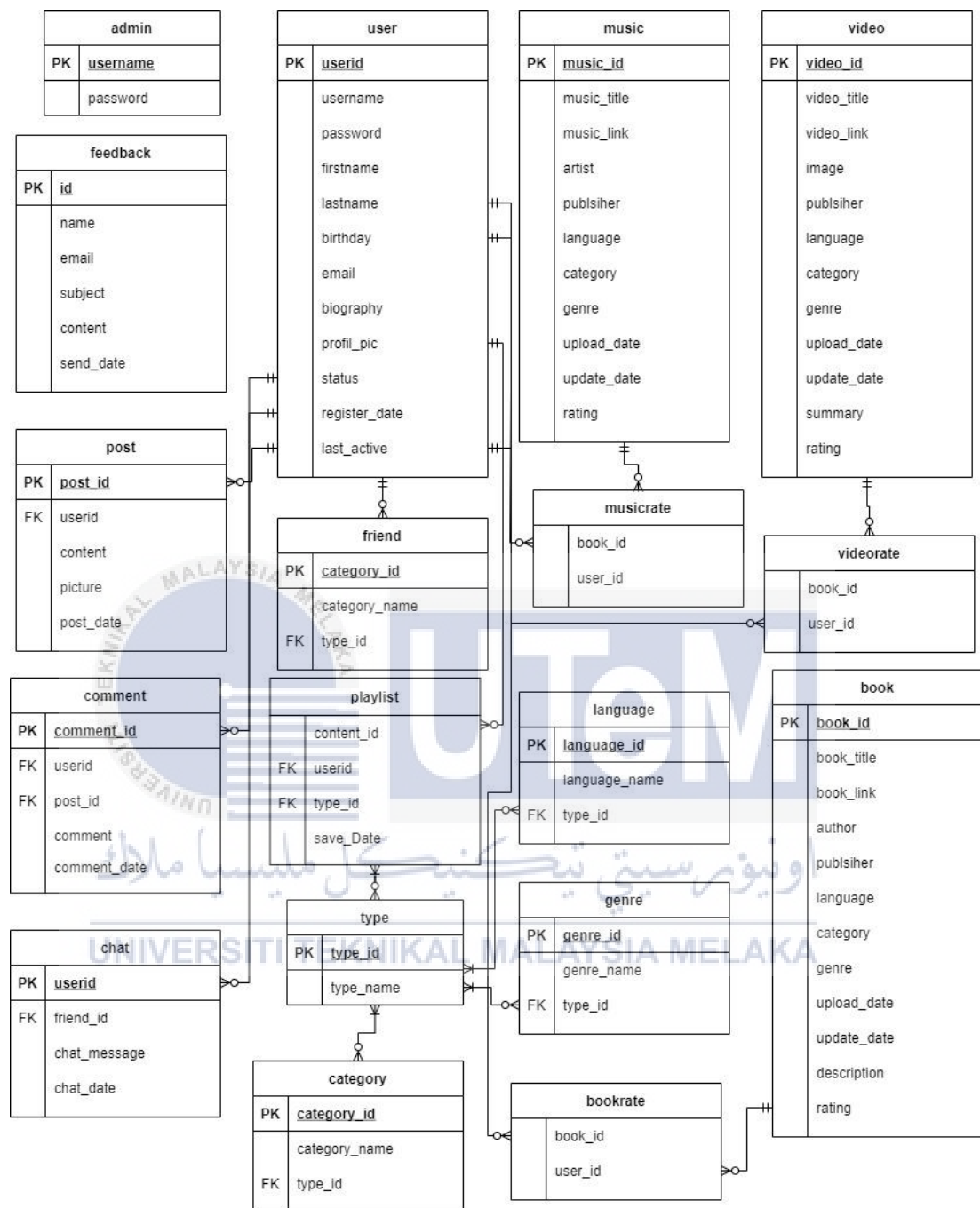
(d) *Logical Database Design***Figure 4.45 Logical database design**

Figure 4.32 displays the logical database design for the whole system. There are total of 13 tables derived from 9 main modules in the system.

*(e) Business Rule*

Business rules develop a suitable and logical relationship participation rules and constraints to create a solidified data model. List of business rules:

- One admin can manage zero or many content and one or many content can be managed by one admin.
- One admin can manage one or many clients, and one or many clients can be managed by one admin.
- One admin can manage zero or many feedbacks, and one or many feedback can be managed by one admin.
- One admin can manage zero or many and one or many categories can be managed by one admin.
- One or many clients can watch zero or many video and one or many video can be watched by one or many users.
- One or many clients can hear zero or many music and one or much music can be listened by one or many users.
- One or many clients can read zero or many books and one or many books can be read by one or many users.
- One or many clients can manage one or many post, but one or many post can be managed by one and only one client.
- One or many clients can manage one or many friends, and one or many friend can be added by one or many clients.
- One or many clients can have one or many chat and one or many chat can be had by one or many clients.

(f) *Data Dictionary*

- Admin

**Table 4.3 admin**

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(2)		No		auto_increment			
password	varchar(20)		No					
username	varchar(50)		No					

- Book

**Table 4.4 book**

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
book_id	int(2)		No		auto_increment			
book_title	varchar(100)		No					
book_link	varchar(150)		No					
author	varchar(100)		No					
publisher	varchar(100)		No					
upload_date	varchar(20)		No					
update_date	datetime		No	CURRENT_TIMESTAMP				
category	varchar(20)		No					
genre	varchar(20)		No					
language	varchar(20)		Yes	NULL				
description	varchar(300)		No					
rating	int(5)		Yes	NULL				

- Bookrate

**Table 4.5 book rate**

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
book_id	int(5)		No			--> book.book_id ON UPDATE RESTRICT ON DELETE RESTRICT		
userid	int(3)		No					

- Category

Table 4.6 category

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
category_id	int(3)		No		auto_increment			
category_name	varchar(20)		No					
type_id	int(1)		No			-> type.type_id ON UPDATE RESTRICT ON DELETE RESTRICT		

- Chat

Table 4.7 chat

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
friend_id	int(3)		No					
chat_message	varchar(500)		No					
chat_date	datetime		No					

- Comment

Table 4.8 comment

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
comment_id	int(3)		No		auto_increment			
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
post_id	int(3)		No			-> post.post_id ON UPDATE RESTRICT ON DELETE RESTRICT		
comment	varchar(200)		No					
comment_date	datetime		No					

- Feedback

**Table 4.9 feedback**

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(3)		No		auto_increment			
name	varchar(100)		No					
email	varchar(100)		No					
subject	varchar(40)		No					
content	varchar(300)		No					
send_date	datetime		No	CURRENT_TIMESTAMP				

- Friend

**Table 4.10 friend**

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
friend_id	int(3)		No					

- Genre

**Table 4.11 genre**

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
genre_id	int(3)		No		auto_increment			
genre_name	varchar(20)		No					
type_id	int(1)		No			-> type.type_id ON UPDATE RESTRICT ON DELETE RESTRICT		

- Language

Table 4.12 language

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
language_id	int(3)		No		auto_increment			
language_name	varchar(20)		No					
type_id	int(1)		No			-> type.type_id ON UPDATE RESTRICT ON DELETE RESTRICT		

- Music

Table 4.13 music

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
music_id	int(2)		No		auto_increment			
music_title	varchar(100)		No					
music_link	varchar(150)		No					
artist	varchar(50)		No					
publisher	varchar(50)		No					
language	varchar(20)		No					
category	varchar(20)		No					
genre	varchar(20)		No					
upload_date	varchar(20)		No					
update_date	datetime		Yes	CURRENT_TIMESTAMP				
rating	int(5)		Yes	NULL				

- Musicrate

Table 4.14 musicrate

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
music_id	int(2)		No			-> music.music_id ON UPDATE RESTRICT ON DELETE RESTRICT		
userid	int(3)		No					

- Playlist

Table 4.15 playlist

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
type_id	int(3)		No			-> type.type_id ON UPDATE RESTRICT ON DELETE RESTRICT		
content_id	int(3)		No					
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
save_date	datetime		No					

- Post

Table 4.16 post

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
post_id	int(3)		No		auto_incre ment			
userid	int(3)		No			-> user.userid ON UPDATE RESTRICT ON DELETE RESTRICT		
content	varchar(300)		No					
picture	varchar(150)		Yes	NULL				
post_date	datetime		No					

- Type

Table 4.17 type

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
type_id	int(1)		No		auto_incre ment			
type_name	varchar(12)		No					

- User

Table 4.18 user

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
userid	int(3)		No		auto_increment			
username	varchar(20)		No					
password	varchar(20)		No					
firstname	varchar(15)		No					
lastname	varchar(15)		No					
birthday	varchar(20)		Yes	NULL				
email	varchar(40)		No					
biography	varchar(300)		Yes	NULL				
profilepic	varchar(100)		Yes	NULL				
status	varchar(10)		No					
date_register	date		Yes	NULL				
last_active	date		Yes	NULL				

- Video

Table 4.19 video

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
vid_id	int(2)		No		auto_increment			
vid_title	varchar(100)		No					
vid_link	varchar(150)		Yes	NULL				
image	varchar(100)		Yes	NULL				
publisher	varchar(50)		No					
summary	varchar(300)		No					
upload_date	varchar(20)		No					
update_date	datetime		Yes	CURRENT_TIMESTAMP				
category	varchar(20)		Yes	NULL				
genre	varchar(50)		No					
language	varchar(20)		Yes	NULL				
rating	int(5)		Yes	NULL				

- Videorate



Table 4.20 Videorate

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
vid_id	int(5)		No			-> video.vid_id ON UPDATE RESTRICT ON DELETE RESTRICT		
userid	int(3)		No					

### 4.3 Detailed Design

#### 4.3.1 Software Design

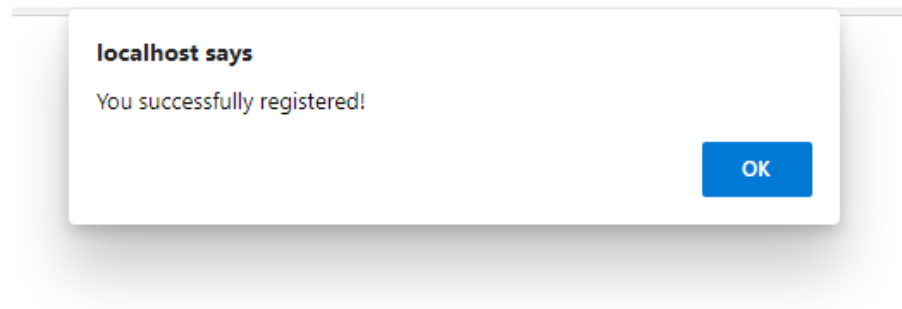
##### 4.3.1.1 Program Specification

###### i. Authenticate Module

- Register
- New user will enter their credentials to be processed by the system.

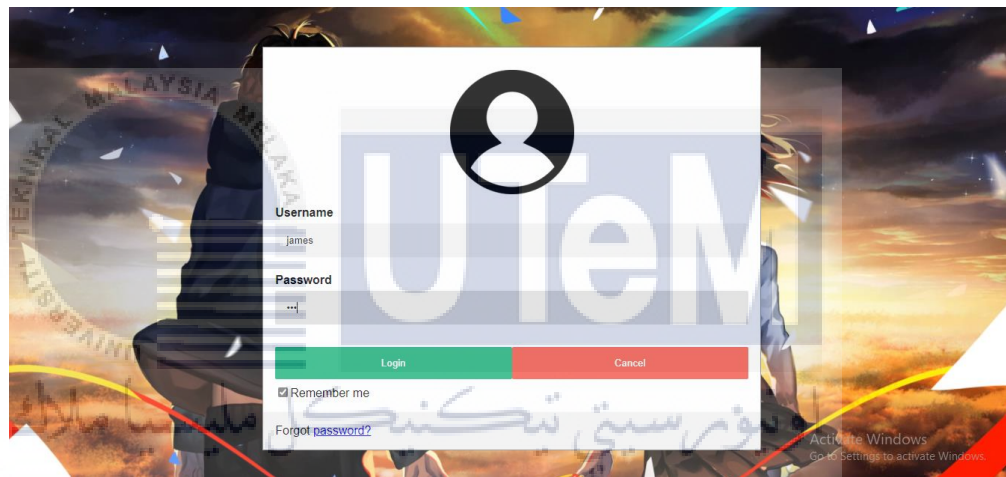
Figure 4.46 fill in sign up form.

- The system will display a successful message to the user.



**Figure 4.47 Success register notification.**

- Login
- The user must enter username and password to be verified.



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**Figure 4.48 Login form**

- After successful, user will be sent to main page.
  - Client

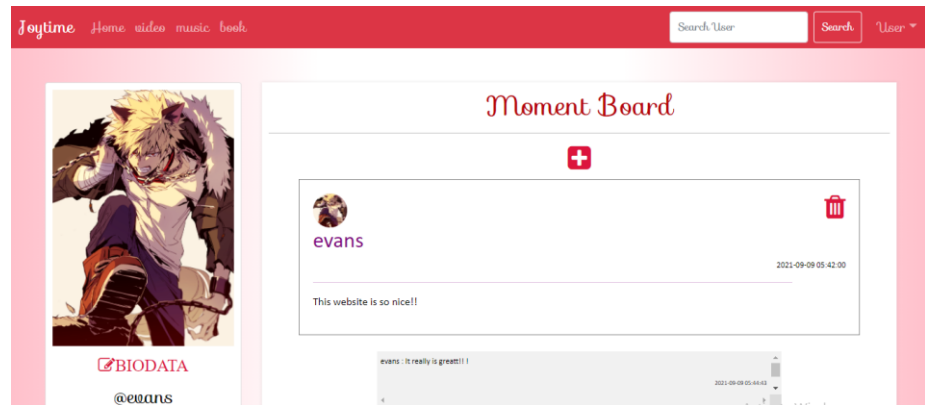


Figure 4.49 Client main page

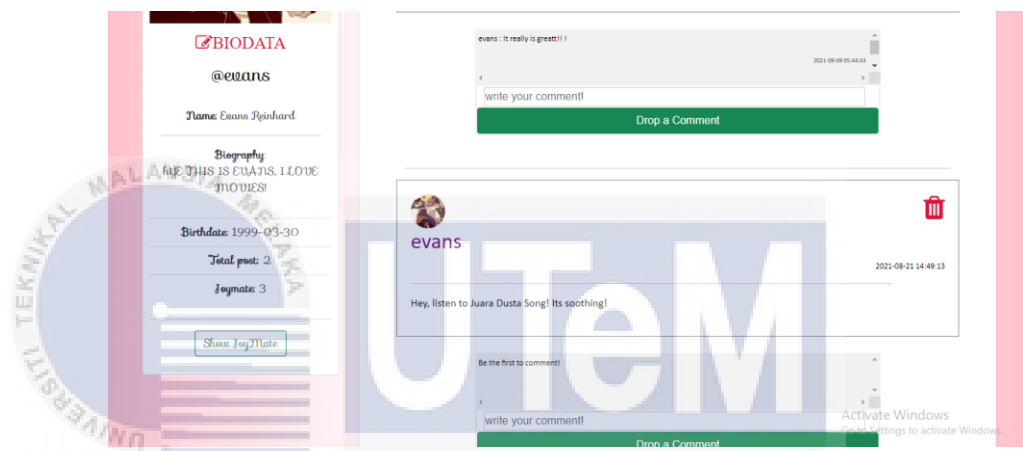


Figure 4.50 Client main page

Admin

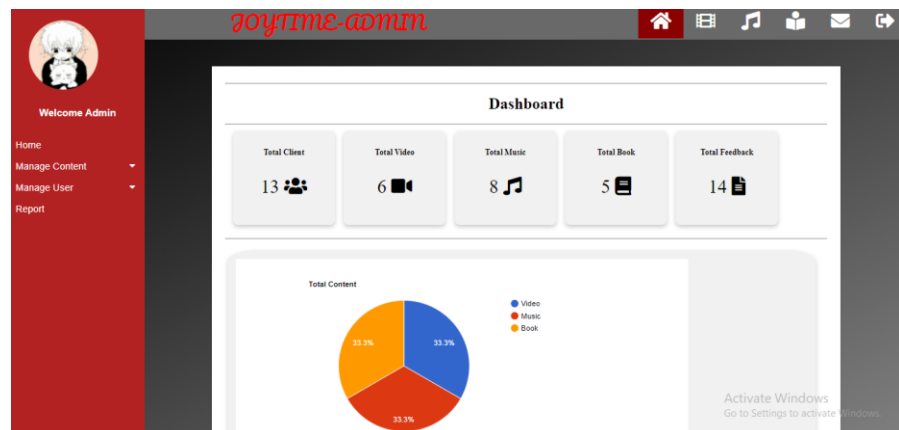
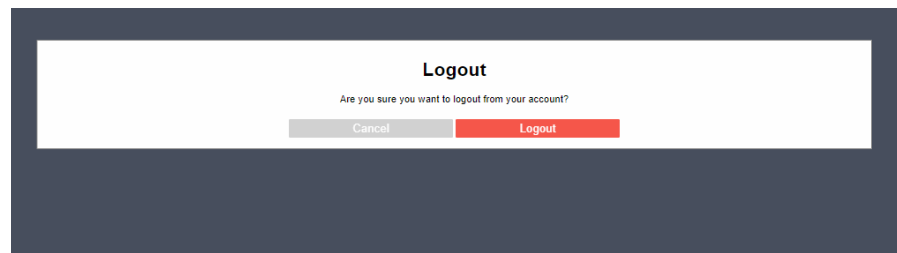


Figure 4.51 Admin homepage

- Logout
- The user will click to logout button on the rightest panel and a logout modal will appear.



**Figure 4.52** logout modal

## ii. Profile Module

- Edit Profile
- User can edit their profile by updating their information.





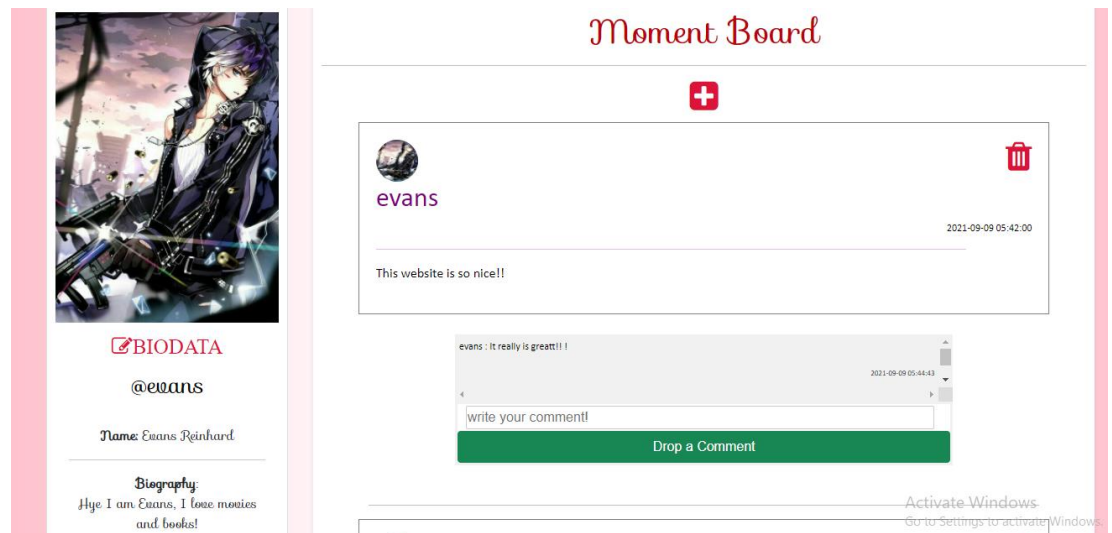


Figure 4.54 Client updated data.

### iii. Content management module

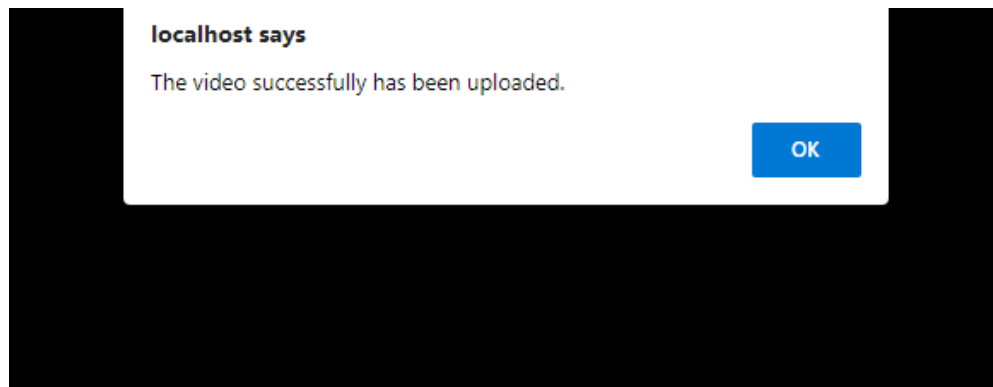
- Video
  - Add

- The admin will insert all the data of the content into the form including the files.



Figure 4.55 Admin add video.

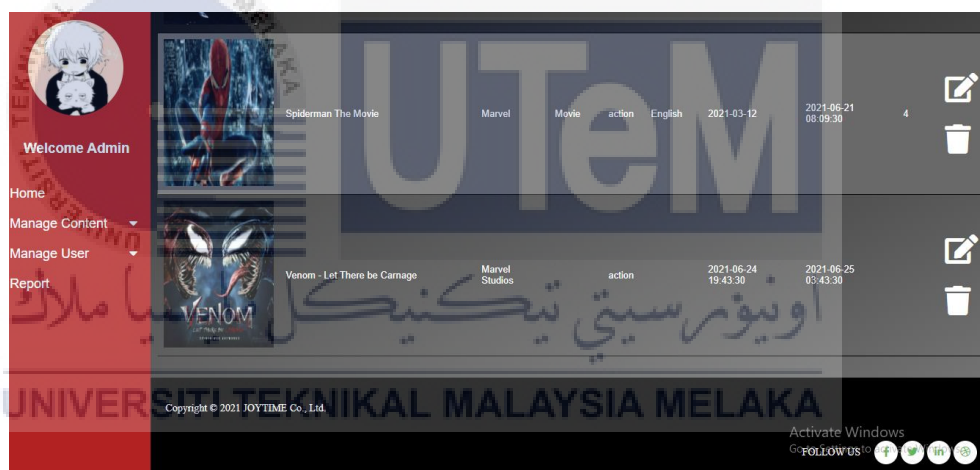
- Display message after a succeeded add.



**Figure 4.56 Successful add video message.**

o Edit

- The admin chooses the content to be update.



**Figure 4.57 Main video page**

- The admin will insert any data to be updated.

Update the content information in the forms below.

Title: Venom and The Carnage

Publisher:

Category: Movie

Genre: action

Language: English

Summary:

Poster file: Choose File No file chosen

Video file: Choose File No file chosen

Go Back, Reset, Submit

**Figure 4.58 Update video data**

- Display the updated data.

Update Video

Title : Venom and The Carnage

Category : Movie

Genre : action

Language : English

Publisher : Marvel Studios

Date added : 2021-06-24 19:43:30

Date Updated : 2021-06-24 19:51:03

Summary : The story of venom with its sworn enemy, Carnage.

Rating :

**Figure 4.59 Video data updated.**

- o Delete

- Admin will choose the file to be delete.



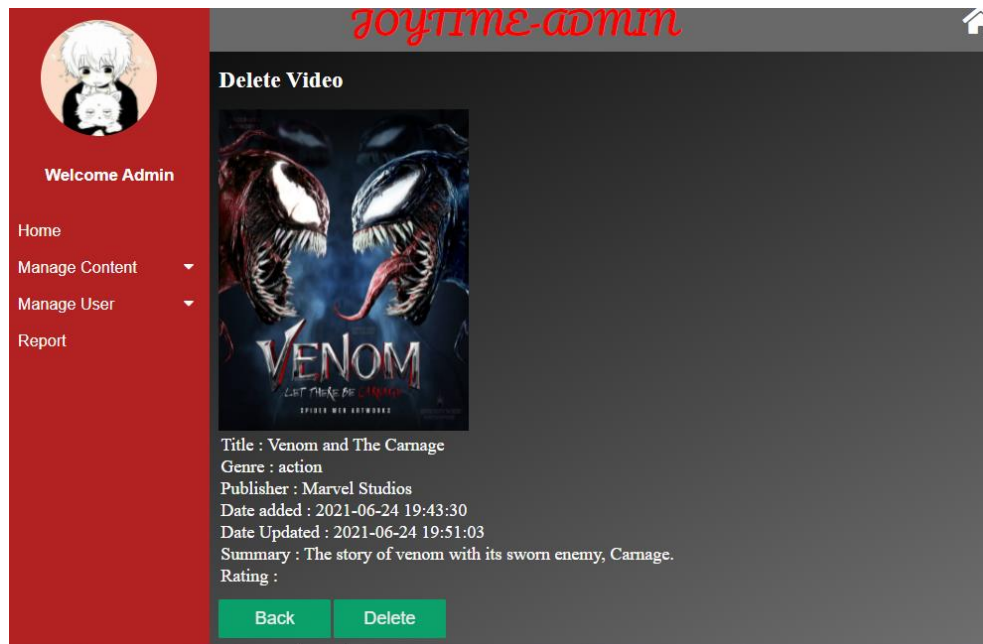


Figure 4.60 Delete video

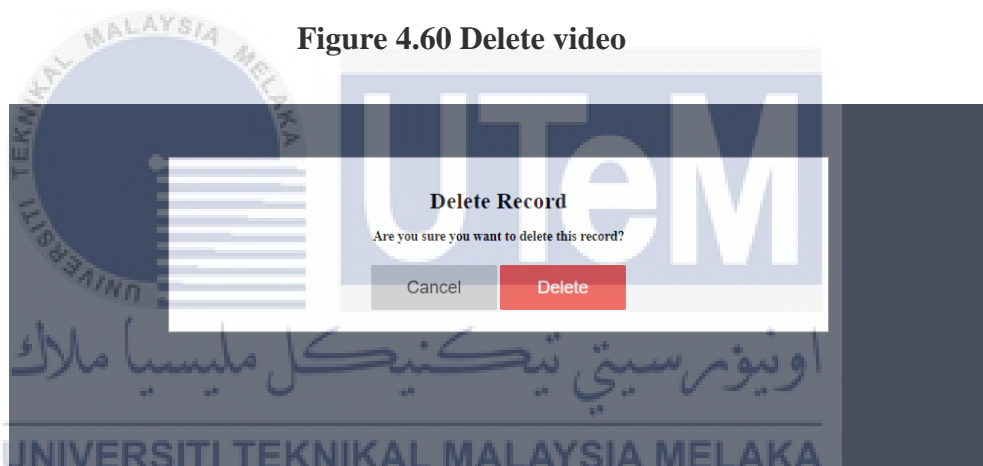


Figure 4.61 Delete modal.

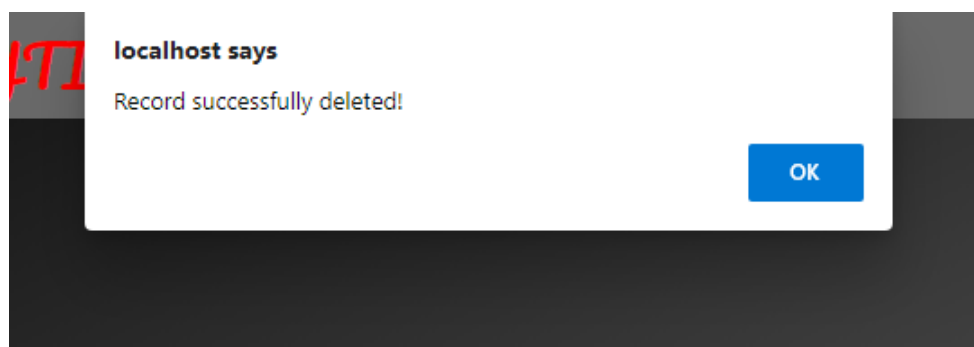


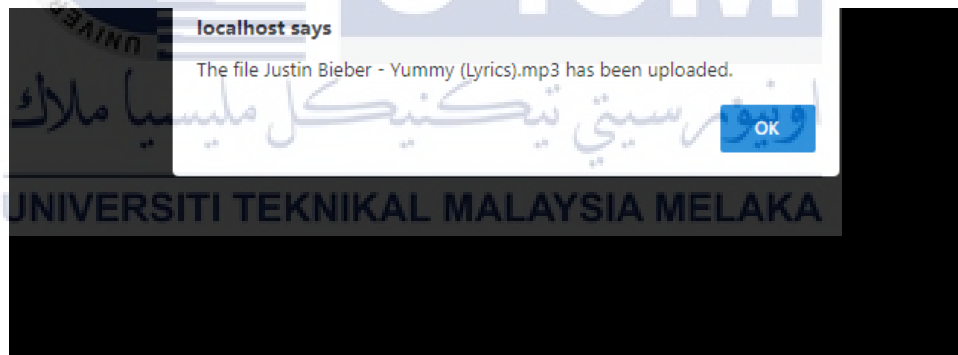
Figure 4.62 Successful delete message.

- Music
  - Add
- The admin will insert all the data of the content into the form including the files.

The screenshot shows a web interface for 'joytime-admin'. On the left is a red sidebar with a user profile and navigation menu (Home, Manage Content, Manage User, Report). The main content area is titled 'Add New Music!' and contains a form with the following fields: Title (Yummy), Artist (Justin Bieber), Publisher (Nova Music), Category (Latest), Genre (Pop), Language (English), and Music file (Justin Bieber - Yummy (Lyrics).mp3). At the bottom right of the form are 'Back', 'Reset', and 'Submit' buttons.

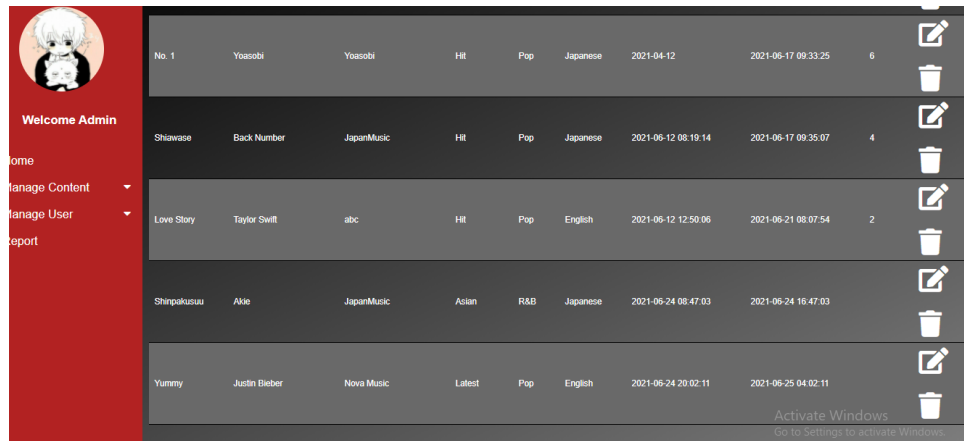
**Figure 4.63 Add music**

- Display message after a succeeded add.



**Figure 4.64 successful add music.**

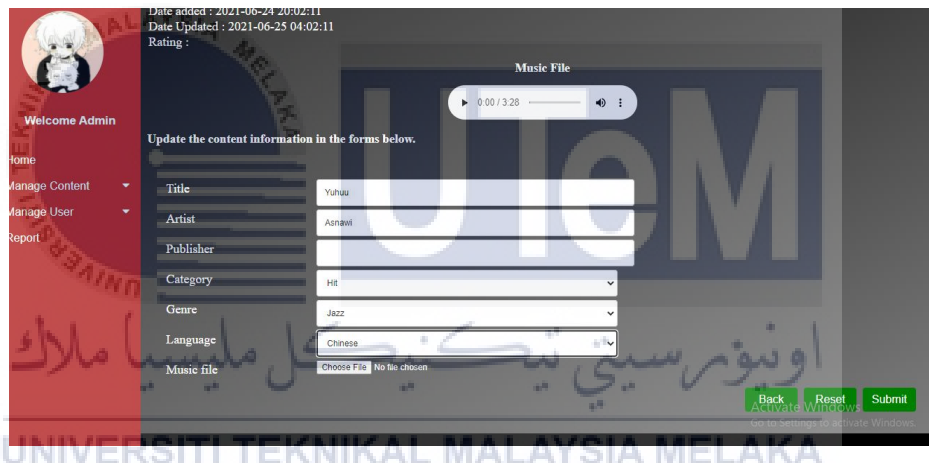
- Edit
- The admin chooses the content to be update.



No	Title	Artist	Genre	Category	Language	Date Added	Date Updated	Rating	Actions
No. 1	Yoasobi	Yoasobi	Hit	Pop	Japanese	2021-04-12	2021-06-17 09:33:25	6	[Edit] [Delete]
Shiawase	Back Number	JapanMusic	Hit	Pop	Japanese	2021-06-12 06:19:14	2021-06-17 09:35:07	4	[Edit] [Delete]
Love Story	Taylor Swift	abc	Hit	Pop	English	2021-06-12 12:50:06	2021-06-21 08:07:54	2	[Edit] [Delete]
Shinpakusuu	Ake	JapanMusic	Asian	R&B	Japanese	2021-06-24 08:47:03	2021-06-24 16:47:03		[Edit] [Delete]
Yummy	Justin Bieber	Nova Music	Latest	Pop	English	2021-06-24 20:02:11	2021-06-25 04:02:11		[Edit] [Delete]

Figure 4.65 main music page

- The admin will insert any data to be updated.



Date added : 2021-06-24 20:02:11  
Date Updated : 2021-06-25 04:02:11  
Rating :

Update the content information in the forms below.

Title: Yuhuu  
Artist: Asnawi  
Publisher: [Empty]  
Category: Hit  
Genre: Jazz  
Language: Chinese

Music file: [Choose File] No file chosen

Buttons: Back, Reset, Submit

Figure 4.66 update music

- Display the updated data.

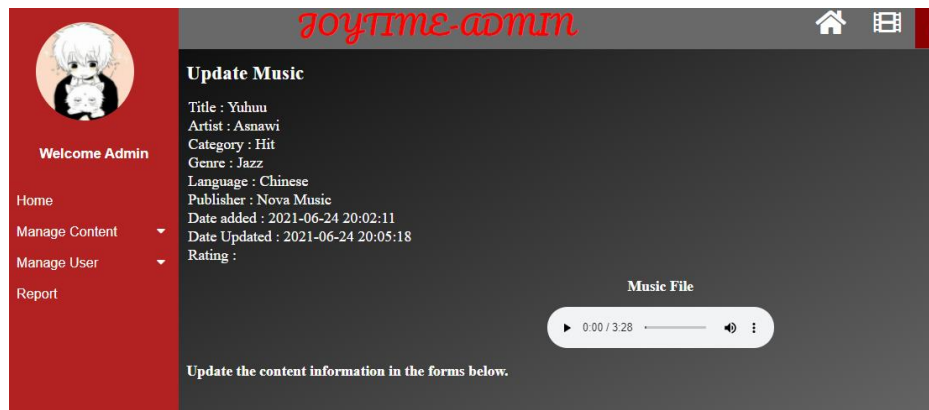


Figure 4.67 updated music data

- Delete
- Admin will choose the file to be delete.



Figure 4.68 Updated music data

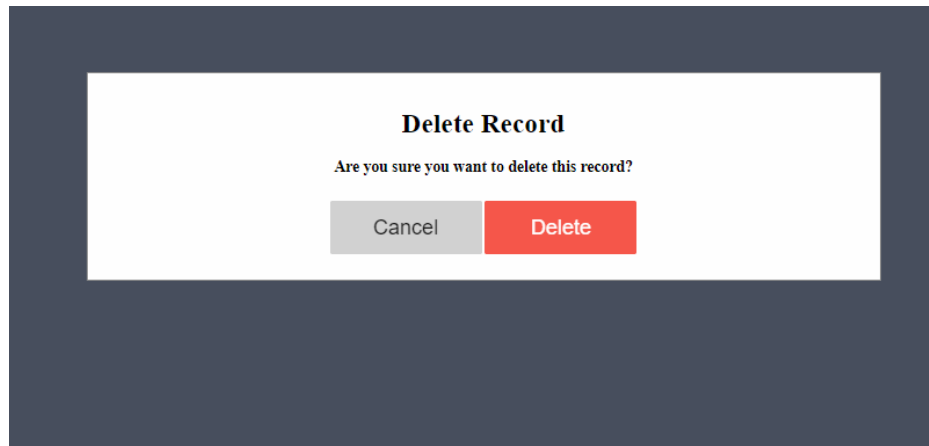


Figure 4.69 Delete modal

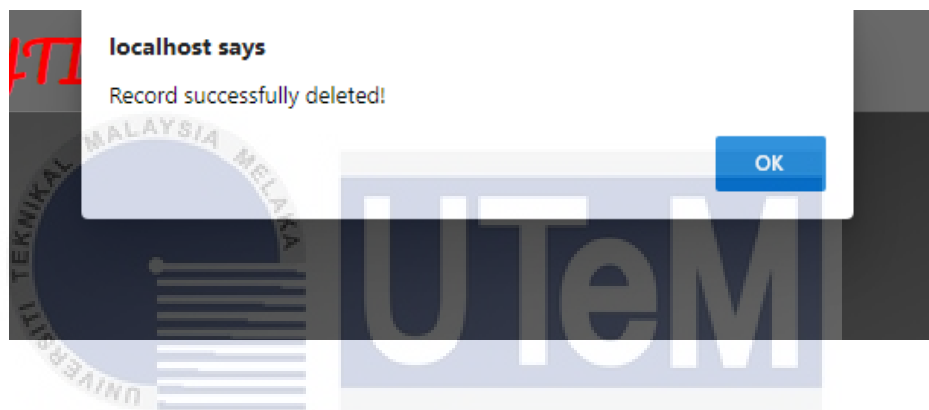


Figure 4.70 Successful delete music

- Book
  - Add

- The admin will insert all the data of the content into the form including the files.

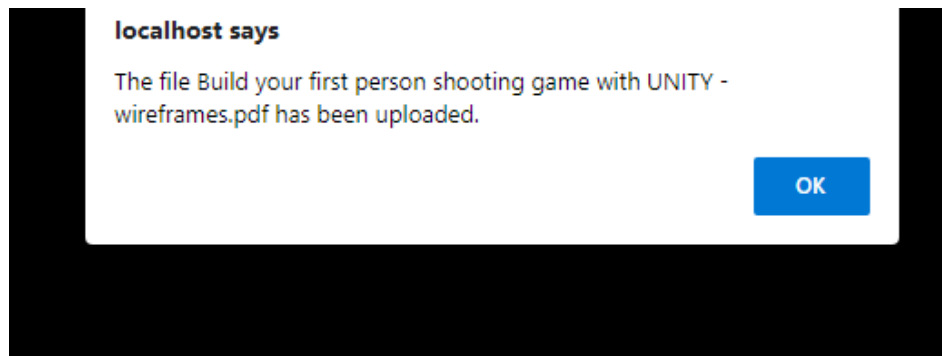
 A web form for adding book data. On the left is a red sidebar with a user profile picture and the text "Welcome Admin". The sidebar menu includes "Home", "Manage Content", "Manage User", and "Report". The main form area has the heading "Add the content information in the forms below." and contains the following fields:
 

Title	Build your first shooting game!
Author	Rezarin
Publisher	FPSbook
Category	Study
Genre	action
Language	English
Summary	About how to make a game!

 At the bottom, there is a "Book file" section with a "Choose File" button and a file name "Build your fi...reframes.pdf". At the bottom right, there are "Back", "Reset", and "Submit" buttons.

Figure 4.71 Add book data

- Display message after a succeeded add.



**Figure 4.72 Successful add book message**

- o Edit

- The admin chooses the content to be update.



**Figure 4.73 Main book page**

- The admin will insert any data to be updated.

Welcome Admin

Home  
Manage Content  
Manage User  
Report

Update the content information in the forms below.

Title: Build your first fps game

Author: \_\_\_\_\_

Publisher: \_\_\_\_\_

Category: Study

Genre: action

Language: English

Book file: Choose File No file chosen

Back Reset Submit

**Figure 4.74 Book edit form data**

- Display the updated data.

joytime-admin

Welcome Admin

Home  
Manage Content  
Manage User  
Report

**Update Book**

Title : Build your first fps game  
Author : Rezerin  
Category : Study  
Genre : action  
Language : English  
Publisher : FPSbook  
Date added : 2021-06-24 20:10:24  
Date Updated : 2021-06-24 20:13:18  
Rating :

Book File

Wireframe  
Build Your Own  
FIRST-PERSON

**Figure 4.75 Edited book data**

### Delete

- Admin will choose the file to be delete.

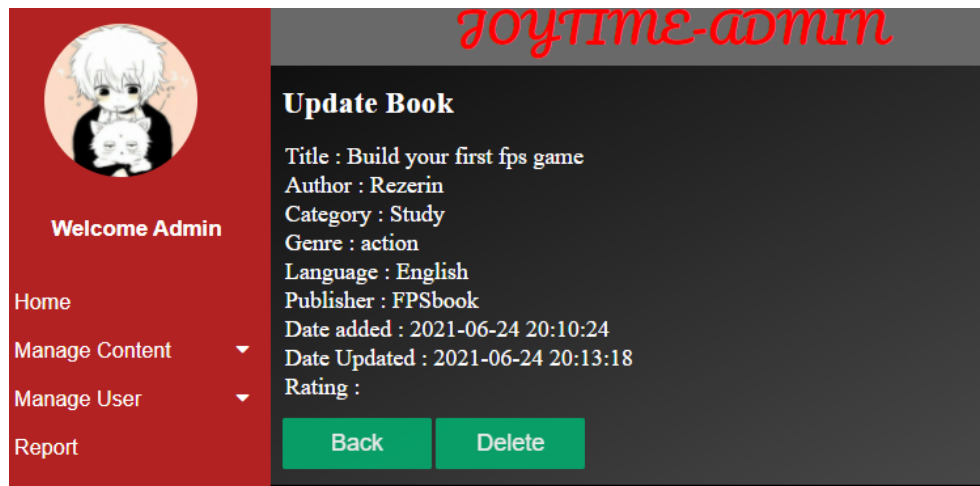


Figure 4.76 Delete book

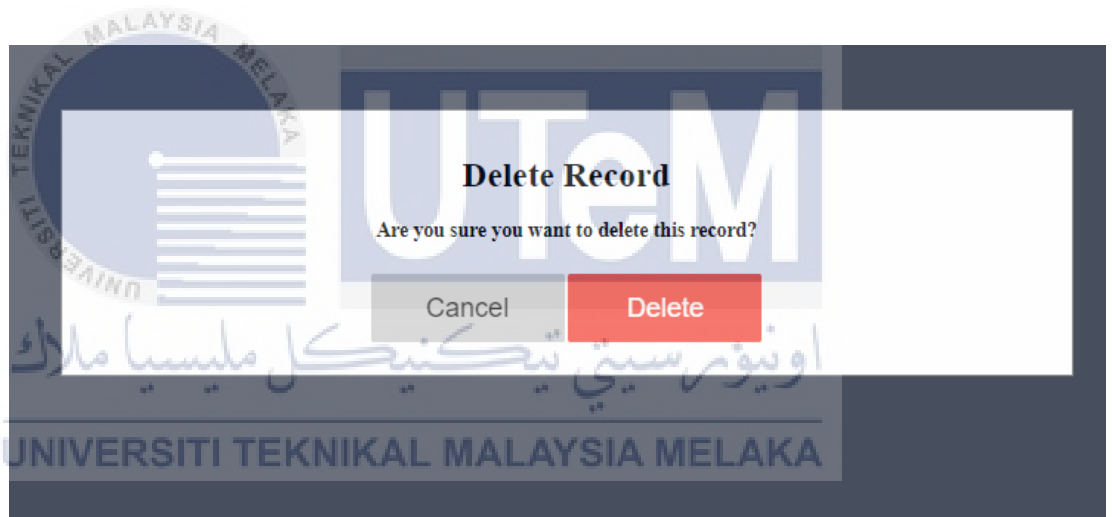
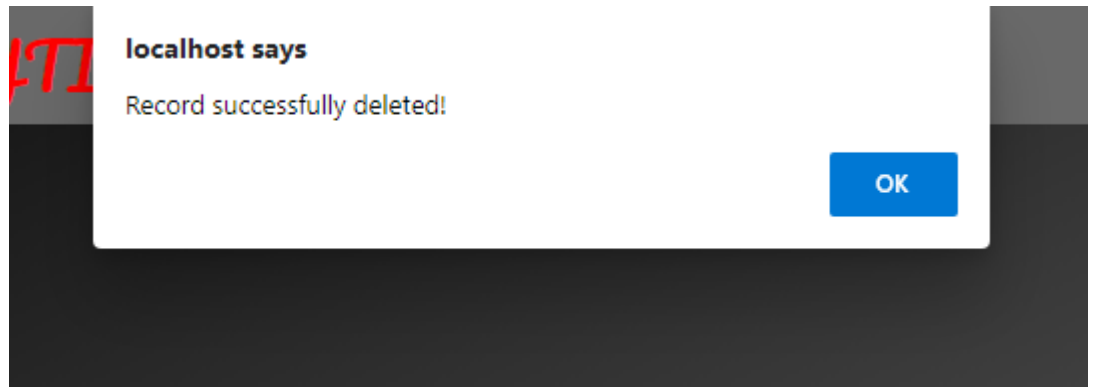


Figure 4.77 Delete modal



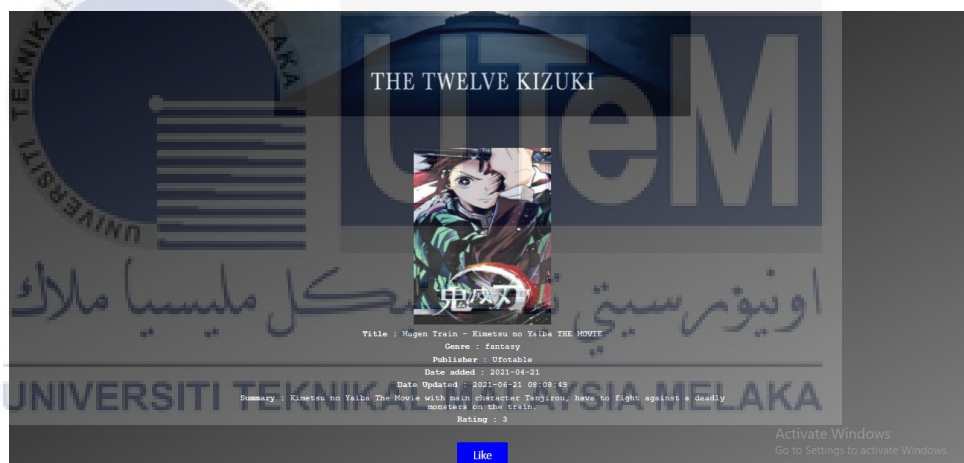


**Figure 4.78 Successful delete message**

#### iv. Rate and rank module

- Rating

- The client can rate the content by click on the 'like' button.



**Figure 4.79 rate**

- The rating will go up after being rated. The user can redo the like by click on the 'unlike' button.

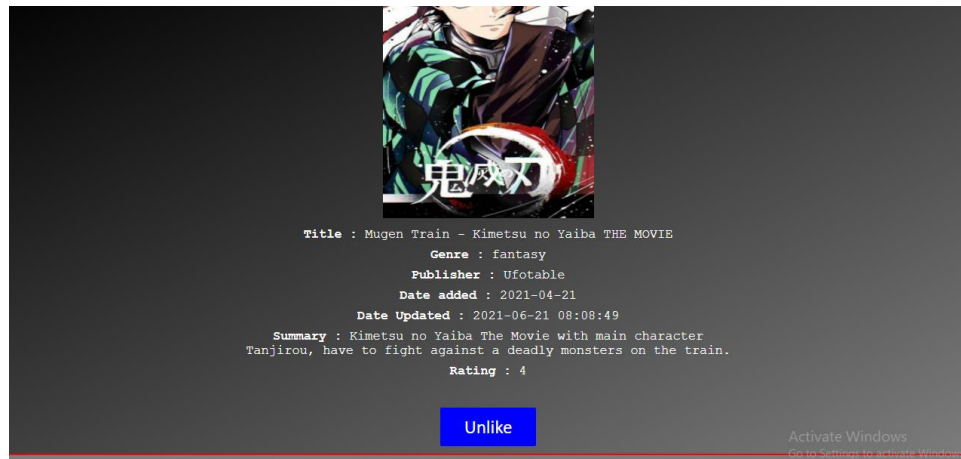


Figure 4.80 undo rate

- Ranking
- The ranking can be seen when the client chooses to sort by rating, the most rating will be rank highest.

Listen Your favourite Music now!!  
 Choose your favourite music!

Sort by:

**Content List**

Title	Artist	Publisher	Upload date	Category	Genre	Language	Rating
Dear God	Avenged Sevenfold	Avenged Sevenfold	2021-04-09	Latest	rock	English	2 <input type="button" value="Listen Now!"/>
Juara Dusta	Ariff Bahran	RUSA	2021-04-14	Asian	Pop	Malay	2 <input type="button" value="Listen Now!"/>
King	Gumi	Kanaria	2021-04-15	Asian	Pop	Japanese	1 <input type="button" value="Listen Now!"/>
Love Story	Taylor Swift	abc	2021-06-12 12:50:06	Hit	Pop	English	2 <input type="button" value="Listen Now!"/>
No. 1	Yoasobi	Yoasobi	2021-04-12	Hit	Pop	Japanese	6 <input type="button" value="Listen Now!"/>
Shiawase	Back Number	JapantMusic	2021-06-12 08:19:14	Hit	Pop	Japanese	4 <input type="button" value="Listen Now!"/>

Figure 4.81 before ranked

**Listen Your favourite Music now!!**  
Choose your favourite music!

Sort by: Alphabetical

**Content List - Sorted for "rating"**

Title	Artist	Publisher	Upload date	Category	Genre	Language	Rating
No. 1	Yosobi	Yosobi	2021-04-12	Hit	Pop	Japanese	6 <input type="button" value="Listen Now"/>
Shiawase	Back Number	JapanMusic	2021-06-12 08:19:14	Hit	Pop	Japanese	4 <input type="button" value="Listen Now"/>
Tabun	Yosobi	Yosobi	2021-04-25	Asian	R&B	Japanese	2 <input type="button" value="Listen Now"/>
Juara Dusta	Ariff Bahran	RUSA	2021-04-14	Asian	Pop	Malay	2 <input type="button" value="Listen Now"/>
Dear God	Avenged Sevenfold	Avenged Sevenfold	2021-04-09	Latest	rock	English	2 <input type="button" value="Listen Now"/>
Love Story	Taylor Swift	abc	2021-06-12 12:50:06	Hit	Pop	English	2 <input type="button" value="Listen Now"/>

**Figure 4.82 after ranked**

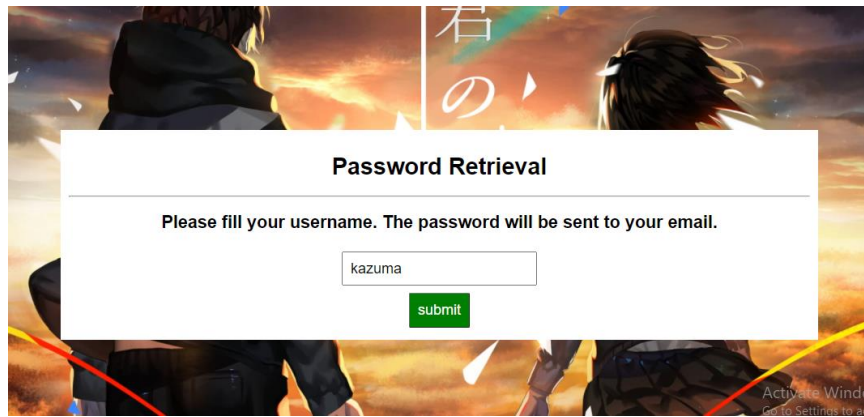
**v. Forgot password module.**

- Retrieve link.

- The user will click on the forgot password button.

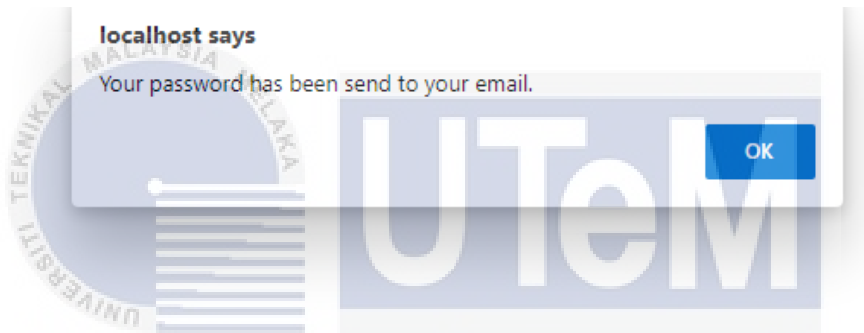


**Figure 4.83 Forgot password link**



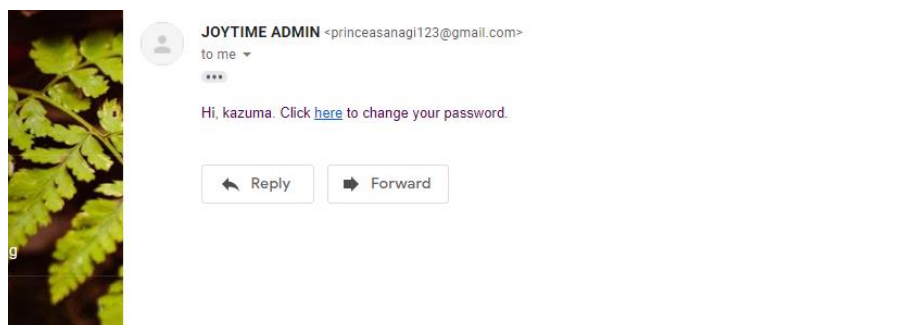
**Figure 4.84 Username input for forgot password**

- The user will receive email from the system.



**Figure 4.85 Email send message**

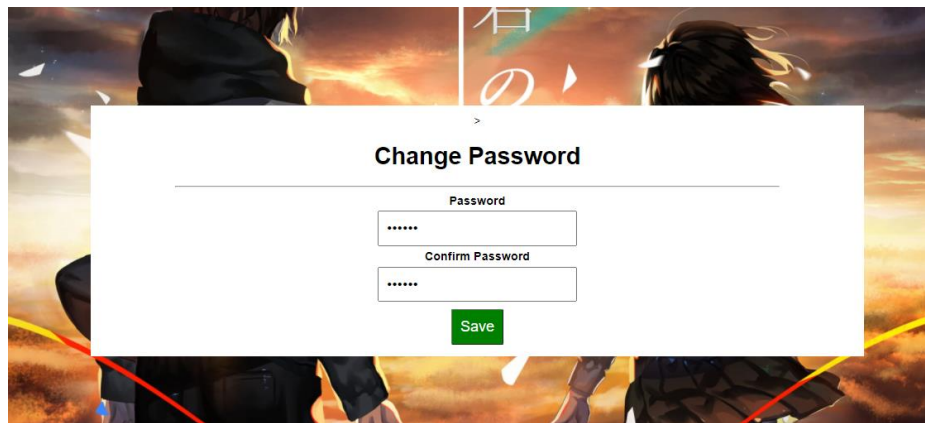
UNIVERSITI TEKNIKAL MALAYSIA MELAKA



**Figure 4.86 Email with link**

- Change Password

- The user can change their password.

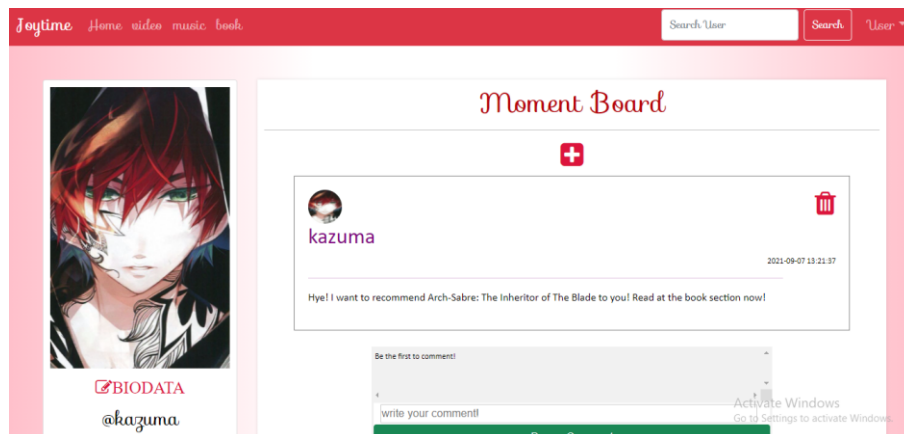
A screenshot of a web application's 'Change Password' form. The form is centered on a white background with a dark, anime-style background image. It features two input fields: 'Password' and 'Confirm Password', both containing six asterisks. A green 'Save' button is positioned below the second field. The title 'Change Password' is displayed in bold black text at the top of the form.

**Figure 4.87 Change password form**

A screenshot of a login form for 'UTeM' (Universiti Teknikal Malaysia Melaka). The form is overlaid on a background image featuring the university's logo and name in both English and Malay. The login fields are filled with 'kazuma' for the username and six asterisks for the password. A green 'Login' button and a red 'Cancel' button are visible. Below the buttons, there is a checked 'Remember me' checkbox and a link for 'Forgot password?'. The university's name 'UNIVERSITI TEKNIKAL MALAYSIA MELAKA' is also visible in the background.

**Figure 4.88 After successful update password**

- The password will be updated automatically.



**Figure 4.89 Successful login attempt with new password**

## vi. User management module

### i. View user

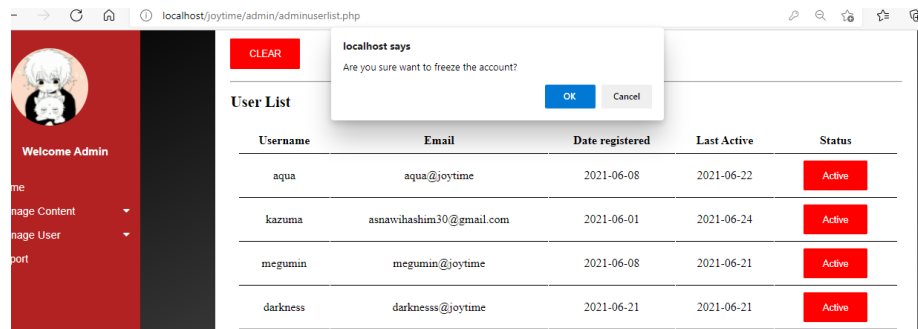
- Admin can view the user in form of list.

Username	Email	Date registered	Last Active	Status
aqua	aqua@joytime	2021-06-08	2021-06-22	Active
kazuma	asnawihashim30@gmail.com	2021-06-01	2021-06-24	Active
megumin	megumin@joytime	2021-06-08	2021-06-21	Active
darkness	darknesss@joytime	2021-06-21	2021-06-21	Active
wiz	wiz@joytime	2021-06-11	2019-06-15	Inactive
yunyun	yunyun@joytime	2021-06-22	2021-06-15	Frozen
kirito	kirito@joytime	2021-04-22	2021-06-21	Active

**Figure 4.90 User list**

### ii. Change status

- By clicking on the status button, as example the first red button, it will make the account to be frozen.



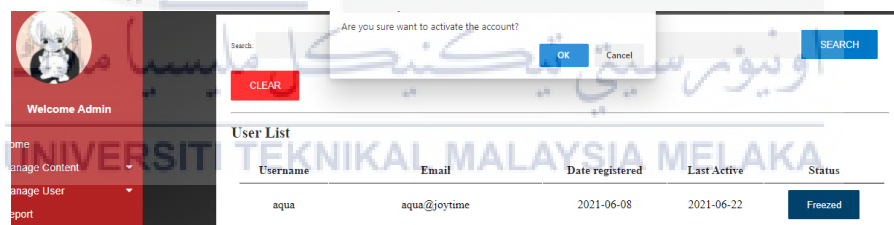
**Figure 4.91** click on active user to be freeze

User List

Username	Email	Date registered	Last Active	Status
aqua	aqua@joytime	2021-06-08	2021-06-22	Freezed

**Figure 4.92** the user status changed to freeze.

- By clicking the freeze button, the user will become active again.



**Figure 4.93** Click at the freeze account

User List

Username	Email	Date registered	Last Active	Status
aqua	aqua@joytime	2021-06-08	2021-06-22	Active

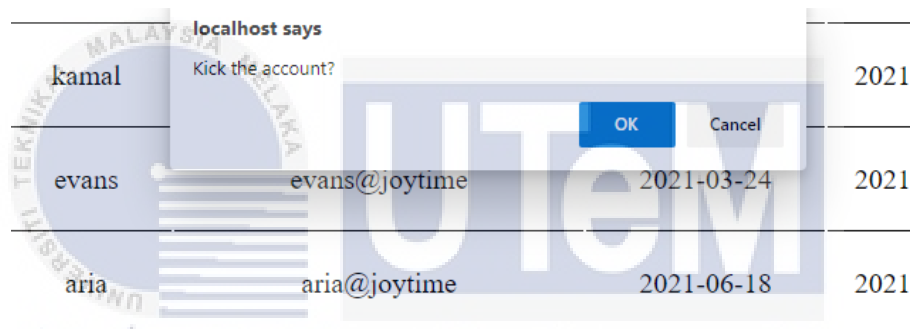
**Figure 4.94** The account returns to active

### iii. Delete User

- The admin can delete any user with status 'inactive' which are considered did not used the account for a long time.

quinn	quinn@joytime	2021-06-22	2021-06-22	Active
eva	eva@joytime	2021-06-22	2021-06-22	Active
james	james@gmail.com	2021-06-24	2012-06-24	Inactive

**Figure 4.95 Inactive user to be delete**



**Figure 4.96 Delete account confirmation message**

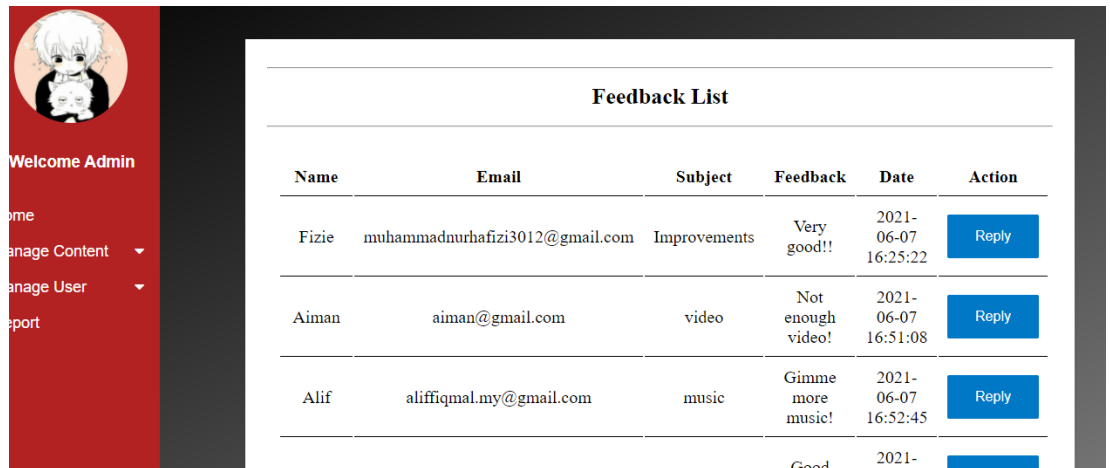


**Figure 4.97 Successful delete account**

### iv. Reply Feedback

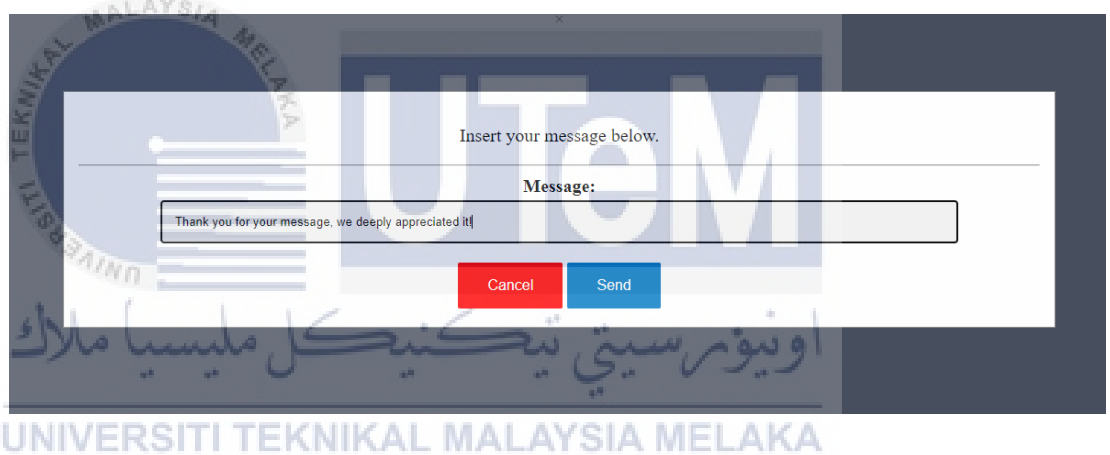
- Admin can reply to the message from the users.





Name	Email	Subject	Feedback	Date	Action
Fizie	muhammadnurhafizi3012@gmail.com	Improvements	Very good!!	2021-06-07 16:25:22	<a href="#">Reply</a>
Aiman	aiman@gmail.com	video	Not enough video!	2021-06-07 16:51:08	<a href="#">Reply</a>
Alif	aliffiqmal.my@gmail.com	music	Gimme more music!	2021-06-07 16:52:45	<a href="#">Reply</a>
			Good	2021-	<a href="#">Reply</a>

**Figure 4.98 Feedback list**



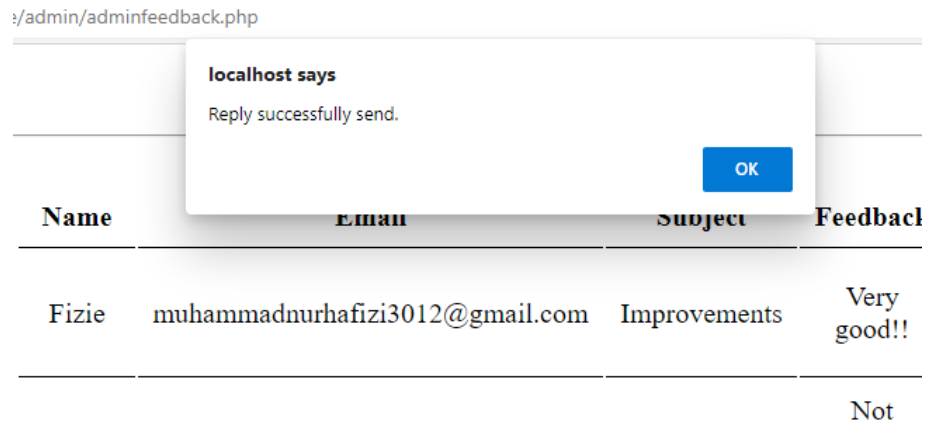
Insert your message below.

Message:

Thank you for your message, we deeply appreciated it!

[Cancel](#) [Send](#)

**Figure 4.99 reply feedback modal**



**Figure 4.100 Successful reply feedback message**

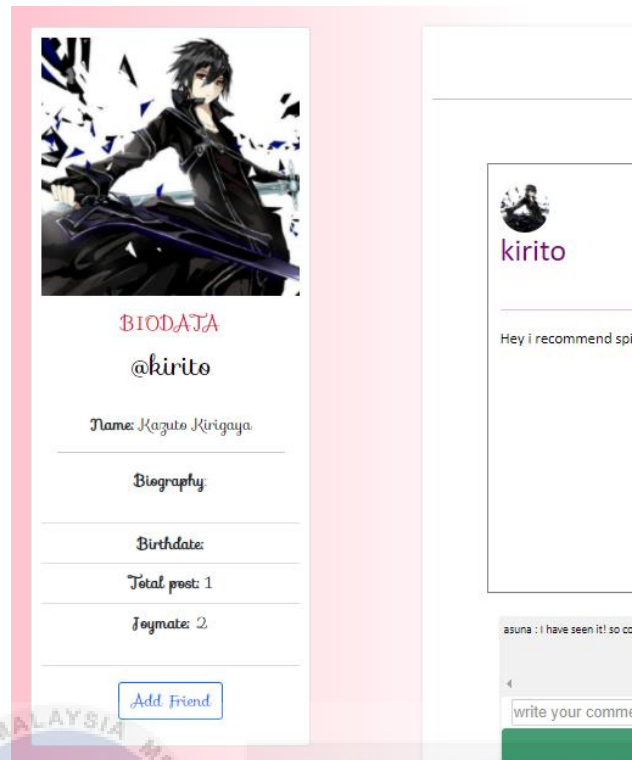
**vii. Friend**



**Figure 4.101 Friend**

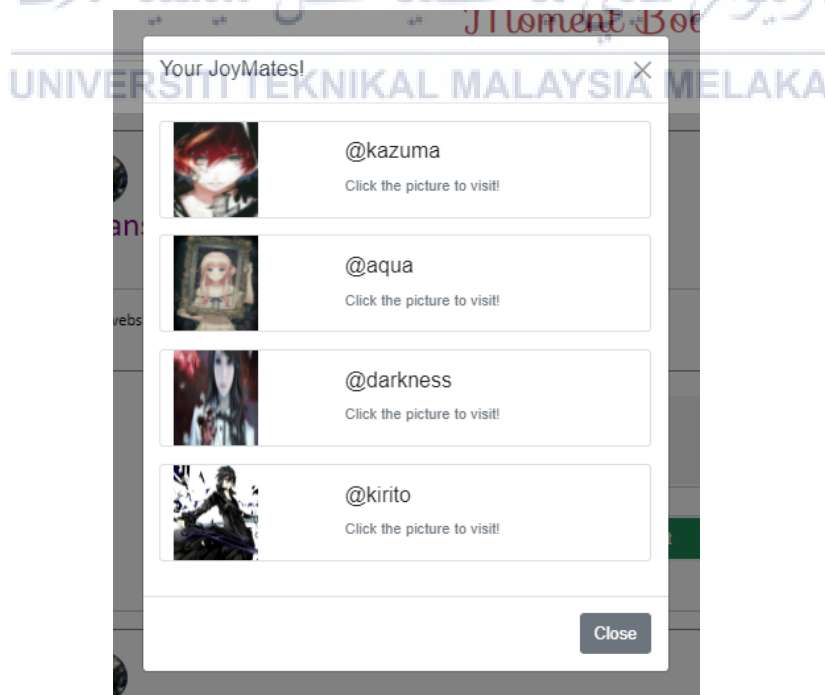
Figure 4.101 show the list of friends the user has at the time being.

- **Add friend**



**Figure 4.102 Add button user profile**

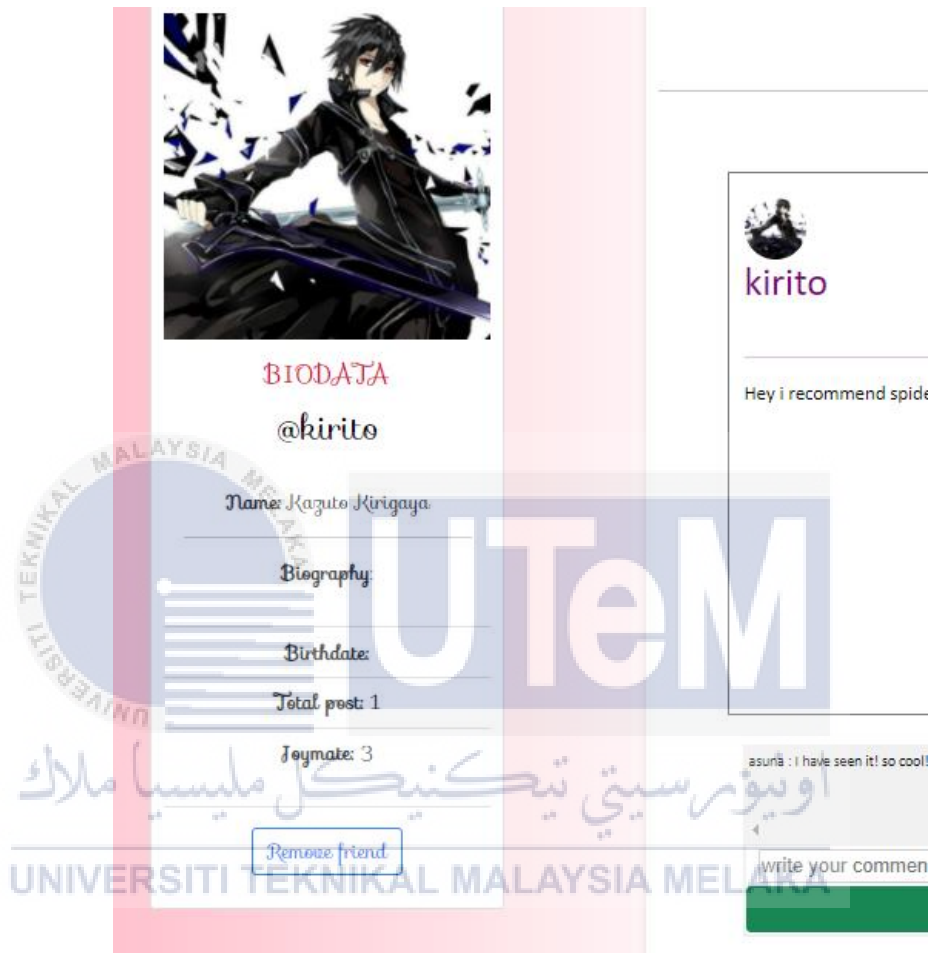
Figure 4.102 shows the profile of another user that the user wants to add as friend. The user will click on the blue add friend button.



**Figure 4.103 Friend list after add**

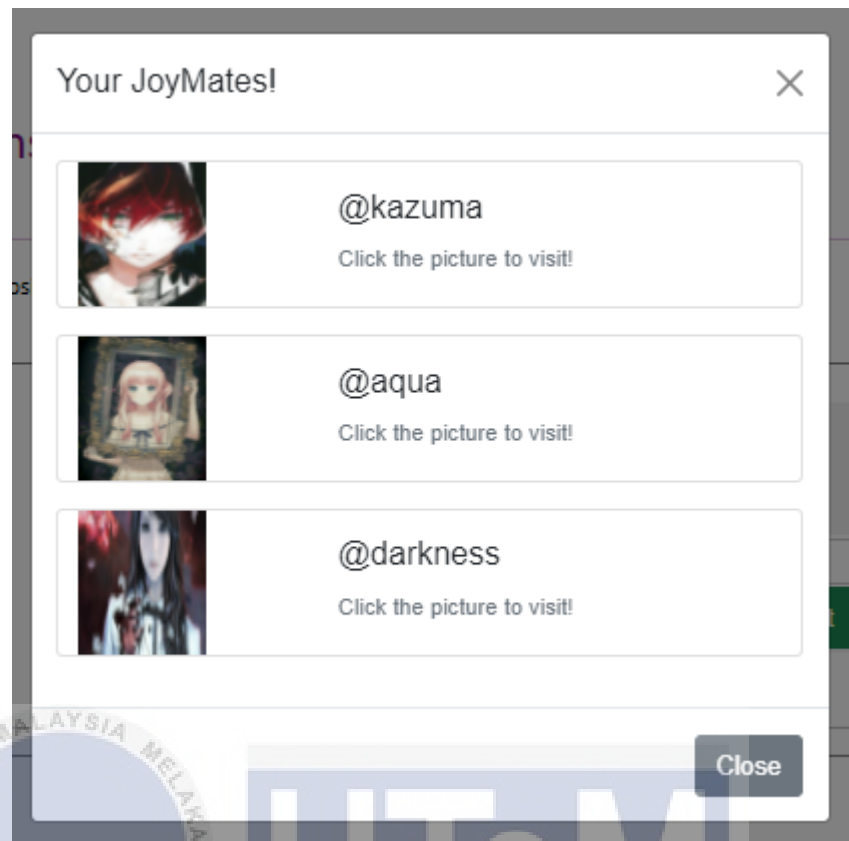
Figure 4.103 show after the user has confirmed to add another user as friend, the list will be updated.

- **Remove friend**



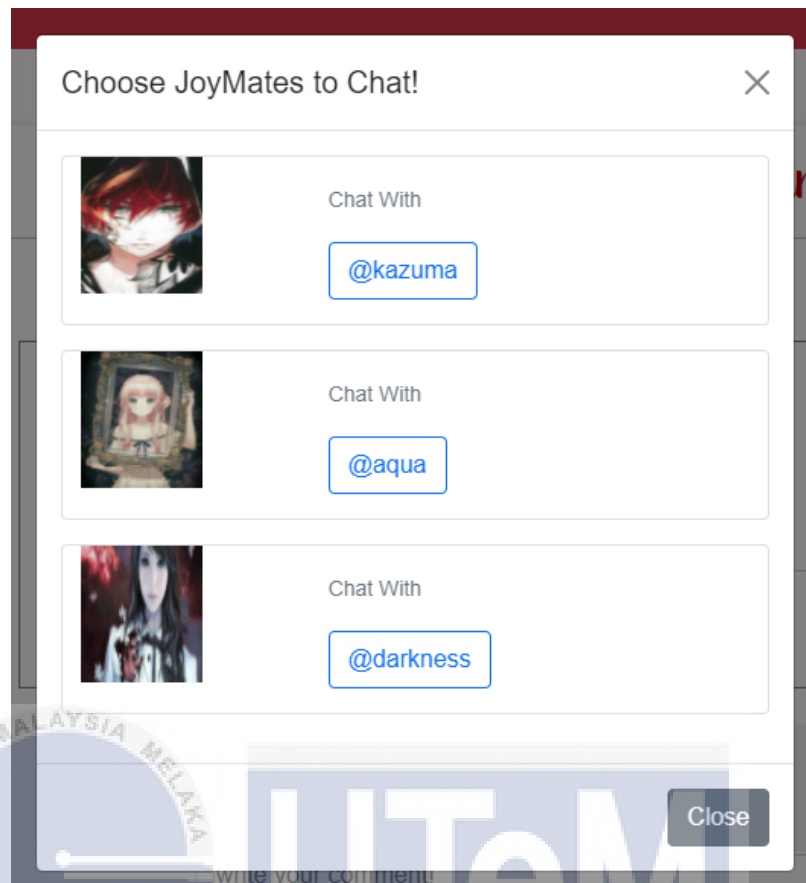
**Figure 4.104 Remove friend button**

Figure 4.104 shows the profile of another user that has been added as friend. The user will click on the remove friend button to remove the user from their friend list.



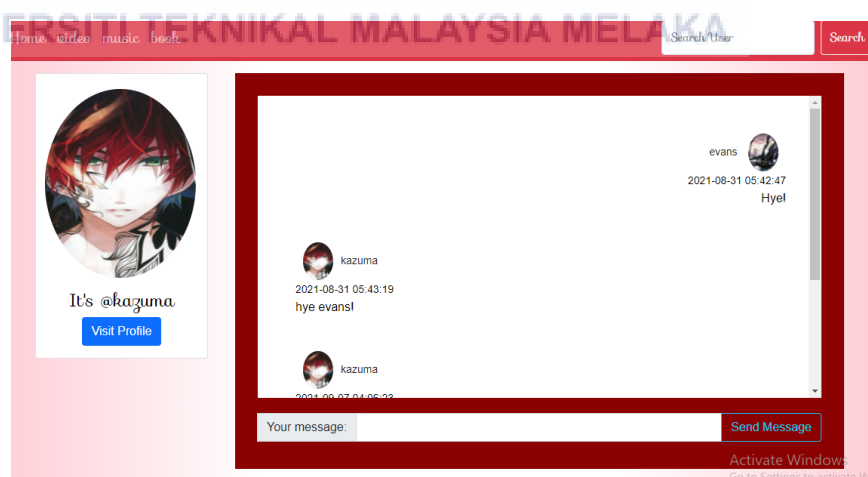
**Figure 4.105 Friend list after removed**

Figure 4.105 show the updated list after the user have been removed from the friend list.



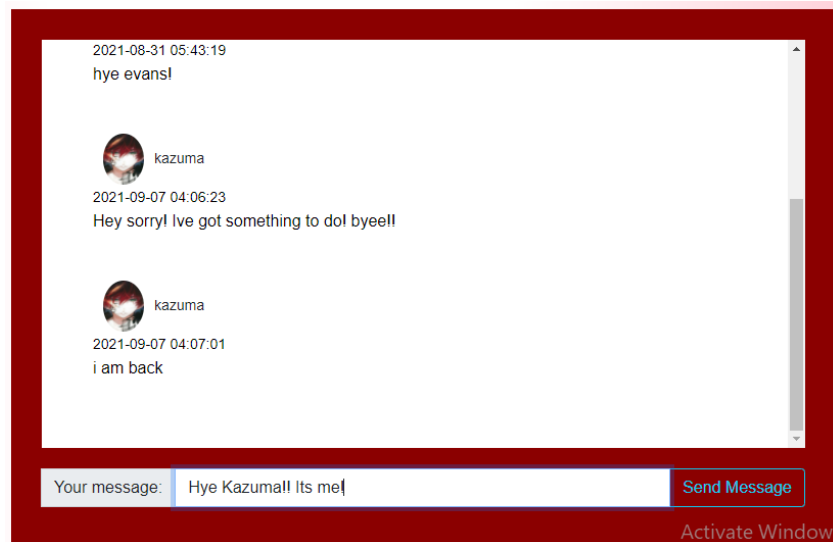
**Figure 4.106 Friend to chat**

Figure 4.106 show the list of users to be chat with.



**Figure 4.107 Chat Page**

Figure 4.107 shows the list chat page after choosing a friend to chat. The page displays the chat between the users.



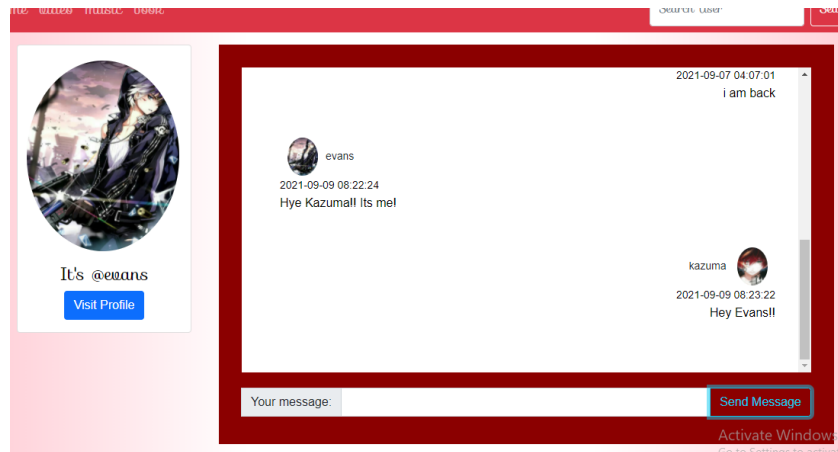
**Figure 4.108 Chat Box**

Figure 4.108 shows right before user send message to another user.



**Figure 4.109 Update message**

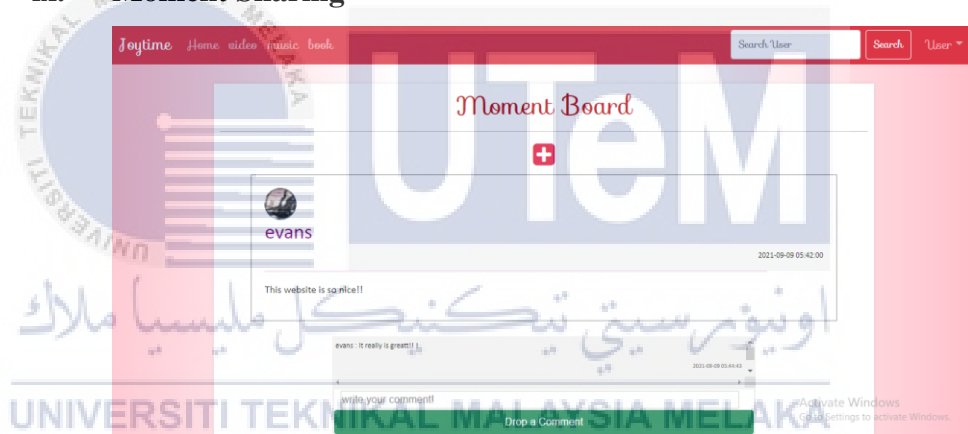
Figure 4.109 shows the chat that display the message that has been send to the friend.



**Figure 4.110 Friend account**

Figure 4.110 show the send messages from the friend account perspectives.

### ix. Moment Sharing



**Figure 4.111 Moment page**

Figure 4.111 shows the main page for moment sharing. The “+” icon is for add new post.

- **Add post**



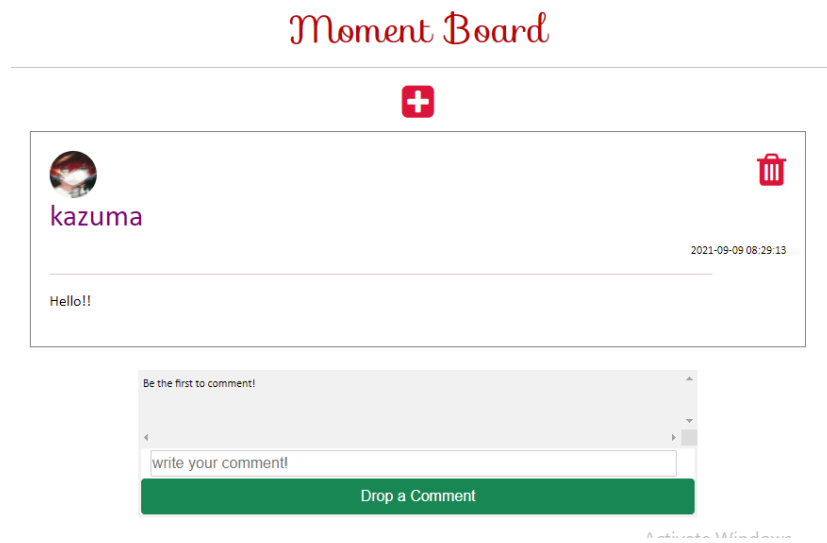
**Figure 4.112 Add post modal**

Figure 4.112 shows after the “+” icon have been clicked; the user can enter their post to be update on the moment board.

**Figure 4.113 Posted moment**

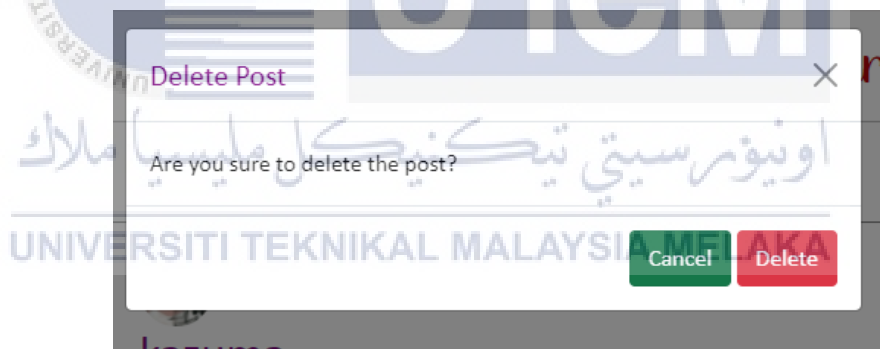
Figure 4.113 shows the updated moment board after the user have add new post.

- **Remove post**



**Figure 4.114 Trash button on moment**

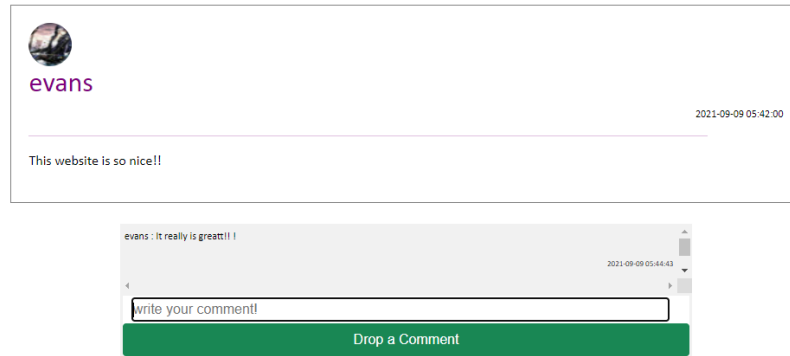
Figure 4.114 shows the post that with trash icon to remove post that can be seen only at profile page moment's board.



**Figure 4.115 Confirm delete modal**

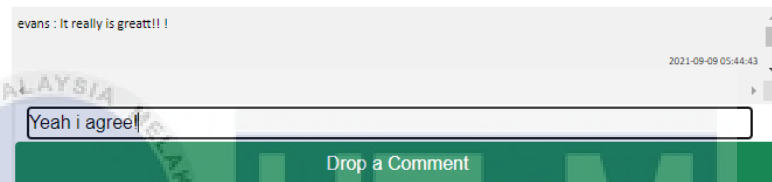
Figure 4.115 shows the confirmation modal to delete the post. Upon clicking delete button, the post will be removed from the database and system.

- **Comment**



**Figure 4.116 Comment box**

Figure 4.116 shows the comment section on every post.



**Figure 4.117 Input for comment box**

Figure 4.117 shows the situation before the user send a comment on a post.



**Figure 4.118 Updated comment**

Figure 4.118 shows the comment that have been send to the post.

### 4.3.2 Physical Database Design

The conversion of data gathered during the logical design phase are done in physical design process where a phase from the logical design is changed to a detailed description of the physical database including the tables and constraints. The security



implementation where everything about implementation of the system will be detailed greater.



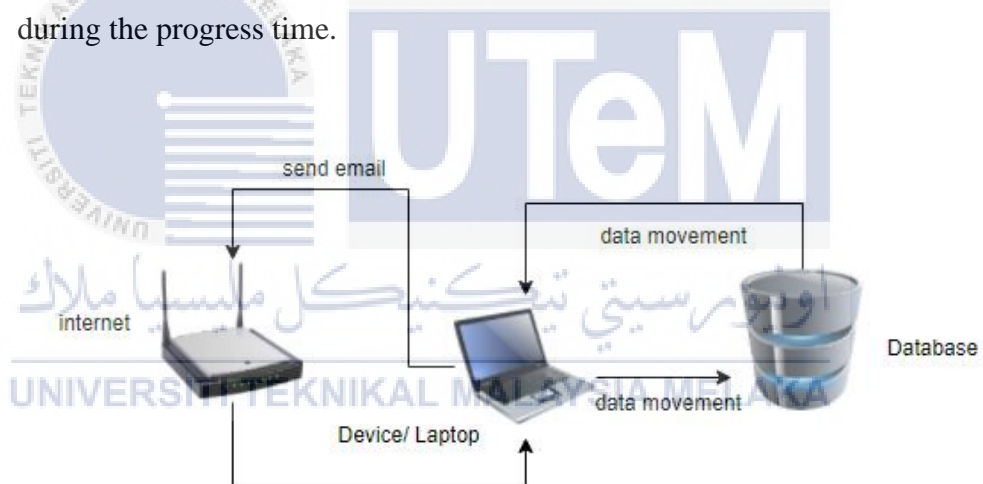
## CHAPTER 5: IMPLEMENTATION

### 5.1 Introduction

This section will be detailed about the implementation of this system, JOYTIME. It shall cover about the software development setup, software configuration management and implementation status of every module.

### 5.2 Software Development Environment Setup

The illustration below shows how the system has been developed and work during the progress time.



**Figure 5.1 Software development diagram**

### 5.3 Software Configuration Management

This section will go over all the software that was utilized to support the configuration control that was needed for this project.

### 5.3.1 Configuration Environment Setup

Laragon is the program that is used extensively during this stage's execution. You must first install this program or application to obtain access to phpMyAdmin. Laragon is a portable, isolated, fast, and powerful universal programming environment for PHP, Node.js, Python, Java, Go, and Ruby. It's compact, lightweight, easy to use, and extensible.



Figure 5.2 Laragon icon

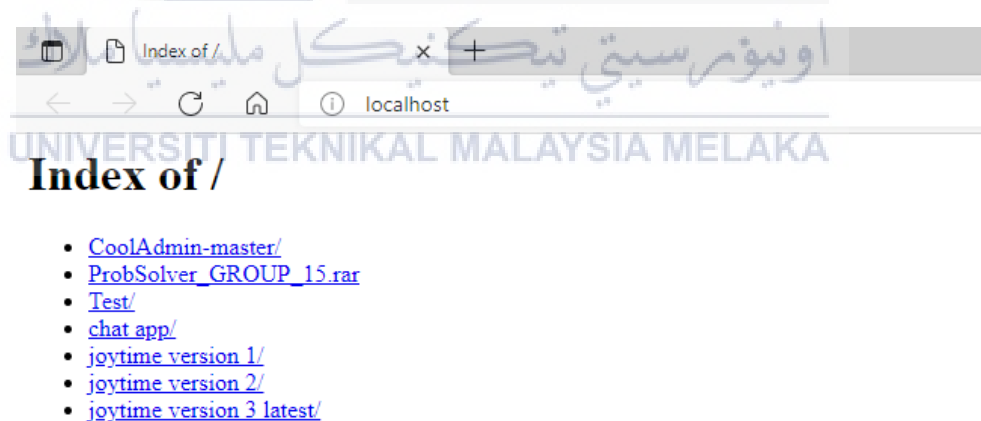
Sublime Text 3 was used to create the source code and edit it. Sublime Text 3 (ST3) is a cross-platform, lightweight code editor that is recognized for its speed, ease of use, and strong community support. It's a fantastic editor out of the box, but the true strength comes from the ability to customize it using Package Control and custom settings.



**Figure 5.3 Sublime text 3 icon**

### 5.3.2 Version Control Procedure

The development log may be accessed using the localhost address. JOYTIME has been changed and updated several times, so it has several version to differentiate between the old and new one.



**Figure 5.4 Version of JOYTIME**

### 5.4 Conclusion

For the successful creation of a JOYTIME system, the implementation step or phase is required. The system is created exactly in line with the criteria, notably the time range and result, thanks to the methodical methodology for setting up the system environment and versioning control. Correct installation and setup processes help the



project prevent technical issues with the software program, which can cause delays in development. The next chapter will explain the list of testing for the system.



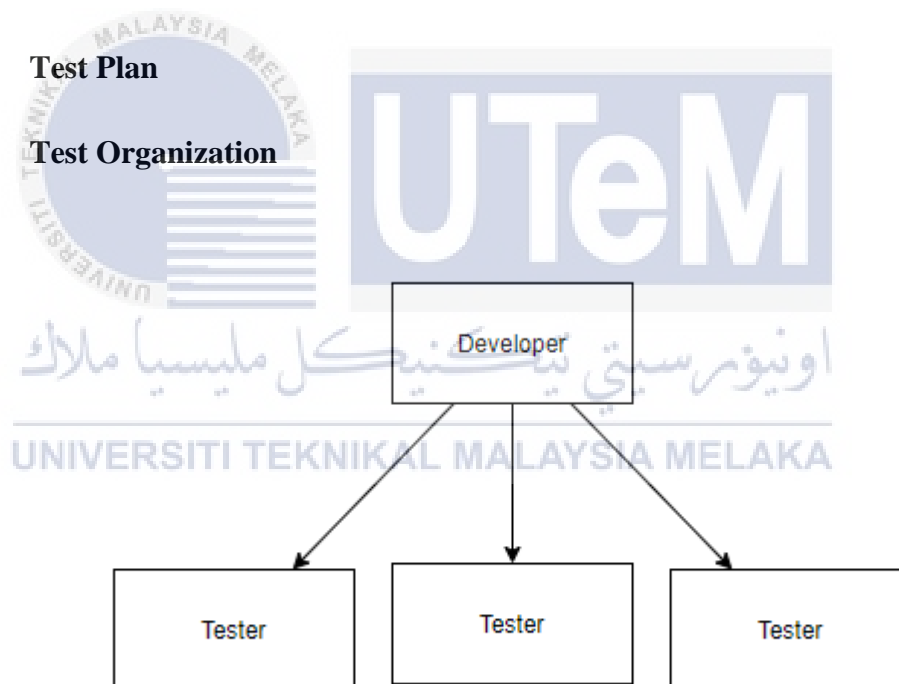
## CHAPTER 6: TESTING

### 6.1 Introduction

The details of the test plan are revealed in this chapter, which includes descriptions of the test organisation, test environment, and test timetable. In terms of test classes, it also specifies the testing technique. The test design, which includes test description and test results, follows the chapter.

### 6.2 Test Plan

#### 6.2.1 Test Organization



**Figure 6.1 Test organization diagram**

Based on figure 6.1, it shows the test organization which consists of a developer and several testers. Everyone engaged in the system's testing phase will be identified and characterized by the testing organisation. The four fundamental testing methodologies that will be utilized during the testing process are unit testing, integration testing, system testing, and user acceptability testing. The above-

mentioned testing procedure would be carried out by a separate individual to minimize bias evaluation and other problems. Due to the case of Pandemic, the system has been tested by close friends and classmates.

### **6.2.2 Test Environment**

All testing is done in the development environment, including unit testing, integration testing, and system testing. As a result, the hardware specifications and firmware settings of personal computers are identical to those used in development environments.

## **6.3 Test Strategy**

The test approach used during the testing phase is discussed in this section. A test strategy is a well-structured set of phases that ensures software testing success by combining several sorts of test case creation techniques.

### **6.3.1 White Box Testing**

White Box Testing is a software evaluating approach that involves testing the product's underlying structure, architecture, and code in order to validate input-output flow and enhance design, usability, and security. White box testing is also known as Clear box testing, Open box testing, Transparent box testing, Code-based testing, and Glass box testing since the code is visible to the testers.

### **6.3.2 Black Box Testing**

Black Box Testing is a software testing approach that involves testing the functionality of software applications without knowing the internal code structure, implementation details, or internal pathways. Black Box Testing is a type of software testing that focuses on the input and output of software applications and is fully driven by software requirements and specifications.

### **6.3.3 Test Classes**

Following the acceptance of a set of appropriate input, a functionality test is run to see if the stated system features are operating as intended and providing accurate

output. Various way to test a system is known throughout the world. The testing strategy used by testers and developers helps them execute and perform unit, integration, and system testing.

### **6.3.3.1 Unit Testing**

Unit testing is a form of software testing that examines individual units or operations. Its main goal is to thoroughly test each unit or function. A unit is the smallest portion of an application that can be tested. It often has one or a few inputs and only one output.

### **6.3.3.2 Integration Testing**

Individual software modules are integrated and assessed as a group during the integration testing phase of software testing. Integration testing is used to assess a system's or component's compliance with stated functional requirements.

### **6.3.3.3 System Testing**

System testing is a type of testing that is done on an entire integrated system to see if it meets its criteria. All integrated modules that have undergone integration testing are sent into system testing.

### **6.3.3.4 User Acceptance Testing**

The final stretch of any software development life cycle is user acceptance testing (UAT). This is when actual users put the software through its paces to determine if it can do the functions it was created to handle in real-world scenarios. UAT testers are responsible for ensuring that modifications were done in accordance with the original specifications.

## **6.4 Test Design**

Test design is a method for defining “how” testing must be carried out. It contains procedures for identifying test cases by listing the stages of the stated test criteria. Test objectives, strategy objectives, and stakeholder definitions of success are among the goals.

## 6.4.1 Unit Testing

Individual testing parts of an application, referred to as units, are reviewed individually and independently for correct operation during unit testing.

### 6.4.1.1 Authentication

(a) Register

**Table 6.1 Register Unit Testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT001	Fill all the text field and choose date and click sign up.	Positive	First name: "Ahmad" Last name: "Adi" Birthdate: "07/02/2018" Email: "adi123@gmail.com" Username: "adi" Password: "adi1234" Password confirmation: "adi1234"	The system displays successful register notification box.	The system displays successful register notification box.	Pass
JUT002	Fill all the text except the date and click sign up.	positive	First name: "Ahmad" Last name: "Adi" Birthdate: - Email: "adi123@gmail.com" Username: "adi" Password: "adi1234" Password confirmation: "adi1234"	The system displays successful register notification box.	The system displays successful register notification box.	Pass

JUT003		negative	<p>First name: -</p> <p>Last name: "Adi"</p> <p>Birthdate: 05/09/2021</p> <p>Email: "adi123@gmail.com"</p> <p>Username: "adi"</p> <p>Password: "adi1234"</p> <p>Password confirmation: "adi1234"</p>	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT004	Fill some of the field including date and leave only one text field empty and click sign up.	negative	<p>First name: "Ahmad"</p> <p>Last name: -</p> <p>Birthdate: 05/09/2021</p> <p>Email: "adi123@gmail.com"</p> <p>Username: "adi"</p> <p>Password: "adi1234"</p> <p>Password confirmation: "adi1234"</p>	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT005		negative	<p>First name: "Ahmad"</p> <p>Last name: "Adi"</p> <p>Birthdate: 05/09/2021</p> <p>Email: -</p> <p>Username: "adi"</p> <p>Password: "adi1234"</p>	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass

			Password confirmation: "adi1234"			
JUT006			First name: "Ahmad" Last name: "Adi" Birthdate: 05/09/2021 Email: "adi123@gmail.com" Username: - Password: "adi1234" Password confirmation: "adi1234"	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT007		negative	First name: "Ahmad" Last name: "Adi" Birthdate: 05/09/2021 Email: "adi123@gmail.com" Username: "adi" Password: - Password confirmation: "adi1234"	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT008		negative	First name: "Ahmad" Last name: "Adi" Birthdate: 05/09/2021 Email: "adi123@gmail.com"	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass

			Username: "adi" Password: "adi1234" Password confirmation: -			
JUT009	Leave all text field empty except date and click sign up.	negative	First name: - Last name: - Birthdate: 05/09/2021 Email: - Username: - Password: - Password confirmation: -	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT010	Leave all text field empty and click sign up.	negative	-	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass

(b) Sign in

**Table 6.2 Sign in unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT011	Fill all the text field.	Positive	Username: "kazuma" Password: "123"	The user directly sends to the profile page.	The user directly sends to the profile page.	Pass
JUT012	Fill only the username field	negative	Username: "kazuma"	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass



JUT013	Fill only the password field	negative	Password: "123"	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT014	Fill nothing on the field.	negative	-	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass

## (c) Admin

## 6.4.1.1.1.1 Video

## 6.4.1.1.1.1.1 Add

**Table 6.3 Admin add video unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT015	Fill all the text field.	Positive	Title: "Venom" Publisher: "Marvel" Category: "movie" Genre: "action" Language: "English" Summary: "I am venom" Poster File: "venomposter.jpg" Video File: "Venom.mp4"	The data successfully added notification displayed.	The data successfully added notification displayed.	Pass
JUT016	Leave only one or more field empty	negative	Title: "Venom" Publisher: "Marvel" Category: "movie" Genre: "action" Language: "English" Summary: "I am venom" Poster File: "venomposter.jpg" Video File: -	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT017	Leave all field empty	negative	-	An error to fill the empty	An error to fill the empty	Pass

				space appeared.	space appeared.	
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#### 6.4.1.1.1.2 Update

**Table 6.4 Admin update video unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT018	Fill all the text field.	Positive	Title: "Venom2" Publisher: "Marvel Studio" Category: "drama" Genre: "horror" Language: "chinese" Summary: "I am venom movie two" Poster File: "venomposter2.jpg" Video File: "Venom2.mp4"	The data successfully update notification displayed.	The data successfully update notification displayed.	Pass
JUT019	Leave only one or more field empty	Positive	Title: "Venom" Publisher: - Category: "movie" Genre: "action" Language: "English" Summary: "I am venom" Poster File: "venomposter.jpg" Video File: "Venom2.mp4"	The data successfully update notification displayed.	The data successfully update notification displayed.	Pass
JUT020	Leave all field empty	negative	-	No update notification displayed.	No update notification displayed.	Pass

#### 6.4.1.1.1.3 Delete

**Table 6.5 Video delete unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT021	Press Delete button	Positive	-	The data successfully deleted	The data successfully deleted notification displayed.	Pass

				notification displayed.		
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## 6.4.1.1.1.2 Music

## 6.4.1.1.1.2.1 Add

**Table 6.6 Music adds unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT022	Fill all the text field.	Positive	Title: "Leave the door open" Artist: Bruno mars Publisher: "RusaMusic" Category: "latest" Genre: "jazz" Language: "English" Music File: "leavethedooropen.mp3"	The data successfully added notification displayed.	The data successfully added notification displayed.	Pass
JUT023	Leave only one or more field empty	negative	Title: "Leave the door open" Artist: Bruno mars Publisher: - Category: - Genre: "jazz" Language: "English" Music File: "leavethedooropen.mp3"	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT024	Leave all field empty	negative	-	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass

## 6.4.1.1.1.2.2 Update

**Table 6.7 Music update unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT025	Fill all the text field.	Positive	Title: "Leave the door open edited" Artist: Bruno mars and friend	The data successfully update	The data successfully update	Pass

			Publisher: "Tiger Music" Category: "asian" Genre: "rock" Language: "English" Music File: "loveyou3000.mp3"	notification displayed.	notification displayed.	
JUT026	Leave only one or more field empty	positive	Title: - Artist: Bruno mars Publisher: "Tiger Music" Category: - Genre: "jazz" Language: "English" Music File: "loveyou3000.mp3"	The data successfully update notification displayed.	The data successfully update notification displayed.	Pass
JUT027	Leave all field empty	negative	-	No update notification displayed.	No update notification displayed.	Pass

#### 6.4.1.1.1.2.3 Delete

**Table 6.8 Music deletes unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT028	Press Delete button	Positive	-	The data successfully deleted notification displayed.	The data successfully deleted notification displayed.	Pass

#### 6.4.1.1.1.3 Book

##### 6.4.1.1.1.3.1 Add

**Table 6.9 Book add unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT029	Fill all the text field.	Positive	Title: "Arch-Sabre" Author: "Azz" Publisher: "Fixie" Category: "novel" Genre: "fantasy"	The data successfully added	The data successfully added notification displayed.	Pass

			Language: "English" Summary: "The new bestseller novel!" Book File: "arch-saber lighnovel.pdf"	notification displayed.		
JUT030	Leave only one or more field empty	negative	Title: "Arch-Sabre" Author: "Azz" Publisher: "Fixie" Category: "novel" Genre: "fantasy" Language: "English" Summary: - Book File: "arch-saber lighnovel.pdf"	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass
JUT031	Leave all field empty	negative	-	An error to fill the empty space appeared.	An error to fill the empty space appeared.	Pass

6.4.1.1.1.3.2 Update

Table 6.10 Book update unit testing

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT032	Fill all the text field.	Positive	Title: "Arch-Sabre 2" Author: "Asnawi" Publisher: "Malaysia Book" Category: "news" Genre: "fiction" Language: "malay" Summary: "The peak of greatness" Book File: "howtoeatrice.pdf"	The data successfully update notification displayed.	The data successfully update notification displayed.	Pass
JUT033	Leave only one or more field empty	positive	Title: "Arch-Sabre 2" Author: - Publisher: - Category: "news" Genre: "fiction" Language: "malay"	The data successfully update notification displayed.	The data successfully update notification displayed.	Pass

			Summary: “The peak of greatness” Book File: “howtoeatrice.pdf”			
JUT034	Leave all field empty	negative	-	No update notification displayed.	No update notification displayed.	Pass

## 6.4.1.1.1.3.3 Delete

**Table 6.11 Book delete unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT035	Press Delete button	Positive	-	The data successfully deleted notification displayed.	The data successfully deleted notification displayed.	Pass

## 6.4.1.1.1.4 Report

**Table 6.12 Report unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT036	Press print button	Positive	-	A window display on prints the report appeared.	A window display on prints the report appeared.	Pass

## 6.4.1.1.1.5 Profile

**Table 6.13 Profile unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT037	Fill all the text field edit.	Positive	First name: “Mohd”	The system displays successful edit profile	The system displays successful edit profile	Pass

			Last name: "Aiman"  Birthdate: "17/01/2014"  Username: "aiman12"  Biography:" I love movies"  Picture File: "profilepic.jpg"  Old Password: "adi1234"  New Password: "aiman1234"	notification box.	notification box.	
JUT038	Leave any one field empty but fill the password	positive	First name: - Last name: "Aiman" Birthdate: "17/01/2014" Username: "aiman12"  Biography:" I love movies"  Picture File: "profilepic.jpg"  Old Password: "adi1234"  New Password: "aiman1234"	The system displays successful edit profile notification box.	The system displays successful edit profile notification box.	Pass
JUT039		positive	First name: "Mohd"  Last name: -	The system displays successful edit profile notification box.	The system displays successful edit profile notification box.	Pass

			Birthdate: "17/01/2014"  Username: "aiman12"  Biography:" I love movies"  Picture File: "profilepic.jpg"  Old Password: "adi1234"  New Password: "aiman1234"			
JUT040		positive	First name: "Mohd"  Last name: "Aiman"  Birthdate: -  Username: "aiman12"  Biography:" I love movies"  Picture File: "profilepic.jpg"  Old Password: "adi1234"  New Password: "aiman1234"	The system displays successful edit profile notification box.	The system displays successful edit profile notification box.	Pass
JUT041		positive	First name: "Mohd"  Last name: "Aiman"  Birthdate: "17/01/2014"	The system displays successful edit profile notification box.	The system displays successful edit profile notification box.	Pass



			Username: -  Biography:” I love movies”  Picture File: “profilepic.jpg”  Old Password: “adi1234”  New Password: “aiman1234”			
JUT042		positive	First name: “Mohd”  Last name: “Aiman”  Birthdate: “17/01/2014”  Username: “aiman12”  Biography: -  Picture File: “profilepic.jpg”  Old Password: “adi1234”  New Password: “aiman1234”	The system displays successful edit profile notification box.	The system displays successful edit profile notification box.	Pass
JUT043		positive	First name: “Mohd”  Last name: “Aiman”  Birthdate: “17/01/2014”  Username: “aiman12”	The system displays successful edit profile notification box.	The system displays successful edit profile notification box.	Pass

			Biography:” I love movies”  Picture File: -  Old Password: “adi1234”  New Password: “aiman1234”			
JUT044	Leave all field empty	positive	-	Nothing displayed, modal disappeared.	Nothing displayed, modal disappeared.	Pass

## 6.4.1.1.1.6 Friend

**Table 6.14 Friend unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT045	Click “add friend” button on another user profile	Positive	-	Joymate added notification displayed.	Joymate added notification displayed.	Pass
JUT046	Click “remove friend” button on another user profile	positive	-	Joymate removed notification displayed.	Joymate removed notification displayed.	Pass

## 6.4.1.1.1.7 Chat

**Table 6.15 Chat unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT047	Fill the text field	Positive	Message: “Hye aiman!”	The message sent and displayed on the chat box.	The message sent and displayed on the chat box.	Pass
JUT048	Leave the text field empty	negative	-	Notification error to fill	Notification error to fill	Pass

				the space appeared.	the space appeared.	
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## 6.4.1.1.1.8 Moment

## 6.4.1.1.1.8.1 Post

**Table 6.16 Post unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT049	Fill the field	Positive	Message: "I love watching movies!" File: "spidermanposter.jpg"	Successfully posted on the moment board.	Successfully posted on the moment board.	Pass
JUT050	Leave any one of the field empty.	positive	Message: "I love watching movies!" File: -	Successfully posted on the moment board.	Successfully posted on the moment board.	Pass
JUT051		negative	Message: - File: "Spidermanposter.jpg"	Error to fill the empty text field appeared.	Error to fill the empty text field appeared.	Pass
JUT052	Leave all space empty.	negative	-	Error to fill the empty text field appeared.	Error to fill the empty text field appeared.	

## 6.4.1.1.1.8.2 Comment

**Table 6.17 Comment unit testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT053	Fill the text field	Positive	Message: "Wow!"	The message sent and displayed on the comment box.	The message sent and displayed on the comment box.	Pass
JUT054	Leave the text field empty	negative	-	Notification error to fill	Notification error to fill	Pass

				the space appeared.	the space appeared.	
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## 6.4.2 Integration Testing

Integration testing is to check the compatibility of modules that is integrated together to work.

### 6.4.2.1 Login

Consist of register and login in authentication module.

**Table 6.18 Login integration testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JUT055	Enter the same password and username as registered.	Positive	Username: "adi" Password: "adi1234"	Successfully login into account and redirected to profile page.	Successfully login into account and redirected to profile page.	Pass
JUT056	Enter one of the field different from when registered.	negative	Username: "adi" Password: "123"	Error "wrong password" appeared.	Error "wrong password" appeared.	Pass
JUT057		negative	Username: "adihebat" Password: "adi1234"	Error "Invalid username" appeared.	Error "wrong password" appeared.	Pass

### 6.4.2.2 Profile Edit Password

Consist of profile module and authentication module.

**Table 6.19 Profile edits password integration testing**

Test ID	Description	Test mode	Test Data	Expected Output	Actual Output	Result
JIT001	Enter the same old password and a new password	Positive	Old password: “adi1234” New password: “adi123”	Successfully update password notification appeared.	Successfully update password notification appeared.	Pass
JIT002	Enter different old password and a new password.	negative	Username: “adi”  Password: “123”	Error “wrong password” appeared.	Error “wrong password” appeared.	Pass

## 6.5 Conclusion

To measure the overall system performance and the development's accomplishment, the testing approach must be applied. This phase assesses the project's efficiency and guarantees that the system is operating effectively and without defects before handing it over to the customer.

The testing procedure was carried out thoroughly and in detail before the system was installed in the real system environment to determine whether the system functioned successfully without any kind of substantial or obvious faults.

## CHAPTER 7: CONCLUSION

## 7.1 Introduction

The implementation of the system has run its course. Throughout the development process and stages, all performances, testing results, and other information were documented.

This material was examined to evaluate and assess the system's strengths and flaws prior to the handover procedure with the stakeholder or initial customer. We will look through into the project's shortcomings, strengths, value to society, and possible system improvements in this last chapter.

## 7.2 Observation on weakness and strength

JOYTIME is a wonderful system that in my opinion, it has a lot of advantages and good points but in a system, there must be some weakness and in addition, the time given to create this website is insufficient to be developed into a full-fledged superior system since it also need great knowledge and understanding of the codes. This system involved a lot with the people and media, so it needs to be consistent as much as it can.

As we have went through the system, we can see the main advantages of JOYTIME is that this system can have the user to use only a website to entertain themselves with music, book, and video. The user can also save the favourite content in their playlist making it more effortless to search the content again and again. The system also allows the clients to interact with each other with a moment board, much like social media can. It also has a chat feature to chat with added friends. This system also has and easy and quick content management for the admin to add any content into the system.

Unfortunately, as good as it is, there are flaws that the system has upon my inability to obtain abundant of knowledge and tools to create it with my limitations on the device. There also the inability to have a proper web hosting domain to conduct the project in more realistic environment. The system may have the functions enough to entertain the users, but it's still far from perfect.

### **7.3 Proposition for Improvement**

As the system is built within a localhost environment, the website is better if being developed in a webhost environment to get a real feel of what JOYTIME can actually do. With web hosting, the system can be more personified and complete.

The next is to improve the ability of the system to have a watching together function. I have been thinking for this and tried to do it. Unfortunately, there is a lot more I need to have such as times, knowledges, and tools to create it. A movie that can be watch together with friends felt better than watching alone.

Besides that, the system should also have more storage to be able to fill a lot more content. The more content, the more option for the users to choose. The UI/UX also can be upgraded as they are many contents in the system. If I were to upgrade the system, I shall add recommended content list, latest content list, create more information for the publisher of the contents and the sources of the contents such as the company information, the character in movie information, the cast, the music band information and so much more.

Last but not least is to have a mobile application version of the app. Since it's the age of mobile gadgets where a smartphone is being a basic need for a person to work and communicate, the smartphone is also a best platform to watch and enjoy the feature of this website.

### **7.4 Conclusion**

In the nutshell, the Online Synchronised Entertainment System, JOYTIME was successfully created in accordance with all listed needed requirements for the semester and followed the initial planned and design without obvious and revealing constraints. The improvement added also just an upgrade to make the system displayed more advantages than normal system has. This concludes the final version of JOYTIME with completed features as planned from the beginning.

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