HOUSE BOOKING MANAGEMENT WEB SYSTEM FOR A PROPERTY DEVELOPER

NUR AFIQAH FARINA BINTI JAIS

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development) with Honours.

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2021

DECLARATION

I hereby declare that this project report entitled

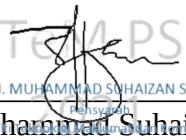
HOUSE BOOKING MANAGEMENT WEB SYSTEM FOR A PROPERTY DEVELOPER

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : Date : 11 September 2021

(NUR AFIQAH FARINA BINTI JAIS)

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 :_____ Date : 12/09/2021

(Ts. Muhammad Suhaizan Sulong)

DEDICATION

To my beloved parents, thank you for supporting me through this journey. There are no words to describe how much both of you has supported me without any complaint and always pray for me and giving me encourage to continue this journey to the end. To my friends who help me walking through this journey, thank you. I might not be able to find the error of learning new knowledge without your never-ending help. And of course, to my supervisor, Ts. Muhammad Suhaizan Sulong, thank you for guiding me in this journey. Thank you, everyone.

ACKNOWLEDGEMENTS

Special appreciation goes to my supervisor, Ts. Muhammad Suhaizan Sulong for his supervision and constant support. He has been an inspirational and role model for this topic. His comments and suggestions during the tentative and proposal works have contributed to the success to complete this project.

I would also like to thank my beloved parents who have been giving me support and motivation throughout my project.

ABSTRACT

With urban planning and management, more and more properties have been built. A property situated in a convenient location, close to all local amenities are one of the good reasons of buying a property i.e., a house. Selling a property to potential house buyers is quite a challenge. Thus, a project for developing a web-based system is proposed namely the House Booking Management Web System for a Property Developer (HBMWS). This HBMWS is specially developed for house agents to manage their potential clients or customers who are interested in buying a property. It provides an easy way for house agents to track, view and report on the booking records of all of their customers, manage property details as well as monitor their performance. This web-based system is developed using an open-source technologies such as PHP with a MySQL database and runs on Windows. The architectural and interface design including the process flows are all based on the common requirements and specification from the existing system and being improvised to allow house agents to achieve their targets. This HBMWS system will be easy to use with simple navigation and standard features.

ABSTRAK

Dengan perancangan dan pengurusan bandar, semakin banyak harta tanah yang dimiliki telah dibina. Harta tanah yang terletak di lokasi yang mudah, dekat dengan Kawasan tempatan kemudahan adalah satu sebab baik untuk membeli harta tanah iaitu rumah. Menjual harta tanah kepada bakal pembeli rumah adalah satu cabaran. Oleh itu, sebuah projek membangunkan sistem berasaskan web dicadangkan iaitu House Booking Management Web System for a Property Developer (HBMWS). HBMWS ini dibangunkan khas untuk ejen rumah untuk menguruskan bakal pelanggan atau pelanggan mereka yang berminat untuk membeli harta tanah. ia menyediakan cara mudah bagi ejen rumah untuk mengesan, melihat dan menyediakan laporan mengenai rekod tempahan semua pelanggan mereka, menguruskan harta tanah secara terperinci serta memantau prestasi ejen. Sistem berasaskan web ini adalah dibangunkan menggunakan teknologi sumber terbuka seperti PHP dengan MySQL pangkalan data dan dijalankan pada Windows. Reka bentuk seni bina dan antara muka termasuk aliran proses semuanya bedasarkan keperluan Bersama dan spesifikasi dari system yang ada dan diperbaiki untuk membolehkan ejen rumah untuk mencapai sasarannya. Sistem HBMWS ini akan mudah digunakan dengan navigasi yang ringkas dan ciri standard.

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LIST OF ABBREVIATIONS

HBMWS	**-**	**House Booking Management Web System**
FYP	**-**	**Final Year Project**
ERD	**-**	**Entity Relationship Diagram**
SRS	**-**	**Software Requirement Specification**
DFD	**-**	**Data Flow Diagram**

CHAPTER 1: INTRODUCTION

1.1 Introduction

This task is created for customers to booking a house. House Booking Management Web System for a Property Developer is a piece of software that may be used to manage reservations for a house. The system enables all types of service businesses to take online bookings as well as manage phone and in-person bookings with simplicity. Previously, customer who want to book a house must go to office and make an appointment with agent. So, it must difficult for customer to find a house with pandemic nowadays. At the same time, it will be time consuming for customer. With this house booking management web system for a property developer, customers who book a house do not want to wait until the person in charge are in office, they want to book the activity on their own time. When use an online booking system, the business is open 24 hours a day, seven days a week.

This system will provide house booking feature for customer to find the dream house they want to book. Among them, this system will show a house for customer make a book. The system is reliant on its center parts to accomplish greatest effectiveness and ideal execution of the system. This technology can increase the effectiveness and improve the efficiency for customer and agent to make a booking house in the system.

1.2 Problem Statement

There are few problems that have been found in this existing house booking management web system. Thus, the Problem Statement (PS) is condensed into Table 1.1.

Table1.1: Summary of Problem Statement

PS	Problem Statement
PS1	Customer have to rely on the information from the office.
PS2	Time consuming in finding a house property on a certain place.
PS3	Difficulty tracking the booking record because still using manual.

PS1: Customer have to rely on the information from the office.

As for now is customer manually go to office to survey a house. Customer have to make an appointment with the agent of the company. For to the appointment must have to make it on office hours.

PS2: Time consuming in finding a house property on a certain place.

Difficulty to know where house is available. Difficulty for customer who want to survey a house at different country. The information of available house is difficult to get.

PS3: Difficulty tracking the booking record because still using manual.

The form of the booking is very important to prove that customer has apply for house. They system needed to ensure the accuracy of data that it will collect to make it as report. So, there is a need to have centralized database.

1.3 Objective

Project Objectives (PO) has been issued as follows and summarized into table 1.2.

Table 1.2: Summary of project Objectives

PO	Problem Objectives
PO1	To develop a system that is more systematic and efficient than using manual record.
PO2	To develop a web-based application of a house booking management web system which could assist customer to booking a house
PO3	To generic report that can be easily count total of booking house and data that already booked by customers.

1.4 Scope

1.4.1 Module to be developed

- **Authentication Module**

  Registration for users to login to the system, have password recovery.

- **House Unit Management Module**

  List of project details with brochure and house unit with agent reward point.

- **House Booking Module**

  Customer make booking with agent.

- **Agent Reward Module**

  Will display agent reward and rank.

- **Dashboard Report Module**

  Will display the number of booking for system in monthly/yearly

1.4.2 Target User

1. Admin (System Admin)
   - Login functionality, add/update house project, add/update voucher for agent, and verify customer payment for booking.
2. User (Agent)
   - Login functionality, claim voucher
3. User (Customer)
   - View house details, booking a house and upload payment receipt.

1.5 Project Significance

The significance of the project is to create a house booking management system that will provide service to agent, easy to use and straightforward process for agent to make a booking with the customer.

1.6 Expected Output

This project will produce a system application that allows customer to make a house booking in anytime. This will make it easier and save customer time to book a house in the office. Although some system like this already exists, this system will produce features that do not exist in existing system and will improve existing features.

1.7 Conclusion

In this chapter, problem statement, project objective, project scope, project significance and expected output of the project are clearly identified. The next chapter will discuss the related work of this project which are literature review and project methodology.

CHAPTER 2: LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

The literature review was conducted to discuss issues from the existing system. From the current technology, researchers shall find out how it is developed and how to find a proper and effective solutions. The methodology will be discussed in this chapter. It acts as guide to ensure the progress working smoothly in correct steps. The methodology that will be use will help to continue for the next phase in relevant way. It also guided by milestone that mapping the progress implementation for the project. The further detail of the phase will describe in the following section.

The progress of this literature review is beginning with problem identification. The existing problems and inconvenience were used to find solutions for a better new system development. Other than that, the existing technologies also had been studied to find great enhancements and the technology implementation for the new system development.

2.2 Facts and findings

This section will focus on previous project which related to booking management project. The project will introduce the domain, explanations of existing system and technique that is applicable and related with booking management project.

2.2.1 Domain

Different people are searching for different real estate property for a variety of reasons such as house, office, shop and so on. It is the desire of every homeowner to have a house that in the greatest location with the best conveniences.

This project focus to be a booking agency's services. Web application that provides the basic functionality required for a booking is proposed as House Booking

Management Web System for a property Developer. HBMWS will be used by a company with a large number of projects. This system's project is about property, specifically a house. The project house might be of several types such as apartment, chalet or cabin.

2.2.2 Existing System

Studies from the similar systems or the existing systems are important to develop a new system. The existing systems can be used as reference and guidance to develop new systems. In addition, similar studies also can provide system builders with pertinent information which it is useful when developing systems in order to prevent errors on applying.

2.2.2.1 UEM Sunrise

Figure below shows the interface of UEM Sunrise System. UEM Sunrise are selling property such as resident, retail, industrial, office, and land in the system which are the UEM Sunrise Berhad located in Kuala Lumpur, Malaysia. The function is almost the same as other booking house, which provides the property details. The limitation of UEM Sunrise is the content of information about the agent are not provided to make a survey. Even though the application is not having many features but still, it is a simple and easy-to-use application.

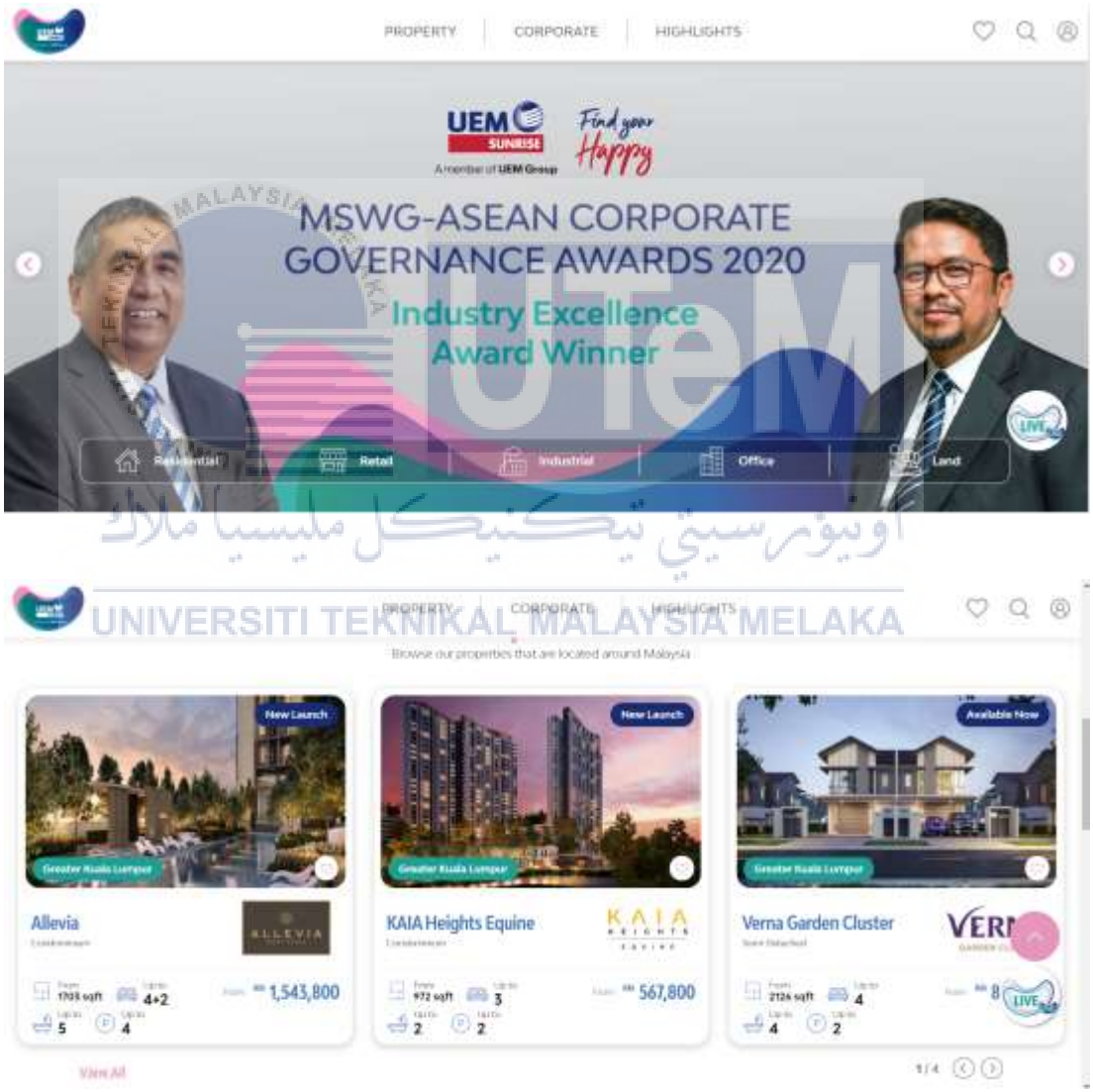


Figure 2.1 UEM Sunrise Website

2.2.2.2 Property Guru

Figure 2.2 below shows the interface of Property Guru System. Property Guru are selling and rent property in the system which are for Property Guru Group that are located in Singapore, Thailand, Vietnam, Indonesia, and Malaysia. They are found in 2007. The founder is Steve Melhuish and Jani Rautianen. PropertyGuru's success is firmly rooted in solving a very big consumer pain-point making finding a home straightforward and transparent process for everyone involved. The leadership team has extensive experience building technology businesses across Asia.

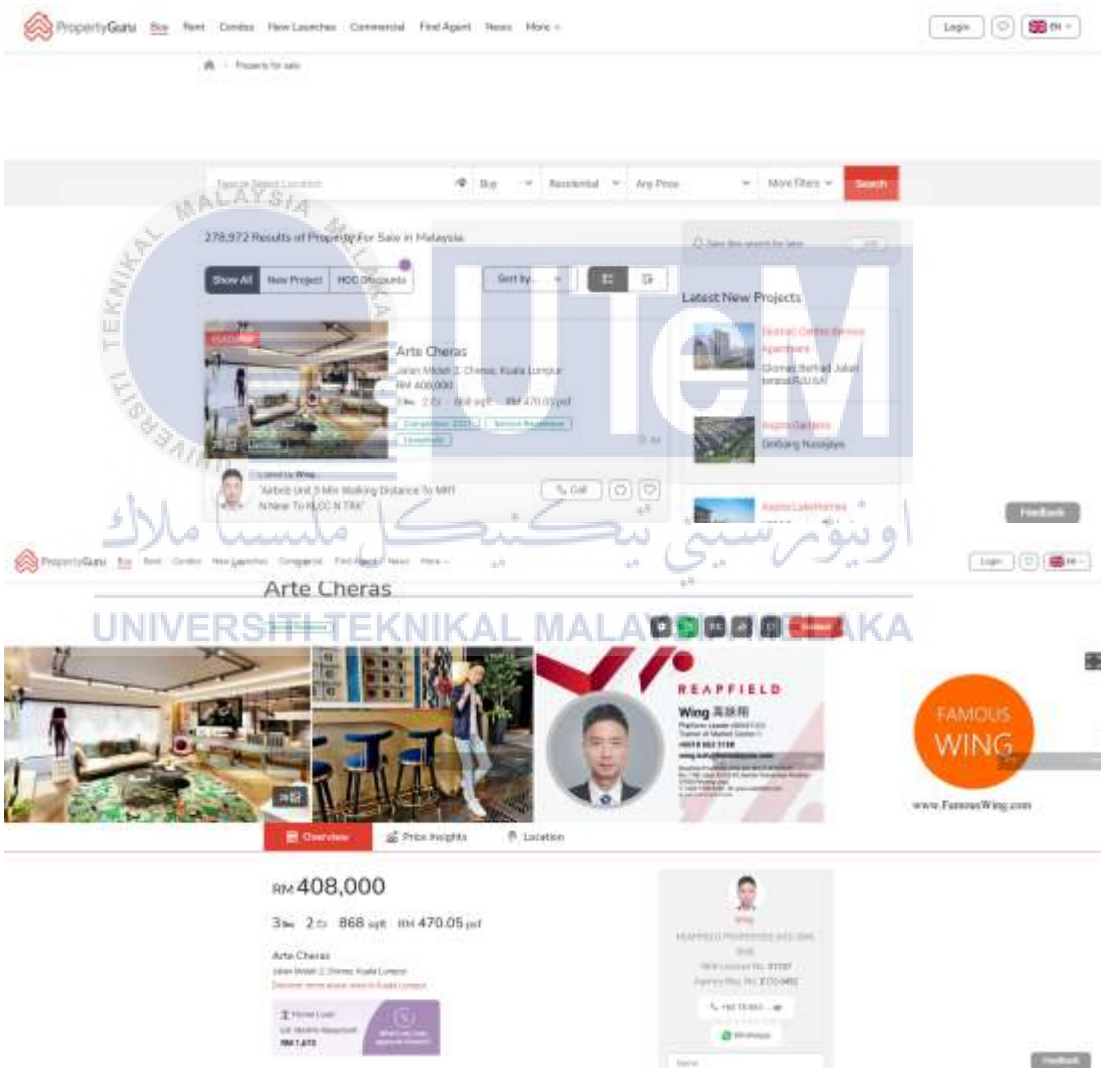


Figure 2.2 Property Guru Website

2.2.2.3 Mudah.my

Figure 2.3 below shows the interface of mudah.my System. Mudah.my are big website. There are more than 52 categories that can find in mudah.my such as selling property such as house, and car. Also, can find electronic, jobs, services, sport and hobbies, and other else in the system. The website is allows anyone to buy and sell in his or her region simply and conveniently.

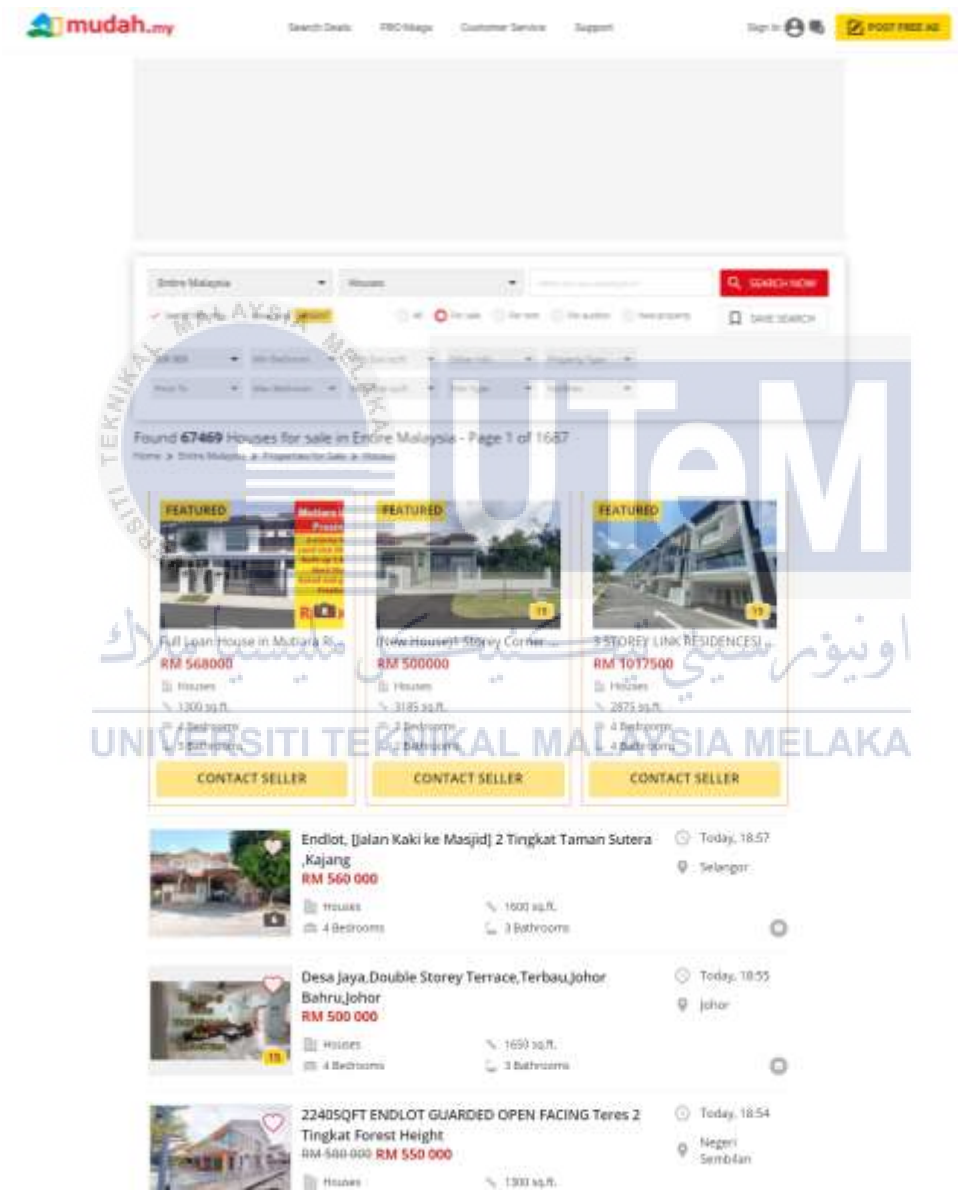


Figure 2.3 Mudah.my Website

2.2.2.4 Comparison Between System

Table 2.1 Comparison Between Existing System

Features	Register/Login	House Unit Management	Agent	Property List
UEM Sunrise System	This system requires login and register, so users need to register first before know about the details.	This system provides for details of the house and provide map that makes it easier for users to find.	Didn't provide agent contact before login the system.	This system provides a property list, this makes it easier for users to know what property are in the system.
Property Guru System	This system requires login and register, so users need to register first before using the system.	This system provides for details of the house and provide map that makes it easier for users to find.	Provide details of agent contact with the License of agent.	This system provides a property list, this makes it easier for users to know what property are in the system.
Mudah.my	This system requires login and register, so users need to register first before using the system.	This system provides for details of the house that makes it easier for users to view.	Provide details contact of agent with the status online and with the ID of agent.	This system provides a property list, this makes it easier for users to know what property are in the system.

2.3 Project Methodology

Figure 2.4: Agile Model

A system development methodology refers to the framework that is used to structure plan and control the process of developing and information system. It is a standard process to conduct all the steps necessary to analyze, design, implement, testing, deployment and maintain information systems. The system development lifecycle is a common methodology for system development in many organizations. It features several phases that mark the progress of the system analysis and design effort which are planning analysis, design, implementation, testing, deployment and maintenance. Lifecycle can be thought of as circular process which the end of useful life of one system leads to the beginning of another project that will develop a new version or replace an existing system together.

Agile was chosen as the most suitable methodology for house booking management web system. Agile is the ability to create and respond to change. Agile aims to keep the process lean and create minimum feasible goods that go through a number of iterations before anything is finished. The reason using this methodology is because it is easy to incorporate. Also helps development process by giving guidelines to developing project in the right step.

First, for analysis is gathering information related to indoor navigation system. Any problems or limitation that are found when gathering information are uses as references to develop new features. Second, for design phase is the developer creates an overall analysis and begins the project-related document design also known as

system architecture. All related diagram and flow chart are used to show the flow and process of the developing system.

Next, for the implementation phase is to create and assemble the requirements for the system. Java language is used in Android Studio software. For fourth phase is testing. System unit testing should be as detailed as possible to ensure that each system handled has been fully tested. Testing includes checking and fixing any error components of the code. For usability testing, shopping mall patron will be as respondent.

For deployment phase, which is the fifth phase, system is ready for production and delivered for public. Finally, the last phase is maintenance. Software maintenance may include software upgrades, repairs, and software fixes if it breaks.

For this project methodology, this system using Structured Systems Analysis and Design Method (SSADM). SSADM is an approach to designing and analyzing information systems. This method uses logical data modeling, entity event modeling and data flow modeling in six step processes to determine how a system must be created or updated.

2.4 Project Requirements

Project requirement main purpose is to from a high-level view of the project and determine its goals. The review process by identifying and knowing what type of current technology is most appropriate to use for this project. It is the obligatory to know the appropriate software and hardware to be used in this project to ensure that the project is running as expected.

i. Hardware Requirement

- Laptop

ii. Software Requirement

- PhpStorm
- Laragon

2.4.1 Software Requirement

The software is utilized to aid in the development of the project. Tools help ease the development of any kind of project, with the correct tools a project can be better managed and completed after than originally expected.

Table 2.2: Software Requirement

Software	Description
 PhpStorm	- Development tools - PhpStorm served as the primary source code editor of the project. - V15.1.2
 Laragon (Virtual Server)	- Laragon is mainly used to aid in the management of databases. - Laragon 4.0 32-bit: PHP 7.2, Apache, MariaDB 10.3, Node.js, yarn, ngrok, git, cmder - Laragon Full 4.0.16

Based on table 2.1, the code will be written using PhpStorm and the database of choice will be Laragon MySql.

2.4.2 Hardware Requirement

Hardware that helps to ease the development of the project, with the correct hardware it will make the project to develop smoothly.

Table 2.2 Hardware Requirement

Software	Description
	- IdeaPad L340-15IRH Gaming - Operating System: Windows 10 Home Single Language 64-bit - Microprocessor: Intel® Core™ i5-9300H CPU @ 2.40GHz - System Memory: 12GB

Based on table 2.2, to develop the House Booking Management Web system will be Lenovo Laptop.

2.5 Project Schedule and Milestone

Gantt chart is one of the most useful ways to show the tasks and events displayed against time. Gantt chart will help in representing the starting time and the ending time for each task. The main objective of this Gantt chart is to ensure that the project will be continuing developing according to the time interval set for each task. Each process has its own task.

Table 2.3: Gantt Chart

WEEK/ ACTIVITY	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14	WEEK 15
1. Proposal Discussion									MID SEMESTER BREAK						
2.Proposal Correction/Improvement															
3. Proposal Submission via Online System															
4. Chapter 1 (System Development)															
5. Chapter 1 and Chapter 2															
6. Chapter 2 (Progress Presentation 1)															
7. Chapter 2 and Chapter 3															
8. Chapter 3 and Chapter 4															
9. Chapter 4															
10. Chapter 4 (Progress Presentation 2)															
11. Demonstration of PSM 1 Report															
12. Final Presentation															
13. Documentation															

2.6 Conclusion

In conclusion, this system has been effectively created. The literature review and project methodology are already finishing in this chapter. Project management and project planning involves decision-making and planning the resources such as cost and time. This is a very important part of project development as it can ensure the overall success of the development of project.

CHAPTER 3: ANALYSIS

3.1 Introduction

Project analysis will cover what any question or information that is left out in previous chapters as well as providing some explanation to how some of the system works. The behavior of the new requirement is being studied in a specific aspect in this phase. Not only that, but it is also necessary to identify and analyses the major problem that we are currently facing. We must also identify the target users, the hardware and software to develop this technology. One of the techniques that can be used to collect data on this project is to review and analyses all existing data.

3.2 Problem Analysis

The purpose of analysis the current system is to identify the shortcoming and issue with current system. With identifying the deficiency of the current system, we could list out make improvement to our system.

Based on the problem statements in Chapter 1. For first problem statement is customer have to make an appointment with agent of the company for proceed booking a house. But nowadays with during this pandemic, its hard to survey the house. Furthermore, to make a booking, must be on office hour time, which is hard for a working people to make a time to survey house. Moreover, is time consuming on finding information of available house.

Next, second problem statement is difficulty to know where house is available. Because of they have to stay at home in the covid pandemic situation. It is difficult for who want to survey a house at different country. And worst, if the location they intent to see is located far away from the information board where they were at the time.

3.3 Requirement Analysis

In requirement analysis will describe about data requirement, functional requirement, non-functional requirement and others requirement.

3.3.1 Data Requirement

Data requirements describes what data should the system input and output and what data should the system store internally.

Table 3.1: Admin

Field Name	Data Type	Description
ID	int	Admin ID, auto generated
email	varchar	Login email for admin
password	varchar	Login password for admin
name	varchar	Name for admin

Table 3.2: Agent

Field Name	Data Type	Description
ID	int	Agent ID, auto generated
Is_active	smallint	To show the agent active or not
email	varchar	Login email for agent
password	varchar	Login password for agent
name	varchar	Name for agent
phone_number	varchar	Phone number for agent
total_point	int	To show the total point of agent
point	int	To show the point of agent get
rank	int	To show agent rank
delete_at	datetime	To show when agent is deleted

Table 3.3: Customer

Field Name	Data Type	Description
ID	int	Customer ID, auto generated
email	varchar	Login email for customer
password	varchar	Login password for customer
name	varchar	Name for customer
phone_number	varchar	Phone number for customer
approve_at	timestamp	Show ehen customer approve the booking

Table 3.4: Project

Field Name	Data Type	Description
ID	int	Project ID, auto generated
name	varchar	Project name
description	varchar	Description for project
location_name	varchar	Location of the project
start	date	When the project start
end	date	When the project end
status	tinyint	Status of the project

Table 3.5: Booking

Field Name	Data Type	Description
ID	int	Booking ID, auto generated
house_id	int	House ID, auto generated, foreign key
agent_id	int	Agent ID, auto generated, foreign key
customer_id	int	Customer ID, auto generated, foreign key
created_at	datetime	When the booking created
status	int	Status of the booking
code	varchar	Security code for customer
point_gain	int	Show the point will gain of the booking
remark	longtext	Show remark of the booking

admin_remark	longtext	Show admin remark
receipt	varchar	Show of the receipt

Table 3.6: House

Field Name	Data Type	Description
ID	int	House ID, auto generated
project_id	int	Project ID, auto generated, foreign key
current_booking_id	int	Booking ID, auto generated
name	varchar	Name of the house
description	longtext	Details of the house
sqft	int	Size of the house
room	int	How many rooms in house
bath_room	int	How many bathrooms in house
garage	int	How many garage
type	varchar	Type of the house
price	double	Price of the house
point	int	Point house for agent

Table 3.7: Voucher

Field Name	Data Type	Description
ID	int	Voucher ID, auto generated
name	varchar	Voucher name
image	varchar	Voucher image
valid_till	date	Duration valid for voucher
cost	int	Cost of the voucher
status	tinyint	Status of the voucher, active or not
is_deletd	tinyint	When the voucher is deleted

Table 3.8: Voucher claim

Field Name	Data Type	Description
ID	int	Voucher claim ID, auto generated
voucher_id	int	Voucher ID, auto generated, foreign key
code	varchar	Voucher code
agent_id	int	To know which agent that claim the voucher
claim_at	datetime	when date of agent claim
cost	int	how much cost for the voucher

3.3.2 Functional Requirement

Functional requirements describe how a product must behave, what its features and functions. It describes the functions a software must perform. A function is nothing but it inputs, behavior, and outputs. It can be a calculation, data manipulation, business process, user interaction or any other specific functionality which defines what function a system is likely to perform. Functional requirements help to capture the intended behavior of the system. This behavior may be expressed as functions, services or tasks or which system is required to perform.

Table 3.9: Functional Requirement

FR No.	Use Case	Description of the system	Phase
FR-1	Authentication	1. Validate the system shall enable to verify user email address and password	P1
FR-2		2. Validate that the system is giving individuals access to system based on their identity	
FR-3		3. Verify that they system should display warning message if when the password or email enter is invalid	
FR-4			

FR-5		4. Validate that the user needs to enter valid email and password to enter the system 5. Verify that the system should display main page after successfully login	
FR-6 FR-7 FR-8 FR-9	Logout	1. Validate that they system should be able to logout after user click the logout button 2. Verify that the system should display login page after user successfully logout the system 3. Verify that the system should display message that the user has successfully logout the system	P1
FR-10 FR-11	Dashboard Report	1. Verify that the system should display the report by number of bookings 2. Verify that the system can generate report by month and year by clicking the search button	P1
FR-12 FR-13 FR-14 FR-15	Registration	1. Verify that the system should display user registration from when user clicking the register button 2. Validate that the user should be able to register to login to the system 3. Verify that the system should display a confirmation message before submit registration form 4. Verify that the system should display message that the user has successfully register to the system	P1

FR-16 FR-17 FR-18	House Unit	1. Verify that the system should display all the list house in the system 2. Verify that the system should display the specific house when customer search store by clicking the search button 3. Verify that the system should display the details house page when user clicking the house	P1
FR-19 FR-20	House Booking	1. Verify that the system should display the booking description when customer clicking the booking button 2. Verify that the system should display the booking and show the detail agent that in charge	P1
FR-21 FR-22 FR-23	Voucher	1. Verify that the system should display the voucher and show the detail voucher. 2. Validate that the system should be able to update the voucher details by clicking the redeem voucher 3. Validate that the system should be able to store which agent that redeem the voucher	P1
FR-24 FR-25	Point of Each House	1. Verify that the system should display the point of the house 2. Validate that the system should display the agent gain point when customer completed the booking	P1

3.3.2.1 Context Diagram

In software development, Data Flow Diagram (DFD) is used to justify and visualize the requirements of the projects in graphical method. It illustrates the flow of data in an information system in terms of inputs and outputs. There are four elements of DFD which are the process, the data flow, the data store and external entity.

Level 0 or context diagram is a general overview of the system which includes all components in the system. Figure 4.3 is the context diagram for HBWMS.

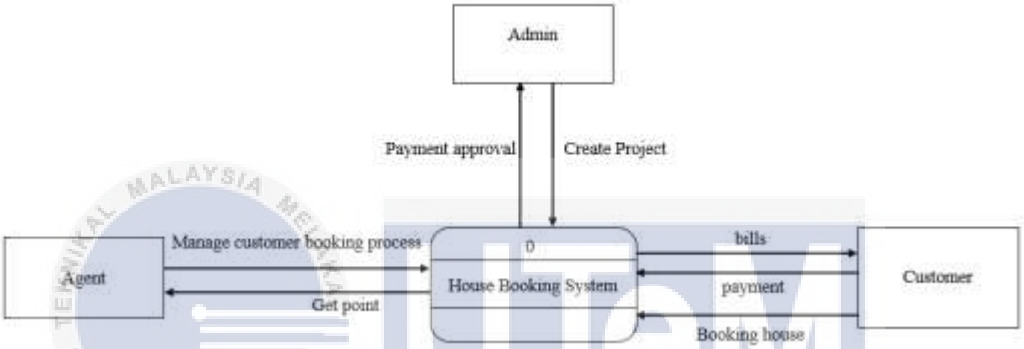


Figure 3.1: Context Diagram for House Booking Management Web System

3.3.2.2 Data Flow Diagram

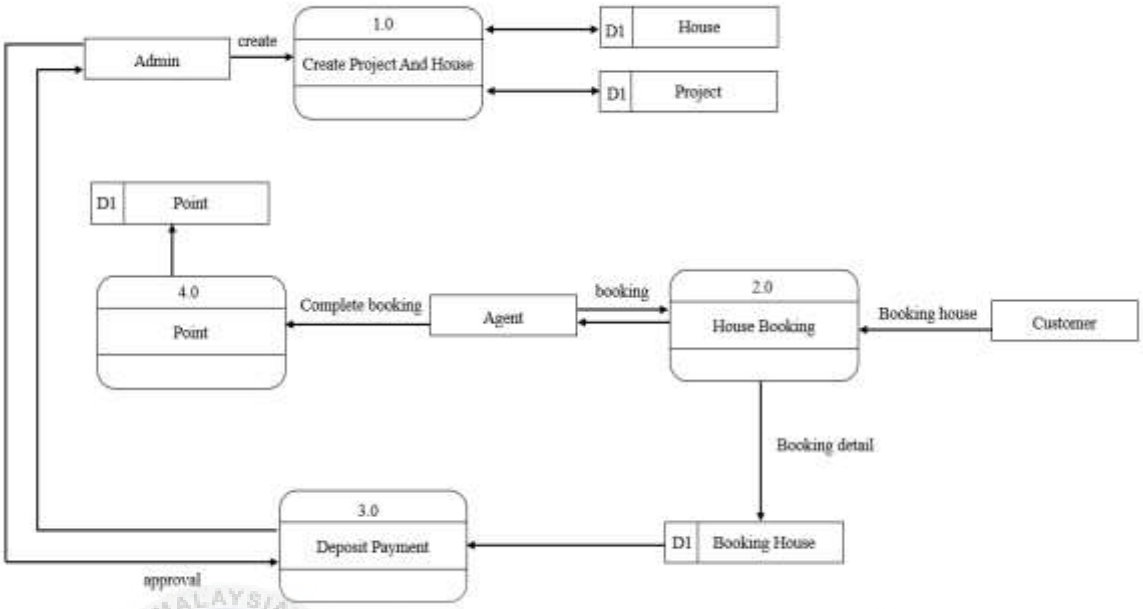


Figure 2.2: DFD level 1 House Booking Management Web System

3.3.3 Non-functional Requirement

A non-functional requirement is essential to ensure the usability and effectiveness of the entire software system. Failing to meet non-functional requirements can result in the system failing to satisfy user needs.

Table 3.10: Non-Functional Requirement

ID	Non-Functional Test Requirement
NFR-01	Verify that the system should be able to update other features from time to time without need to change the whole system
NFR-02	Validate that the system must be easy to use with interfaces that easy for user to understand
NFR-03	Verify that the system must process user query without facing any error
NFR-04	Verify that the system navigation from page-to-page load time not more than 3 seconds

NFR-05	Verify that all data provided by the system has consistency
NFR-06	Validate that the system should implement high security level to protect data confidentiality
NFR-07	Validate that the system cannot be accessed by unauthorized user
NFR-08	Verify the system usability by providing a consistent and standardize layout design for every page of the system
NFR-9	Validate that the system will never view user's password at the point of entry or at anytime
NFR-10	Verify that the system is developed using PhpStorm
NFR-11	Verify that the system is developed using Java programming language
NFR-12	Verify that Firebase is used in the development of the system

3.3.4 Others Requirement

This part will describe each of software and hardware that used to develop the system. The software is utilized to aid in the development of the project. Tools that help ease the development of any kind of project, with the correct tools a project can be better managed and completed after than originally expected. For hardware, it helps to ease the development of the project, with the correct hardware it will make the project to develop smoothly.

Table 3.11: Software Requirement

Software	Description
Chrome	- The software required for developing system and mobile application are listed below:
Microsoft Word 2010	- It is use to prepare the report.

Laragon	- Laragon helps to build and run successful apps. Products and solutions that you can rely on throughout your web app's journey.
Gitkraken	- GitKraken helps to make a backup data from coding that already done in phpStorm.
Php Storm (IDE)	- PhpStorm provides the fastest tools for building apps on every system platform. - Building without limits, create connected web apps, optimize code workflow and code with confidence.

Table 3.12: Hardware Requirement

Software	Description
Laptop Lenovo	- With a laptop, we can download Android Studio software to build the system and Firebase as to store all data.

3.4 Conclusion

In conclusion, this chapter had reviewed some of the requirement that required in this project such as analysis the data dictionary, software and hardware requirement and problem analysis. By going through the analysis phase of this project, the project output and requirement is ensured. The next chapter will discuss the software design of this project.

CHAPTER 4: DESIGN

4.1 Introduction

This chapter will provide a brief description of the system design document. System design is the process of defining the elements of a system such as the architecture, modules and components, the different interfaces of those components and the data that goes through that system. It is meant to satisfy specific needs and requirements of a business or organization through the engineering of a coherent and well-running system.

The first phase in system design methodology is conceptual system design. The entity relationship model is a way to represent the logical relationship of entities to create a database graphically.

The second phase in the system design methodology is logical database design. Data dictionary is a document used to control access to and manipulation of the system. At the same time, the integrity constraints are defined and make review local logical data model with user.

The last phase of system design methodology is physical database which is producing a description of the implementation of the system. It is describing the file organizations, base relations and indexes design which help to achieve efficient access to the data and any associated integrity constraints and security measures.

4.2 High-Level Design

In high-level design, it is important to concern the architecture of the system. An interactive interface will attract user to using this system. The modules are devoted to the application architecture, application flow and technology architecture. It is also helped to detect contradictions prior to coding and can be used as reference manual of how the modules interact at high level.

4.2.1 System Architecture

System architectures define the structure of the product, behavior of the user and system. It shows that mall admin, shop owner, and shopper will use the system through application inside smartphone and the system data are retrieved from the database server.

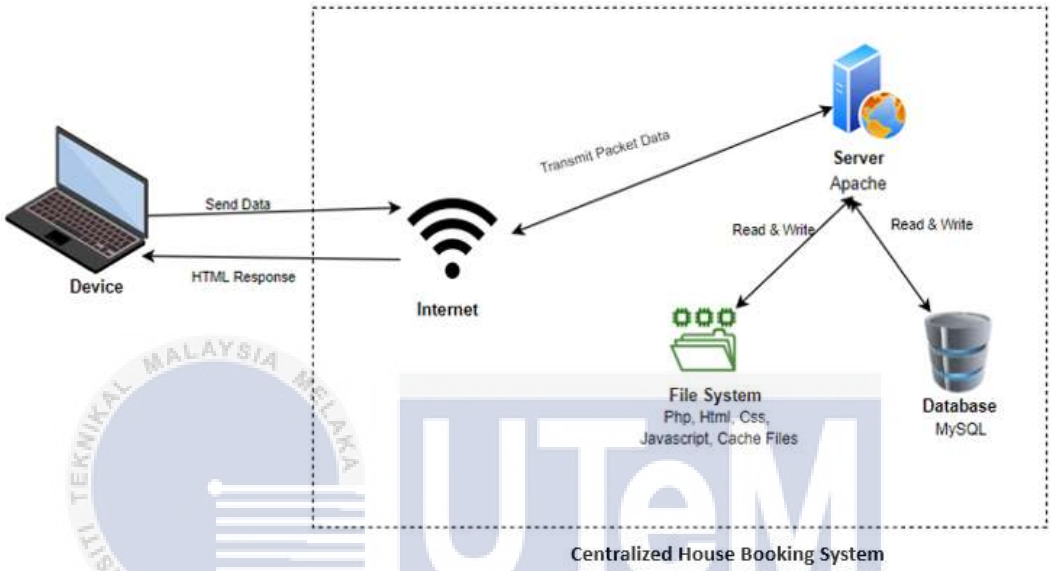


Figure 4.1: System Architecture for HBMWS

4.2.2 User Interface Design

User Interface (UI) is a process of creates and designs an interface of software or computerized devices. The primary user interface for most operating systems is graphical. With a graphical user interface, the tasks are performed by clicking or moving buttons, icons and menus using a pointer device. The interface design is considered crucial to developed because it provides interaction between user and the application system.

4.2.2.1 House Booking Management Web System Interface

Figure 4.2 below shows the homepage view. User can choose which section they want to use. Customer will go view property of houses.

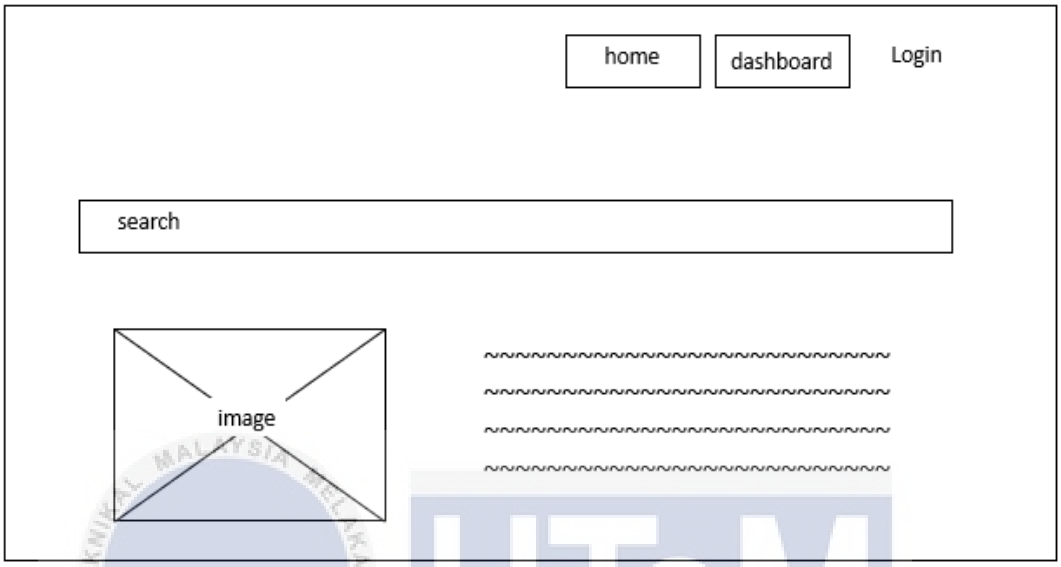


Figure 4.2 Homepage View

Figure 4.3 shows the details of the house by showing picture of interior house. Then customer can proceed book.

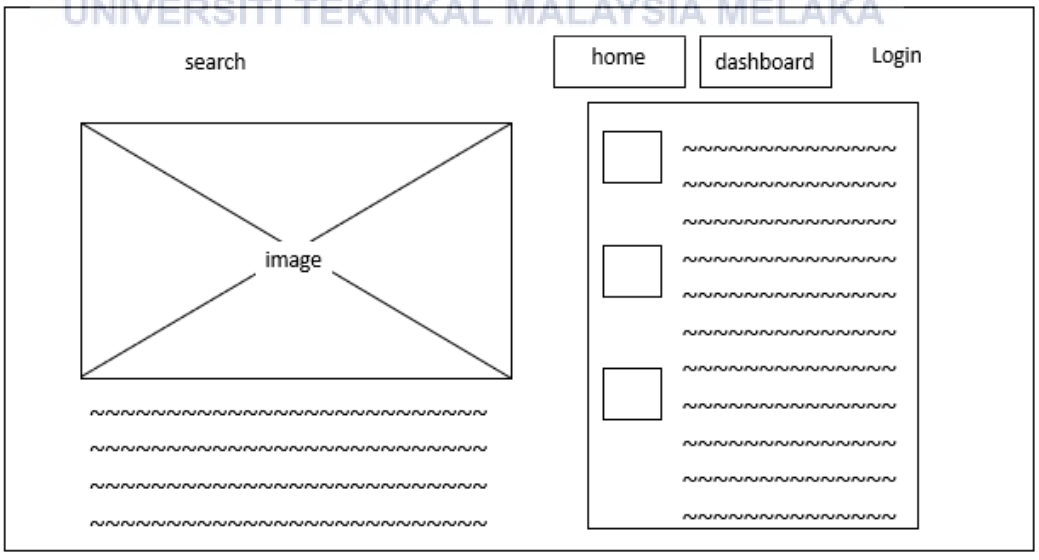


Figure 4.3 House details

Figure 4.4 shows that in the agent interface will display the booking list from customer that already make booking.

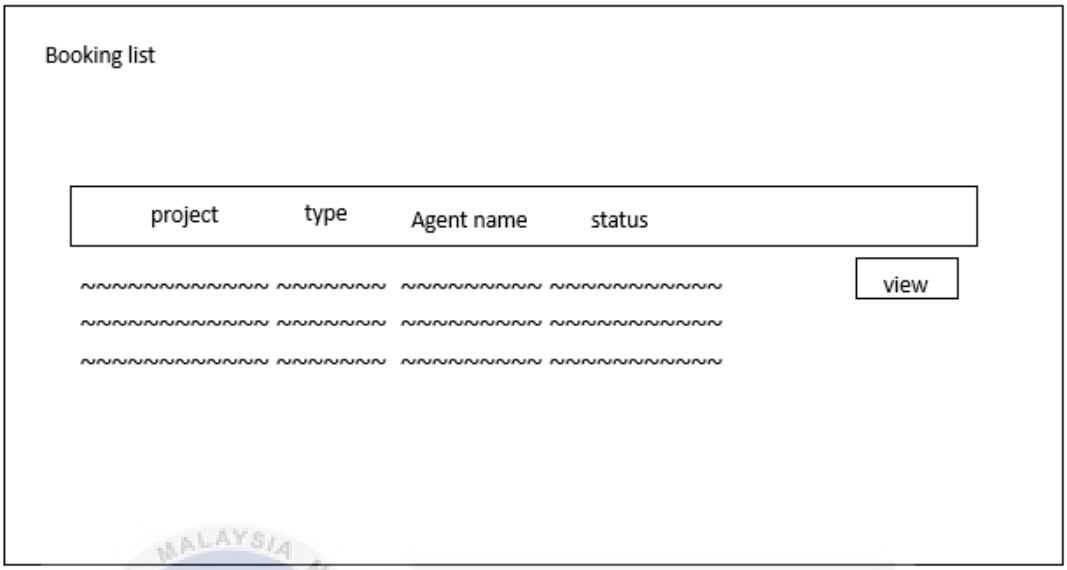


Figure 4.4 Agent Booking List

Figure 4.5 shows that the interface of admin site will display graph of booking. There some function for admin use. Admin can add project and house.

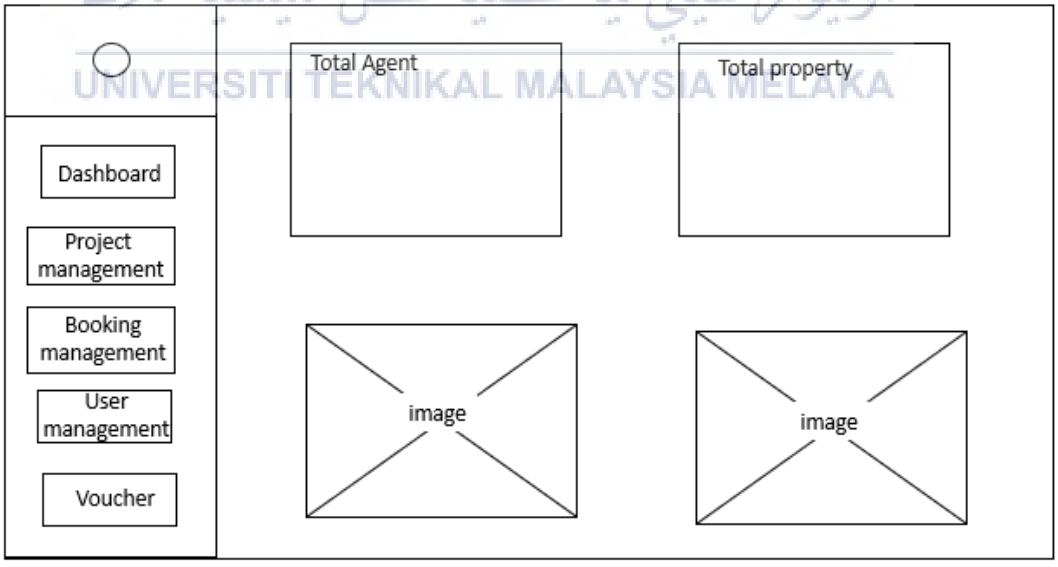
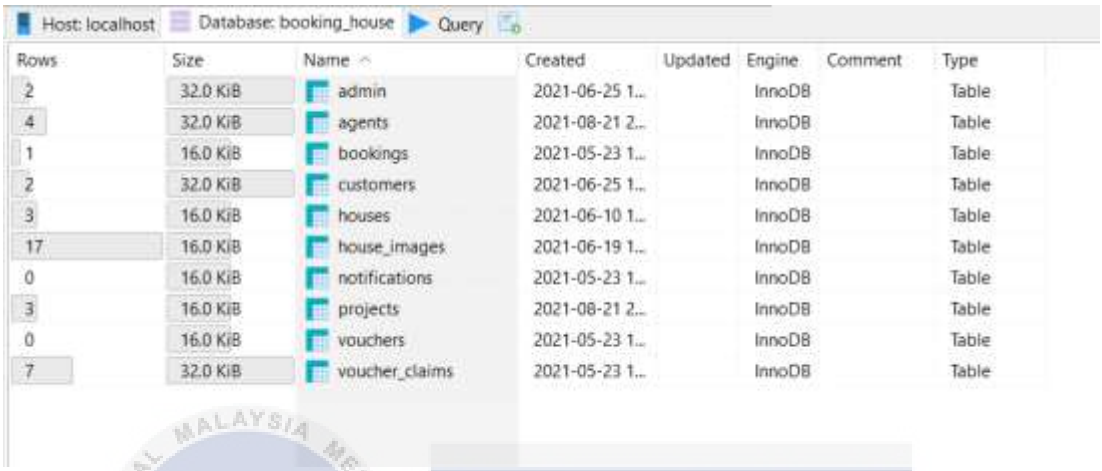


Figure 4.5 Admin Homepage

4.2.3 Database Design

The system application must have a database of its own. It is essential that the database to be used is well organized and structured. The rational database for House Booking Management Web System is shown below.



Rows	Size	Name	Created	Updated	Engine	Comment	Type
2	32.0 KiB	admin	2021-06-25 1...		InnoDB		Table
4	32.0 KiB	agents	2021-08-21 2...		InnoDB		Table
1	16.0 KiB	bookings	2021-05-23 1...		InnoDB		Table
2	32.0 KiB	customers	2021-06-25 1...		InnoDB		Table
3	16.0 KiB	houses	2021-06-10 1...		InnoDB		Table
17	16.0 KiB	house_images	2021-06-19 1...		InnoDB		Table
0	16.0 KiB	notifications	2021-05-23 1...		InnoDB		Table
3	16.0 KiB	projects	2021-08-21 2...		InnoDB		Table
0	16.0 KiB	vouchers	2021-05-23 1...		InnoDB		Table
7	32.0 KiB	voucher_claims	2021-05-23 1...		InnoDB		Table

Figure 4.6 Laragon MySQL Main Page Database Design

4.2.3.1 Conceptual and Logical Database Design

1. Conceptual Database Design

Information obtained from business needs is modelled in a conceptual ERD. The entities and connections depicted in such an ERD are based on the needs of the company. The requirement to satisfy database design has not yet been explored. The simplest model is the conceptual ERD.

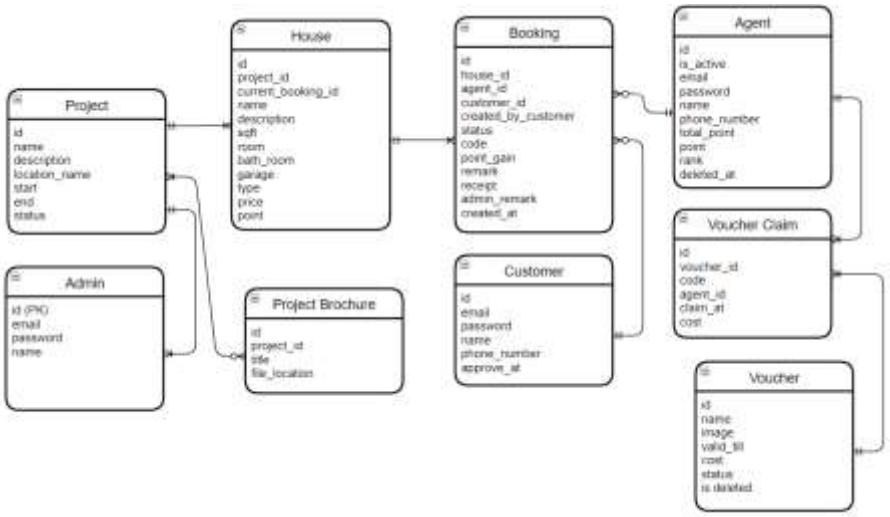


Figure 4.7: Conceptual ERD

2. Logical Database Design

Information obtained from business needs is likewise modelled using logical ERD. Because column types are set, it is more complicated than a conceptual model. It is worth noting that defining column types is optional, but it is something you should do if you want to help with business analysis. It does not yet have anything to do with database construction.

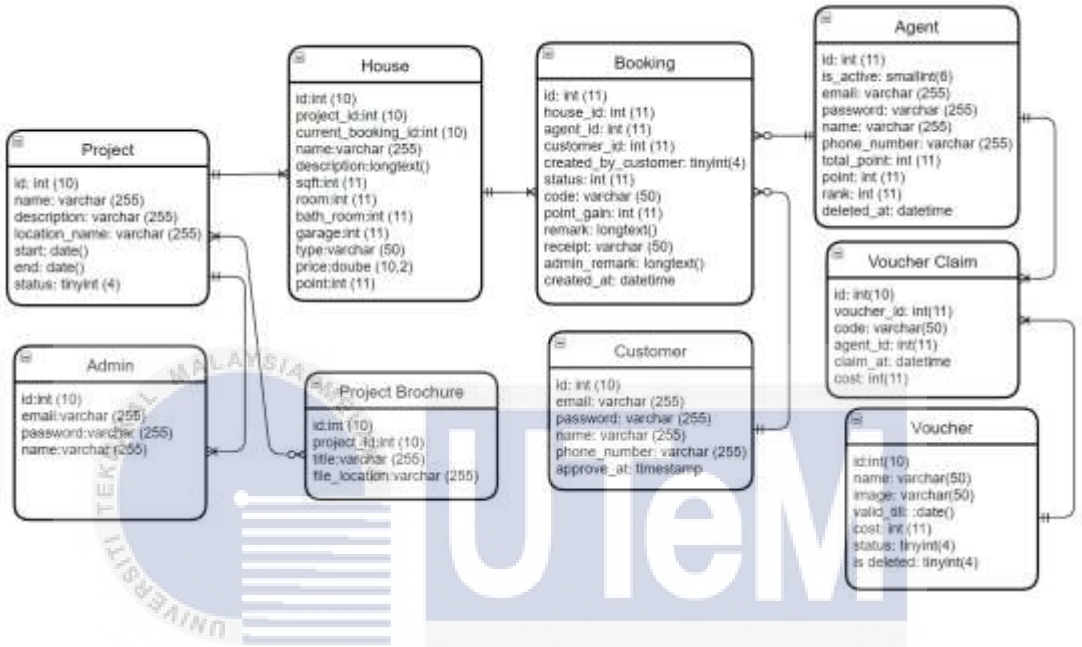


Figure 4.8 Logical ERD

4.3 Detailed Design

4.3.1 Software Design

In this section, data flow chart diagram will be shown. Entity relationship diagrams are diagram that shows the connection of all databases that are required to store data and run the system. The activity diagram shows the flow movement of the system in each actor that involved.

4.3.1.1 Activity Diagram

Three activity diagram that involved which is diagram for admin, agent and customer. In this diagram, it will show the flow of the user when the user use function in the system.

Figure 4.9 Activity Diagram for Admin

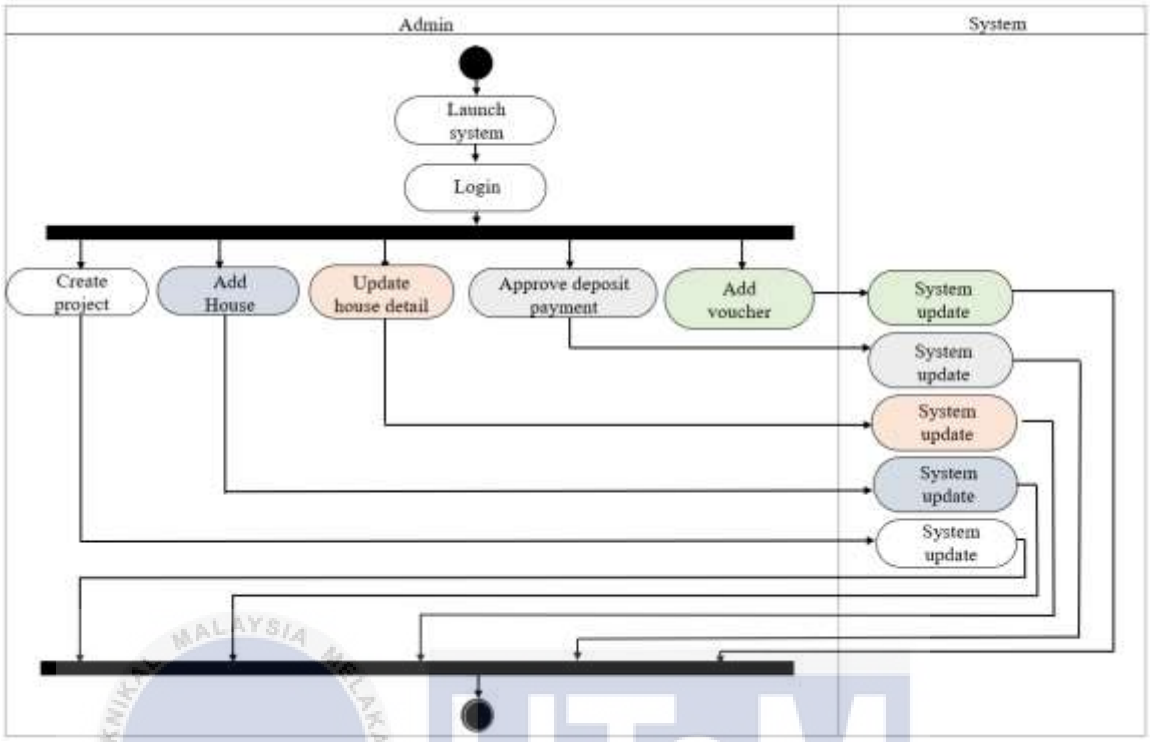


Figure 4.10 Activity Diagram for Agent

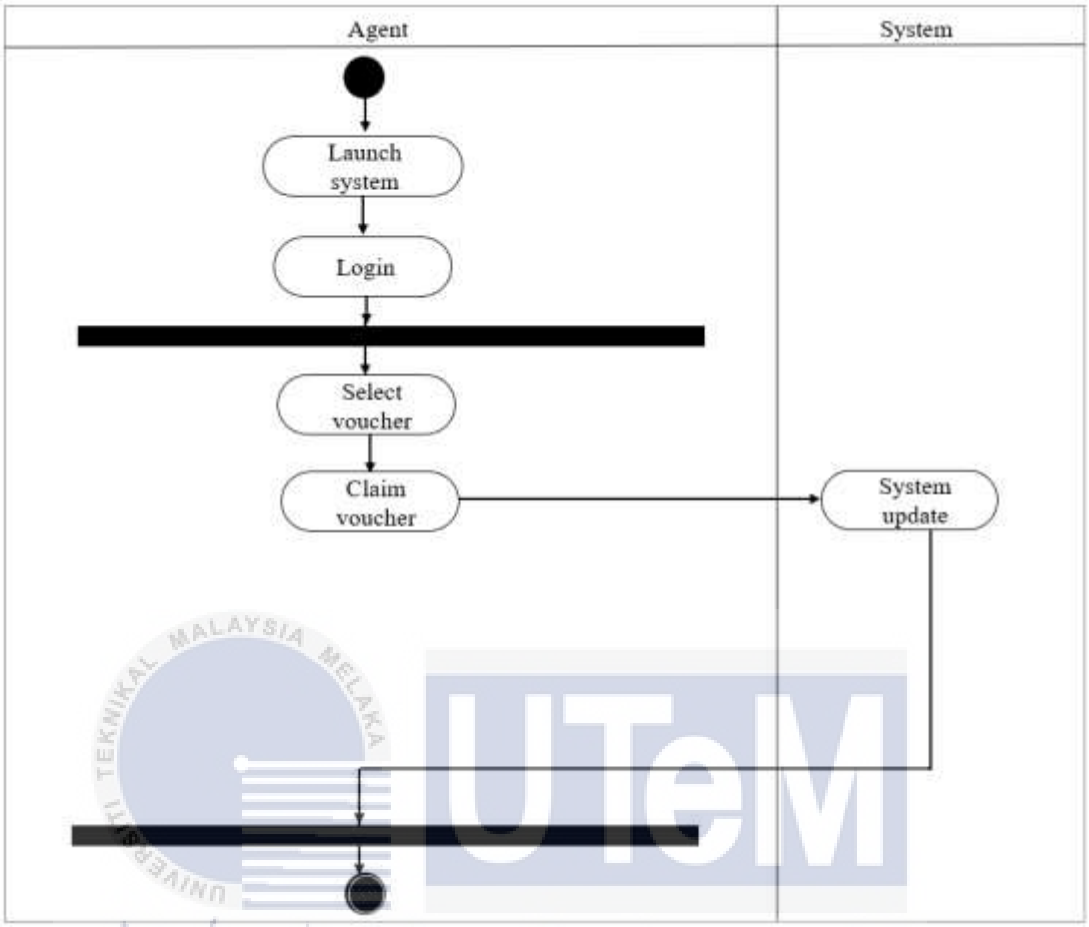
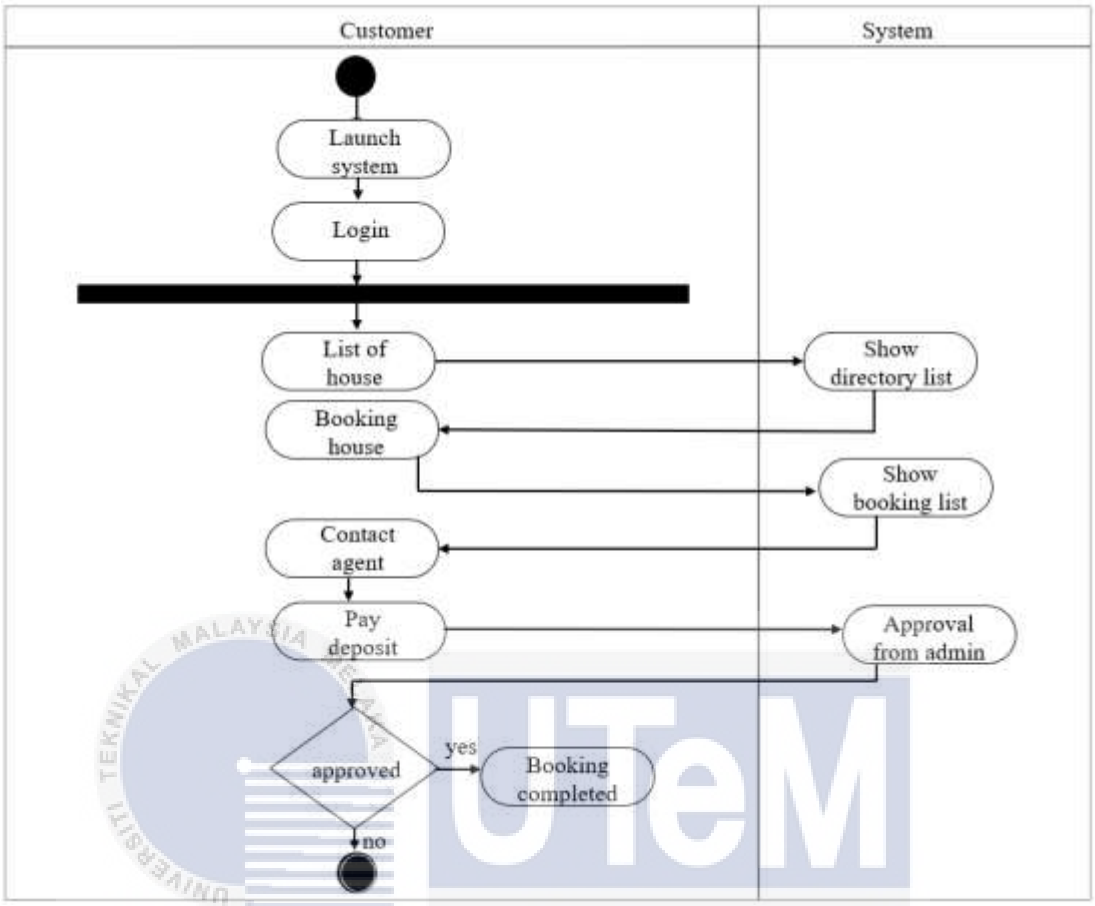


Figure 4.11 Activity Diagram for Customer



4.3.2 Physical Database Design

4.3.2.1 Physical Entity Relationship Diagram

There are nine classes in the system which is admin class, agent class, customer class, booking class, project class, house class, voucher class, voucher claim class, and project brochure class. Figure below show the class diagram for the system and the table below show the attributes, relationship between other classes, primary key, and foreign key of each class.

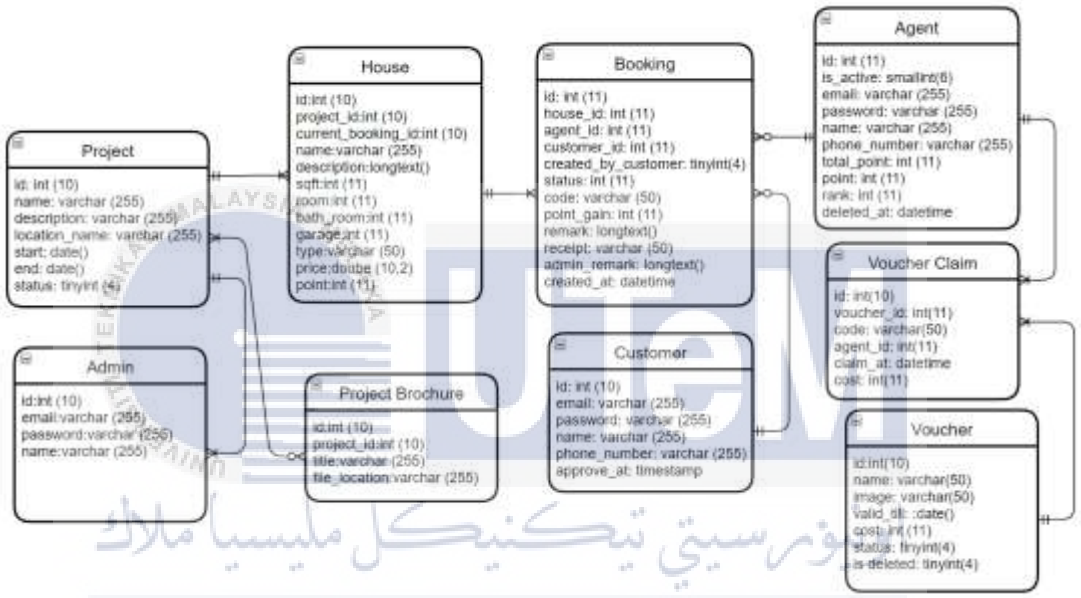


Figure 4.12 Physical Entity Relationship Diagram

4.3.2.2 Data Definition Language

Table 4.1 Admin Database

TABLE: ADMIN				
Column Name	**Key**	**Format**	**Length**	**Description**
ID	PK	INT	10	ID of administrator
Email		VARCHAR	255	Email of administrator
Password		VARCHAR	255	Password of administrator
Name		VARCHAR	255	Name of administrator

Table 4.2 Agents Database

TABLE: AGENTS				
Column Name	**Key**	**Format**	**Length**	**Description**
ID	PK	INT	11	ID of agents
Is_active		SMALLINT	6	The active of an account
Email		VARCHAR	255	Email of agent
Password		VARCHAR	255	Password of agent
name		VARCHAR	255	Store name of agent
Phone_number		VARCHAR	255	Store phone number of agents
Point		INT	11	Store point of agents
Rank		INT	11	Store rank of agent
Deleted_at		DATETIME		Store date of deleted agent

Table 4.3 Customer Database

TABLE: CUSTOMER				
Column Name	**Key**	**Format**	**Length**	**Description**
ID	PK	INT	10	ID of customer
Email		VARCHAR	255	Store email of customer
Password		VARCHAR	255	Store password of customer

Name		VARCHAR	255	Store name of customer
Phone_number		VARCHAR	255	Store phone number of customers
Approved_at		TIMESTAMP		Store approval of customer

Table 4.4 Booking

TABLE: BOOKINGS				
Column Name	**Key**	**Format**	**Length**	**Description**
ID	PK	INT	11	ID of booking
House_ID	FK	INT	11	ID of house
Agent_ID	FK	INT	11	ID of store list
Customer_ID	FK	INT	11	ID of customer
Created_by_customer		TINYINT	4	Store created by customer/ agent
Status		INT	11	Store status of booking
Code		VARCHAR	50	Store random code for email customer
Point_gain		INT	11	Store point gain for agent
Remark		LONGTEXT		Store remark of booking
Receipt		VARCHAR	50	Store receipt url
Admin_remark		LONGTEXT		Store admin remark
Created_at		DATETIME		Store date when booking create

Table 4.5 Houses

TABLE: HOUSES				
Column Name	**Key**	**Format**	**Length**	**Description**
ID	PK	INT	10	ID of house
Project_id	FK	INT	11	ID of project

Current_booking_id		INT	11	ID of current booking
Name		VARCHAR	255	Store name of houses
Description		LONGTEXT		Store description of house
Sqft		INT	11	Store size of house
Room		INT	11	Store quantity room of house
Bath_room		INT	11	Store quantity bathroom of house
Garage		INT	11	Store quantity garage of house
Type		VARCHAR	50	Store type of house
Price		DOUBE	10,2	Store price of house
Point		INT	11	Store point of house

Table 4.6 Project Brochure

TABLE: PROJECTB ROUCHURE				
Column Name	**Key**	**Format**	**Length**	**Description**
ID	PK	INT	10	ID of project brochure
House_Id	FK	INT	10	ID of house
url		VARCHAR	255	Store url of image

Table 4.7 Voucher

TABLE: VOUCHERS				
Column Name	**Key**	**Format**	**Length**	**Description**
ID	PK	INT	10	ID of voucher
Name		VARCHAR	255	Store voucher name
Image		VARCHAR	255	Store voucher image
Valid_till		DATE		Store valid date
Cost		INT	11	Store cost of voucher

status		TINYINT	4	Store status of voucher
Is_deleted		TINYINT	4	Store when voucher deleted

Table 4.8 Voucher claims

TABLE: VOUCHER CLAIM				
Column Name	**Key**	**Format**	**Length**	**Description**
ID	PK	INT	10	ID of voucher claim
Voucher_id	FK	INT	11	ID of voucher
Agent_id	FK	INT	11	ID of agent
Code		VARCHAR	50	Store code voucher
Claim_at		DATETIME		Store date voucher claim
cost		INT	11	Store cost of voucher

4.4 Conclusion

In conclusion, designing the database is important because this can provide a solution for the problems specified in the requirement document in analysis phase. The output of this phase is the design document. The design document act as a plan for the solution and will be used later for implementation, testing and maintenance. The output of this chapter will be used in the next chapter which is individual database system.

CHAPTER 5: IMPLEMENTATION

5.1 Introduction

This chapter, it will discuss about the implementation of software development setup and system database execution. The implementation will be discussed about the project's source code and its purpose. To create the actual system, it requires programming language such as PHP. This chapter also need to set up the project's environment and how it is done.

5.2 Software Development Environment Setup

The project's main environment is discussed regarding the use of software from the beginning to the end of the project. This plan is built on the basis of the design made during the design phase. The stated prerequisite is to ensure the success of the project.

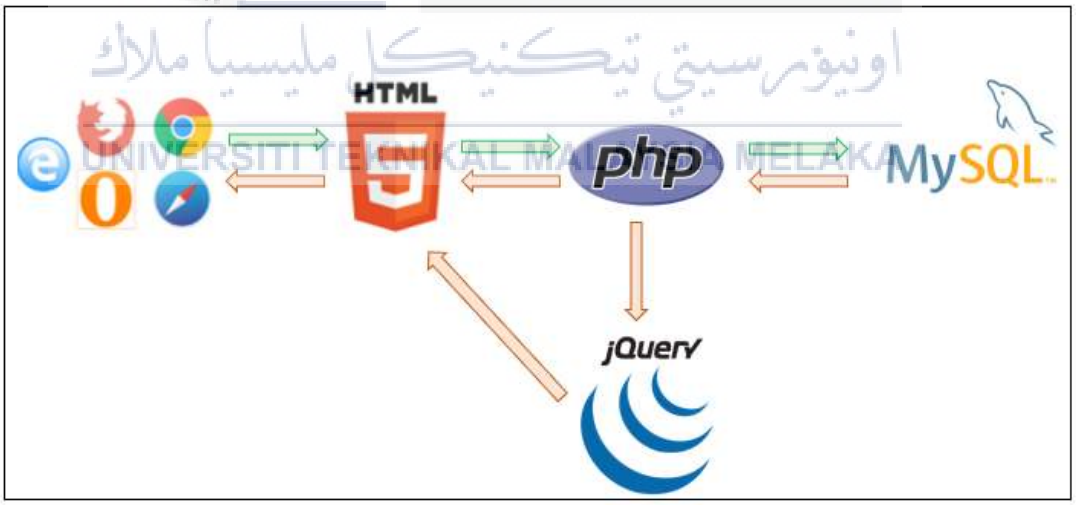


Figure 5.1: Software Development Environment Setup

5.2.1 Software Development Setup

i. Installing Composer

1. Open terminal/CMD
2. Copy and paste below command:

```
Run “php -r "copy('https://getcomposer.org/installer',
'composer-setup.php');"
```

```
php -r "if (hash_file('sha384', 'composer-setup.php') ===
'756890a4488ce9024fc62c56153228907f1545c228516cbf63f885e0
36d37e9a59d27d63f46af1d4d07ee0f76181c7d3') { echo
'Installer verified'; } else { echo 'Installer corrupt';
unlink('composer-setup.php'); } echo PHP_EOL;"
```

```
php composer-setup.php
```

```
php -r "unlink('composer-setup.php');"
```

ii. Installing Laragon

1. Go to https://laragon.org/download/
2. Click link **Download Laragon - Full (147 MB)**
3. After the downloading finish, click the installer to install Laragon.
4. Click 

to run the Apache and MySQL

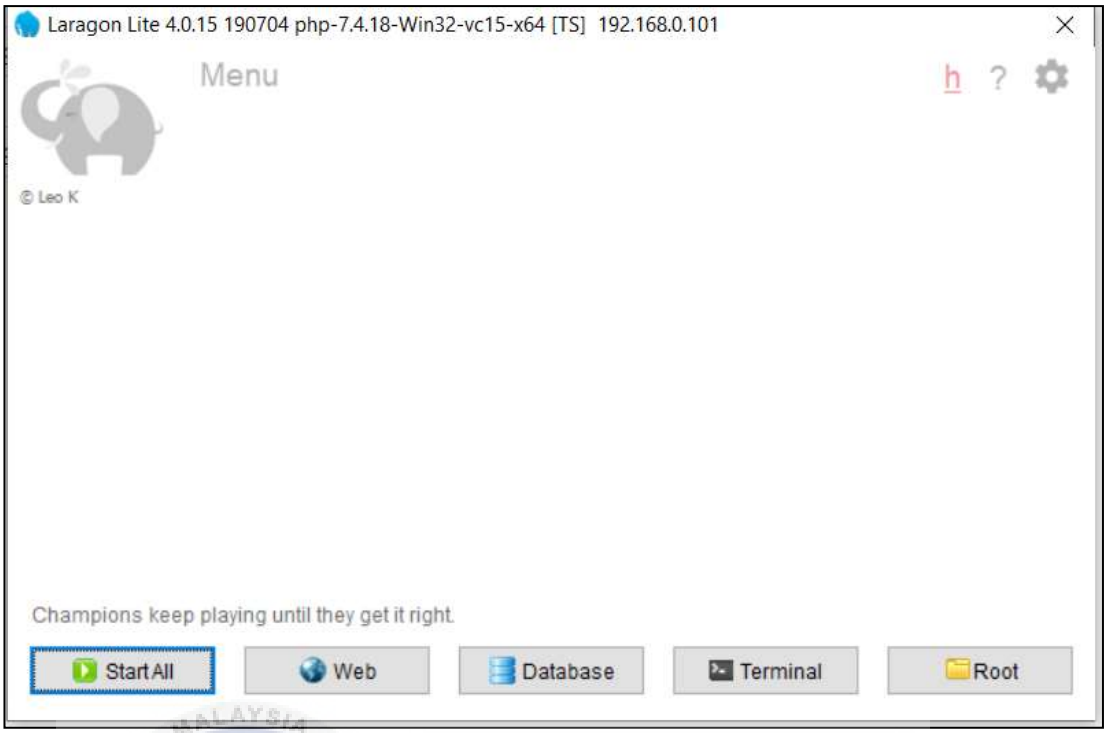


Figure 5.2: Laragon

iii. Installing System

1. Click  to start the terminal program

2. *Notes : Make sure the terminal on the 'laragon/www' directory
3. Paste this command line below to clone the git.

```
git clone https://github.com/farina/parkit.git housebooking
```

4. After finish cloning the file project, run "cd housebooking" to enter the project directory.
5. Run below command to install all require dependency using composer.

```
php -r "unlink('composer-setup.php');"
```

6. Copy .env.example and rename as .env
7. Change mysql configuration on .env
8. Run below command to generate App Key

```
php artisan key:generate
```

9. Run below command to migrate database and seeding the data.

```
php artisan migrate
```

```
php artisan db:seed
```

10. System completely installed. System url: housebooking.test

5.3 Software Configuration Setup

5.3.1 PhpStorm

The software platform used to generate the source code. The implementation code is written to make the database easier to access. After that, the users need to login the system to compare their details with database in MySQL Database.

5.3.2 Laragon MySQL Database

Laragon provide a portable, isolated, fast and powerful development environment for PHP for Windows computers. It is use Apache as a web server. MySQL are the database that been choose to develop the project. Laragon provides a strong database management system, optionally can change it for phpMyAdmin. It can be used as a development environment. It is also great for building and managing modern web applications. It is focused on performance such as designed around stability, simplicity, flexibility and freedom.

5.3.3 Version Control Procedure

How do I control in managing my source code version is by not updating to the latest version, because it worries about the overall effect of the system. So, I will only maintain the current version so that nothing changes.

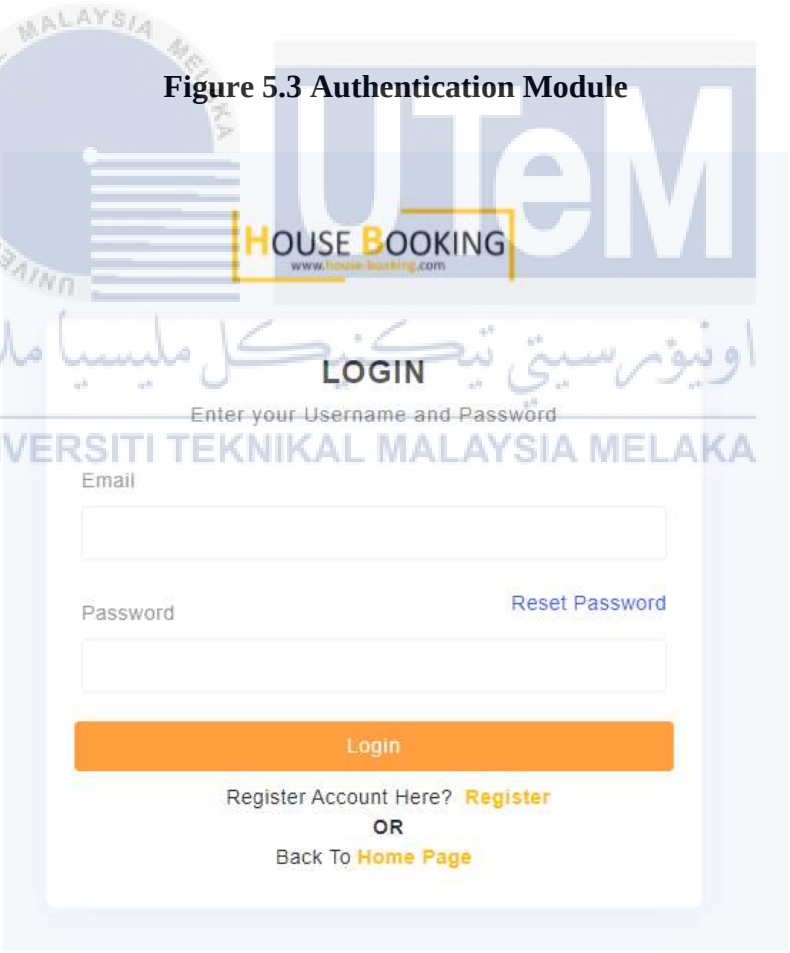
5.4 Implementation Status

Implementation status will describe the progress of the development status for each of the module. For example, authentication module, house unit management module, house booking module, agent reward module, dashboard reporting module. The duration that needs to be completed for each module is 2 weeks.

5.4.1 Authentication Module

Authentication is the process of recognizing a user's identity. This module will be recognizing a user's identity by login with the correct email address or username and password, then the details will compare in the MySQL database. Only authorized user only can login to the system. This module was completed on 16th of April 2021 Friday.

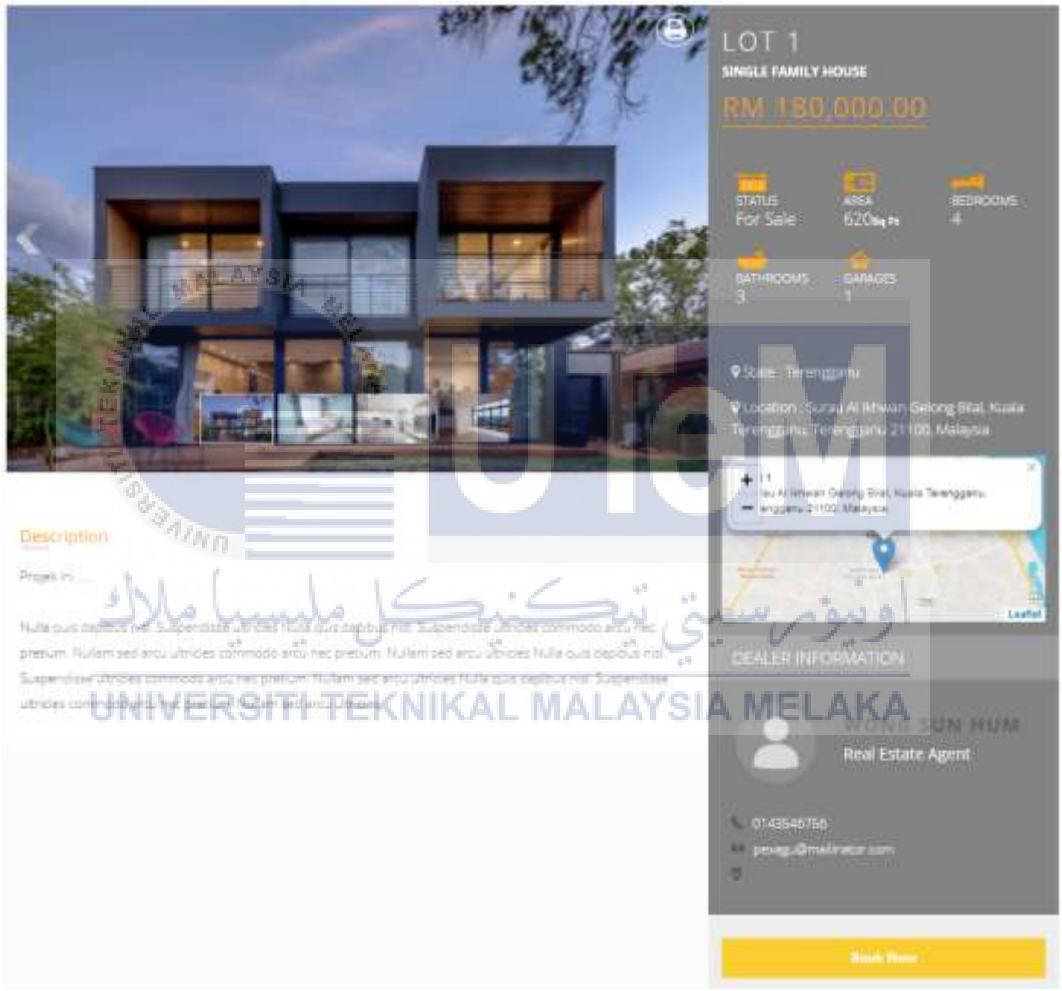
Figure 5.3 Authentication Module



5.4.2 House Unit Management Module

House unit management module will display all the list of project and houses in the system. There are details that will be add by admin and displayed, for example house name, location, size of house, type of house and image of the house. This module was completed on 7th of May 2021 Friday.

Figure 5.4 House Unit Management Module



5.4.3 House Booking Module

House booking module will display all booking created by a particular customer. When the customer book the house, agent will be contacted to managing the customer satisfaction. This module was completed on 21st May 2021 Friday.

Figure 5.5 House Booking Module

5.4.4 Agent Reward Module

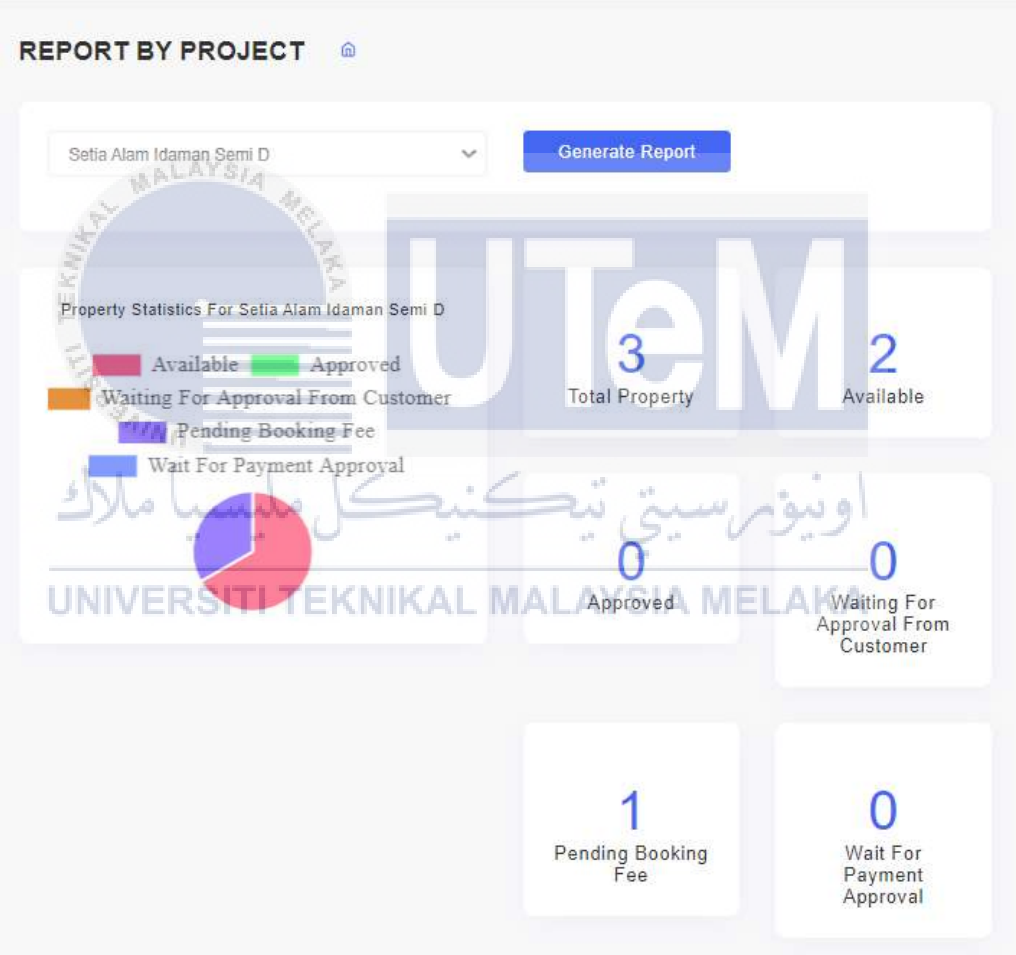
Promotion and event module will display all promotions and events created by a particular store. When the agent already manages a complete booking, will be reward by point and the point can be redeem a voucher. It will display all the details of voucher. This module was completed on 4st Jun 2021 Friday.

Figure 5.6 Agent Reward Module

5.4.5 Dashboard Reporting Module

Promotion and event module will display all promotions and events created by a particular store. When the user clicks the promotion, it will display all the details about the promotion and the event. This module was completed on 21st May 2021 Friday.

Figure 5.7 Dashboard Reporting Module



5.5 Conclusion

In implementation phase, HBMWS is introduced or coded as intended after installing multiple software types in the development setting. The software environment configuration is the tool and process environment to allow HBMWS to be developed, validated and released efficiently and reliably. During software development, the software application included Laragon, Gitkraken and phpStorm (IDE). HBMWS is prepared for delivery, subject alteration during integration and testing throughout the completion of the implementation stage. The request will be screened and debugged after the HBMWS execution. Finally, this chapter will lead to the next chapter focusing on testing and debugging the system, which is the testing phase.

CHAPTER 6: TESTING

6.1 Introduction

In this chapter, it will elaborate about the testing plan of House Booking Management Web system. The testing that has been implemented on the House Booking Management Web System is verify and validate the system to check if the system is fulfils the proposed system requirement as user has requested.

6.2 Test Plan

6.2.1 Test Organization

As a result, the project's personnel must be familiar with "who", "what", "when", and "why". Design decisions are based on determining the structure and design of web pages and guaranteeing the user experience. We will then focus on building user experience enhancement elements and finding a balance between functionality and attractive design. It is also important to make sure the system is user-friendly. It is also important to have someone who is competent to create and manage technology to power the user-facing elements.

6.2.2 Test Environment

Testing my system requires a comfortable environment, thus I exclusively test it at home. Any additional gear or software required to test this system is a laptop with an enough CPU so that there is no lagging performance, as well as mobile phones. For the programming, I only need to launch PhpStorm to run my system and Laragon to access the MySQL database in order to complete the task.

6.2.3 Test Schedule

The test schedule and progresses of the development status for each of the component or modules shown as below. The table 6.1 includes details for component, modules, name, description, duration to complete, date completed and the size of the module.

Table 6.1: Test Schedule

Module	Description	Duration	Date completed	Size (%)
Interface design	Develop user interface of the system	4 days	March 2021	5%
Database design	Develop database and its relationship.	5 days	March 2021	5%
User Login	System user enter email and password to access to the system.	3 days	March 2021	10%
Registration	Register by entering their full name, password and email.	6 days	March 2021	10%
Manage project	Admin able to add, delete or edit project details, brochure/image	5 days	April 2021	10%
Manage house	Admin able to add, delete or edit house unit record with reward points	7 days	April 2021	10%
Booking house	Customer can make house	8 days	April 2021	10%

	booking with random agent			
	The system can generate the point status and rank of agent.	7 days	May 2021	10%
Voucher	Admin able to add, delete or edit voucher	7 days	May 2021	10%
Redeem voucher	Agent can redeem voucher	7 days	May 2021	10%
Event reporting	The system can generate the statistic of booking	7 days	June 2021	10%

6.3 Test Design

6.3.1 Test Description

Blackbox testing are used in this technique. The aim of Blackbox testing is to test the entire functionality and the actions of the system. The result will be based on modules that are covered based on three user requirements. These are the following list:

a) **Customer:** View project house details, booking a house and upload payment receipt

b) **Administrator:** Login functionality, add/update house project, add/update voucher and verify payment booking.

c) **Agent:** Login functionality, claim voucher.

6.3.2 Unit Testing and Testing Documentation

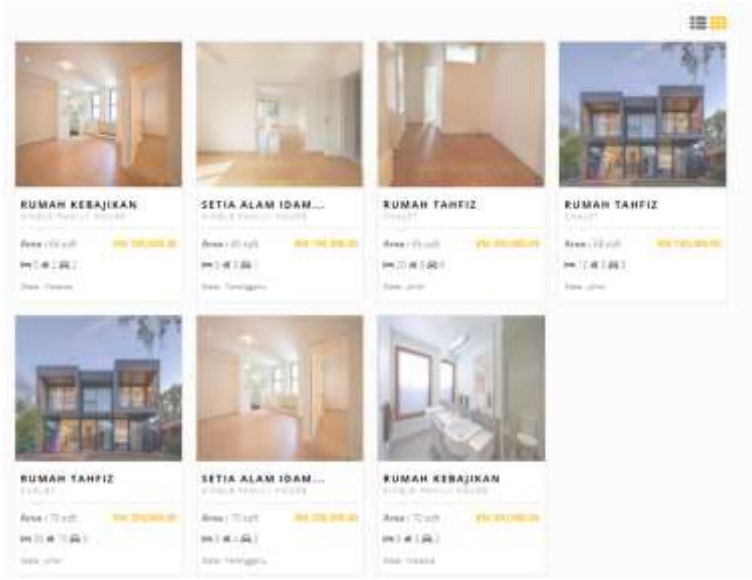
Unit testing method are conducted on android application system in order to ensure that all modules are available and functional. This will make the system modules work properly. This phase is important to evaluate the outcome. Below are the tables of result in each of the functionalities.

6.3.2.1 Project House Details

Table 6.2 shows test case project house details. From the test result, the system shows the project and house details.

Table 6.2: Test Case Project House Details

Test Case ID	Test Case Name	Tester Name	Date
TC-01	Project House	Nur Afiqah Farina Binti Jais	12/6/2021
Test Objective	View house project and details of the house		
Expectation Result	Provide project and house details		

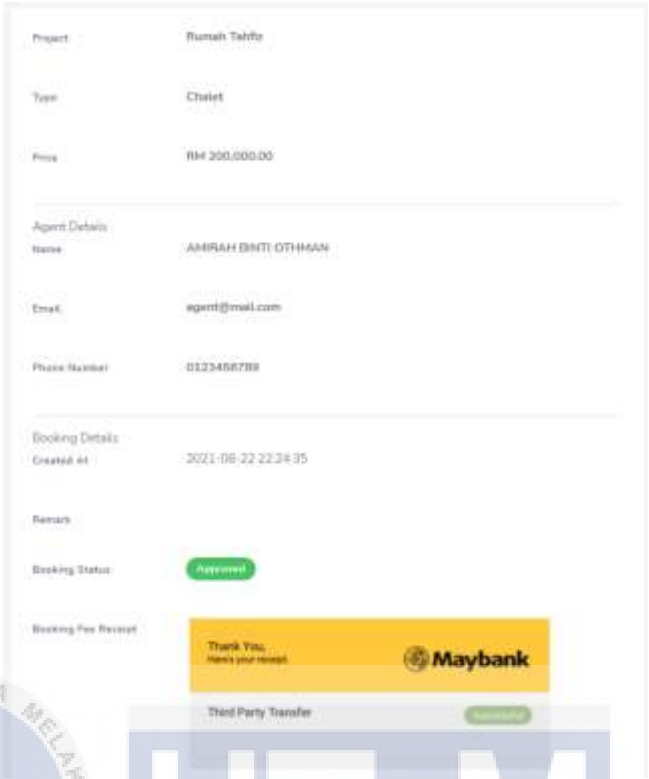
Actual Output	**1**	
	2	
Actual Result	Successfully showing list project and house details.	

6.3.2.2 Booking House and Upload Payment Receipt

Table 6.3 shows test case booking house. The test case result is booking are shown inside the system after user choose the house.

Table 6.3: Test Case Booking House

Test Case ID	Test Case Name	Tester Name	Date
TC-02	Booking house	Nur Afiqah Farina Binti Jais	12/6/2021
Test Objective	Booking a house		
Expectation Result	Enable to book a house.		
Actual Output	1 		

	2	
Actual Result	Successfully booking a house with payment receipt.	

6.3.2.3 Administrator Login

Table 6.4 below show test case for administrator login. Administrator can login into the system and main page will be displayed if the login is successful.

Table 6.4: Test Case Administrator Login

Test Case ID	Test Case Name	Tester Name	Date
TC-03	Administrator Login	Nur Afiqah Farina Binti Jais	12/6/2021

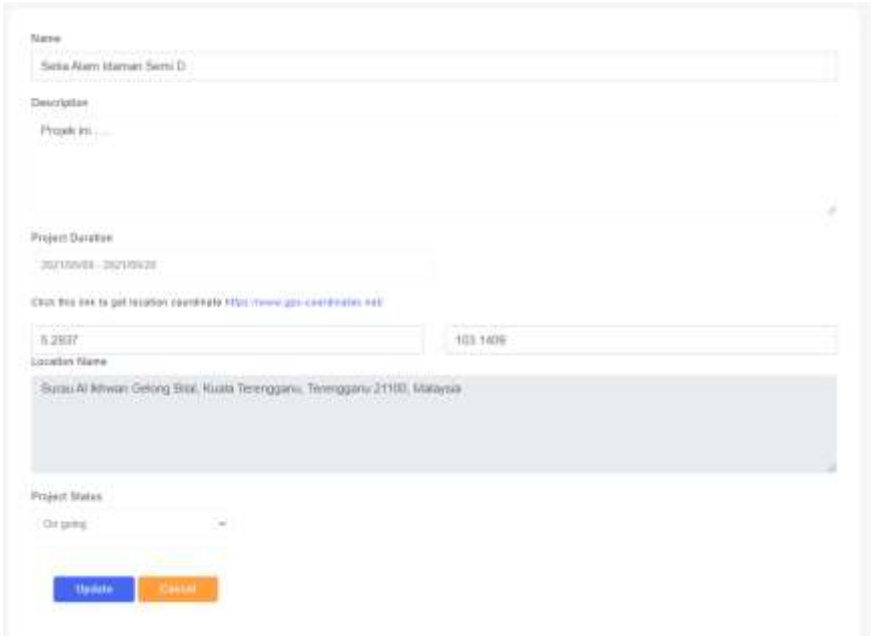
Test Objective	Admin login to system.	
Expectation Result	Successfully login system.	
Actual Output	**1**	
	2	
Actual Result	The main page will be displayed after admin successful login to system.	

6.3.2.4 Update Project Details

Table 6.5 below show the test case for update project details. Administrator can edit and update the current existing project details by searching the project name. The project details update after admin make some changes.

Table 6.5: Test Case Update Project Details

Test Case ID	Test Case Name	Tester Name	Date
TC-04	Edit Project Details	Nur Afiqah Farina Binti Jais	12/6/2021
Test Objective	Update existing project details.		
Expectation Result	Successful update project details.		
Actual Output	1		

	2	
Actual Result	After edit the project details and update, it will automatically save the changes.	

6.3.2.5 Update Voucher

Table 6.6 below show the test case for update voucher. Administrator can edit and update the current voucher by searching the voucher name. The voucher updated after admin make some changes.

Table 6.6: Test Case Update Voucher

Test Case ID	Test Case Name	Tester Name	Date
TC-04	Edit Voucher	Nur Afiqah Farina Binti Jais	12/6/2021
Test Objective	Update existing voucher.		

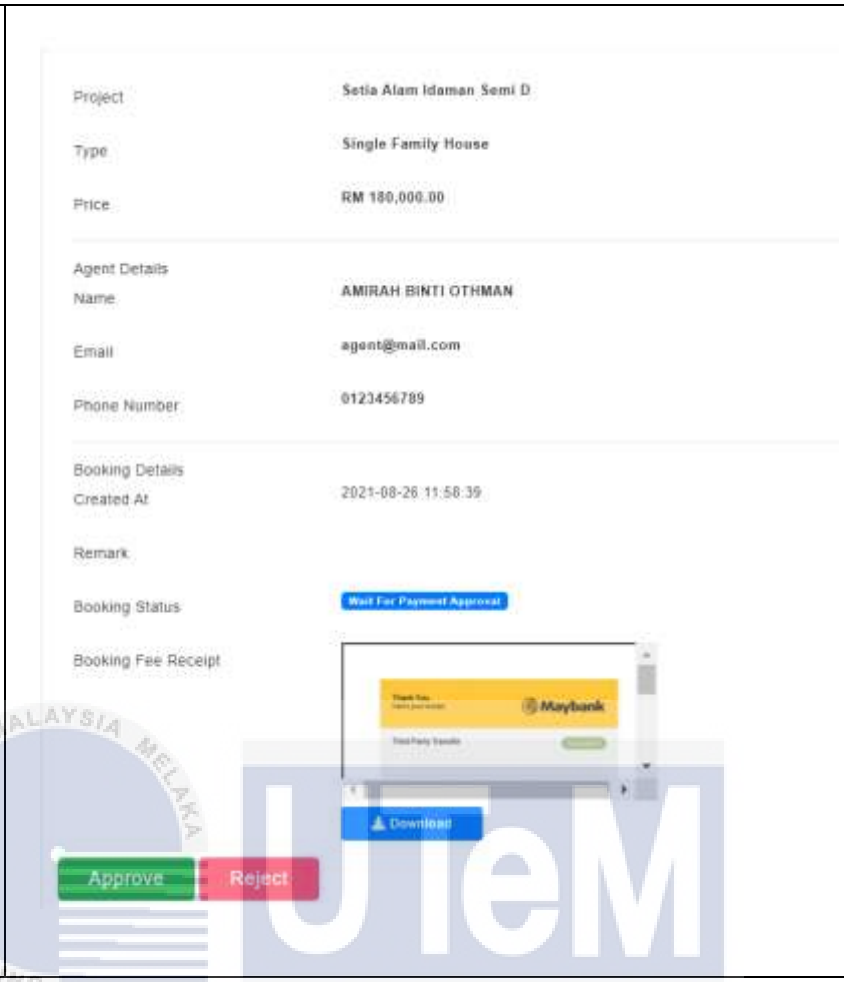
Expectation Result	Successful update voucher details.	
Actual Output	**1**	
	2	
Actual Result	After edit the voucher detail and update, it will automatically save the changes.	

6.3.2.6 Verify Booking Payment

Table 6.7 below show the test case for verify booking payment by customer. Administrator can verify the booking payment whether to be approved or rejected.

Table 6.7: Test Case Verify Booking Payment

Test Case ID	Test Case Name	Tester Name	Date
TC-04	Verify Booking Payment	Nur Afiqah Farina Binti Jais	12/6/2021
Test Objective	Admin manage to verify the booking payment.		
Expectation Result	Enable to verify the booking payment		
Actual Output	**1** 		

	2	
Actual Result	Approve/ reject message is displayed and the booking automatically will be canceled if the admin reject.	

6.3.2.7 Agent Login

Table 6.8 below show test case for agent login. Agent can login into the system and main page will be displayed if the login is successful.

Table 6.8: Test Case Agent Login

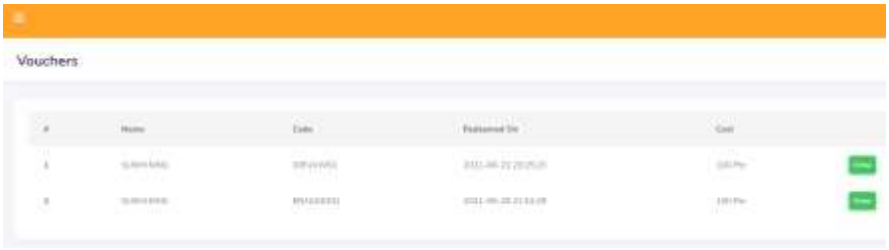
Test Case ID	Test Case Name	Tester Name	Date
TC-03	Agent Login	Nur Afiqah Farina Binti Jais	12/6/2021

<table>
<tr><td>Test Objective</td><td colspan="2">Agent login to system.</td></tr>
<tr><td>Expectation Result</td><td colspan="2">Agent login system.</td></tr>
<tr><td>Actual Output</td><td>1</td><td> 
</td></tr>
<tr><td></td><td>2</td><td>  </td></tr>
<tr><td>Actual Result</td><td colspan="2">The main page will be displayed after agent successful login to system.</td></tr>
</table>

6.3.2.8 Redeem Voucher

Table 6.9 below show the test case for redeem voucher agent. Agent can redeem the voucher if the point enough to redeem.

Table 6.9: Test Case Redeem Voucher

Test Case ID	Test Case Name	Tester Name	Date
TC-04	Redeem Voucher	Nur Afiqah Farina Binti Jais	12/6/2021
Test Objective	Agent redeem the voucher.		
Expectation Result	Agent can redeem the voucher.		
Actual Output	**1** 		
	2 		

Actual Result	Voucher that has been claim will be displayed.

6.4 Test Data

6.4.1 Administrator Login

Table 6.10: Test Data Administrator Login

Email	Password	Expected Output	Actual Output	Pass/Fail
admin@mail.com	secret	Valid Input	Valid Input	Pass
admin@gmail.com	secret	Invalid Email	Invalid Email	Pass
admin@mail.com	Secret	Invalid Password	Invalid Password	Pass
admin@gmail.com	Secret	Invalid Email and Password	Invalid Email and Password	Pass

6.5 Test Result and Analysis

Table 6.11: Test Result and Analysis

Test Case ID	Test Scenario	Test Steps	Test Data	Expected Result	Actual Result	Pass/Fail
TC01	Check Admin Login with Valid Data	1. Open Web Application 2. Enter Email 3. Enter Password	Email: admin@mail.com Password: secret	Admin should Login to the main page	As expected	Pass

		4. Click Login				
TC02	Check Admin Login with Invalid Data	1. Open Web Application 2. Enter Email 3. Enter Password 4. Click Login	Email: admin@gmail.com Password: Secret	Admin should not Login to the main page	As expected	Pass
TC03	Check Project House Details	1. Open Web Application 2. Select Project House 3. Choose house	-	The system should display the house detail.	As expected	Pass
TC04	Customer can Booking House	1. Open Web Application 2. Select Project House 3. Choose house 4. Click Book Now 5. Upload payment receipt	-	The system should display the details of booking.	As expected	Pass

		6. Wait for payment to be verify				
TC05	Agent can Redeem Voucher	1. Open Web Application 2. Click Voucher 3. Choose voucher 4. Click Redeem	-	The system should display the voucher that has been redeem by agent	As expected	Pass
TC06	Admin can Approve Booking Payment	1. Open Web Application 2. Click Booking Management 3. Click View 4. Click approve	Approve	The system should display booking approved	As expected	Pass
TC07	Admin can Reject Booking Payment	1. Open Web Application 2. Click Booking Management 3. Click View 4. Click reject	Reject	The system should display booking rejected	As expected	Pass

TC08	Admin Add Project	1. Open Web Application 2. Click Booking Management 3. Click List 4. Click Create 5. Enter Details of the Project 6. Click Submit	Name: Setia Alam Idaman Semi D Description: Projek ini… Project duration: 08/05/2021-20/05/2021 Location name: Terengganu Project Status: On Going	The system should display a successful message after project add	As expected	Pass
TC09	Admin Add House	1. Open Web Application 2. Click Booking Management 3. Click List 4. Click Manage 5. Click Insert New Property 6. Enter Details of the House 7. Click Add	Name: Setia Alam Idaman Semi D Description: Projek ini… Type: Single Family House Price: RM 180000.00 Area (Sq ft): 620 Total Room: 4 Total Bath Room: 3 Total Garage: 1 Point: 200	The system should display a successful message after house add	As expected	Pass
TC10	Admin can Add Voucher	1. Open Web Application	Name: Sushi King Valid Until: 31/12/2021	The system should display a	As expected	Pass

		2. Click Voucher 3. Click Insert New Voucher 4. Insert voucher details. 5. Click Submit	Image: choose image Cost: 100 Status: Active	successful message after shop admin add voucher		
TC11	Admin can add Agent	1. Open Web Application 2. Click User Management 3. Click Agent 4. Click Add New 5. Enter Agent Detail 6. Click Submit	Name: AMIRAH BINTI OTHMAN Email: agent@mail.com Phone Number: 0123456789	The system should display a successful message after admin add agent	As expected	Pass
TC12	Admin can Update Project Details	1. Open Web Application 2. Click Booking Management 3. Click List 4. Click Edit	Location Name: Terengganu Update to Location Name: Johor	The system should automatically update the project details	As expected	Pass

		5. Change details to update 6 Click Update				
TC13	Admin can Update House Details	1. Open Web Application 2. Click Booking Management 3. Click List 4. Click Manage 5. Click Edit 6. Change details to update 7. Click Update	Total Room:4 Update to Total Room:3	The system should automatically update the house details	As expected	Pass
TC14	Admin can view Report	1. Open Web Application 2. Click Project Management 3. Select Project 4. Click Generate Report		The system should display the report of the project selected	As expected	Pass

TC15	Customer can Update Profile Information	1. Open Web Application 2. Click Profile Icon 3. Click Profile 4. Change details of information 5. Click Update information	Name: USTOMER Update to Name: Farina	The system should automatically update detail.	As expected	Pass

6.6 Conclusion

In conclusion, testing is important to make sure the effectiveness of the system and identify the error occurs. So, the developer can fix the bugs and error before allowing the client to use the system. The testing should start at the requirement phase to avoid further requirement related bugs.

CHAPTER 7: CONCLUSION

7.1 Introduction

This last chapter will elaborate about the weakness and the strengths of the House Booking Management Web System. All the system is based on modules and features that has been implemented. It also explains about some improvements that could be have in this system from the weakness that has been add and the project contribution to any individual or party that has involve in the development of this system.

7.2 Observation on Weaknesses and Strengths

Every system that was developed have their weakness and strengths. For the weaknesses of this system, in the booking payment section, this system does not use payment gateway integration.

For the strengths of this system, this system provides various features for customers. In this system, agent can help book on behalf of customer with the approval from customer. If you want to compare with the existing system, there are some systems that focus only on buying property. There is no for booking property.

7.3 Propositions for Improvement

In my opinion on how to improve my system better are by providing an Agent License section. Which is where the agent must have license before involve with House Booking Management Web System. This will show to the customer that House Booking agent can be trusted and avoid from fraud.

In the future, I want to improve by using the payment gateway integration because it will encrypt sensitive credit card details, ensuring that information is passed

securely from the customer to the acquiring bank, via merchant. So, this saves more user time.

7.4 Project Contribution

Project contribution can be divided to the company. First is for the company, this project can be used to all property in one company. So, this system will be more effective when use it. In addition, a user manual can be found in the Appendix section

7.5 Conclusion

The conclusion that can be concluded after completing this system is the developed system has eased the admin to manage and record the booking house that been book. Also make it easier for customer to make a booking with the simplest way. This system has met its objective and solve the main problem that has been identified previously in this report but improve for the better performance and for the future use is still needed. All the proposition of improvement needs to be implemented to make the system more reliable and secure.

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