PARCEL MANAGEMENT UTeM HOSTEL SYSTEM

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BORANG PENGESAHAN STATUS TESIS*

JUDUL: PARCEL MANAGEMENT UTeM HOSTEL SYSTEM

SESI PENGAJIAN: 2015/2016

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PARCEL MANAGEMENT UTeM HOSTEL SYSTEM

SYAQIRA LIYANA BINTI AHMAD GHAZALI

This report is submitted in partial fulfilment of the requirements for the

Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2016

DECLARATION

I hereby declare that this project report entitled

PARCEL MANAGEMENT UTeM HOSTEL SYSTEM (PMUHS)

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

STUDENT : _____ Date: 25/8/2016

(SYAQIRA LIYANA BT AHMAD GHAZALI)

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: 25/8/2016

(EN.MUHAMMAD SURYANATA)

DEDICATION

Specially dedicated to my beloved family
Mr.Ahmad Ghazali B. Ab Rahman and Mrs. Norrashimah Bt. Johan

For my lecturer and supervisor
Mr.Muhammad Suryanata at Universiti Teknikal Malaysia Melaka (UTeM)

And lastly to my entire friend who have encouraged,
Guided and inspired me thought my journey of education.

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Grateful to the Almighty for the countless blessings and grace that was given. I'm finally able to complete the Final Year Project for this semester. First and foremost, we would like gratitude to my supervisor Mr.Muhammad Suryanata who taught us and worked hard to educate to successfully complete the Parcel Management UTeM Hostel System and also help in the writing of this report. Not forgetting, I would like to thank to my parents and friends who helped me a lot in finalizing this project within the limited time frame.

ABSTRACT

The project that will be developed is Parcel Management UTeM Hostel System (PMUHS) using interactive web-based application. PMUHS will be developed and used especially for UTeM Hostel. At the moment, the parcel information is very important for searching process and kept information much better. PMUHS can upgrade from manual system to the web- based system. It also manages all management about parcel received process by UTeM Hostel staff and give information parcel status that student need. The PMUHS will be divided into two levels of which are Administrator and Student. This project develop using Adobe Dreamveaver CS5, XAMPP, MySQL as database and other software which include Adobe Photoshop CS5, Microsoft Visio 2007, Microsoft Project 2007 and etc. The project methodology of this project will be based on System Development Life Cycle (SDLC).The phases are Planning, Analysis, Design and Implementation. The expected output of this project is to help the hostel staff to organize parcel systematically and provide efficient way for student to check their parcel.

ABSTRAK

Projek yang akan akan dibangunkan adalah *Parcel Management UTeM Hostel System* (PMUHS) menggunakan aplikasi berasaskan web interaktif. PMUHS akan digunakan terutamanya untuk Asrama UTeM. Pada masa ini, maklumat penghantaran bungkusan adalah sangat penting untuk proses mencari dan maklumat disimpan denganlebih baik. PMUHS boleh menaik taraf dari sistem manual kepada sistem berasaskan web. Ia juga menguruskan pengurusan mengenai proses penerimaan bungkusan oleh kakitangan UTeM Hostel dan memberikan maklumat status bungkusan kepada pelajar. The PMUHS akan dibahagikan kepada dua peringkat iaitu Pentadbir dan Pelajar. Projek ini dibangunkan dengan menggunakan Adobe Dreamweaver CS5, XAMPP, MySQL sebagai pangkalan data dan perisian lain termasuk Adobe Photoshop CS5, Microsoft Visio 2007, Microsoft Project 2007 dan lain-lain Kaedah projek ini akan berdasarkan Kitaran pembangunan hayat sistem (SDLC). fasa-fasa merancang, Analisis, reka bentuk dan Pelaksanaan. Output Hasil dari projek ini, diharapkan dapat membantu kakitangan asrama untuk menyusun dan menyimpan data bungkusan dengan secara sistematik dan menyediakan cara yang berkesan untuk pelajar menyemak bungkusan mereka.

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CHAPTER I

INTRODUCTION

1.1. Introduction

As well known, in this era of globalization, to do a variety of jobs quickly and systematically are needed. Job done manually considered inefficient and require renewal. The Parcel Management UTeM Hostel System developed will be used by hostel staff and student

Before this, all information about parcel record using by manual record (log book) at the office. In addition, student must go to office every day to check their parcel also. This system is developed to make the current practice easier and more efficient

This system will be used exclusively by hostel staff and Student at UTeM Hostel. The main purposes of this system are developed to record parcel.

For student, they can check their parcel arrived and take appropriate action go to office.

1.2. Problem statement

In UTeM hostel, all information about parcel record using manual record such as log book. The problem using manual system is requires more paper, which is, hostel staff has to use more paper every time when parcel arrived. Besides, record all parcel by using paper that is less effective for storing data and the probability of record loss is high. By manually records (log book), the chances some of the records will be disappear or damage is high. This problem can occur from many reasons, such as misplace, torn, eaten up by termites, the record can't be clearly readable because of bad handwriting and so on. And the last problem to be faced is more time taken respond to the report, which is the student doesn't know if their parcel already arrived or not, so they must go to the office to make the confirmation about it. In addition, student takes a long time to search their parcel in log book.

1.3. Objective

- To record parcel report systematically. The system will use computer to manage parcel record. It is more efficient and effective than manual system.
- To make the record secure. The manual system use a lot of paper to back up and make filling cabinets increase to manage the data and high costly compare computerized system it easy to backup and more effective.
- To ease the access of the record. The system helps to make the search more efficient and can save time.

1.4. Scope

User Requirement

i. Hostel Staff

A user which is hostel staff will insert new information of parcel to the system. For example detail parcel information, Name Student, Arrived Date, Date Collected. Hostel Staff also can add, update, delete, search, and view parcel record information.

ii. Student UTeM Hostel

Student can check their parcel whether their parcel arrived or not without need to come to office every day. Student can sign up and login. In system, student can check whether he received parcel or not.

System Module:

i. Add Parcel Information
   - This feature is for the Hostel staff. The information will be insert to the database

ii. Update Parcel Information
   - This feature is use to update status of the parcel into the database

iii. View / Display
   - Display the Parcel Information, such as Name student, Tracking Number, No. Tel Student, Date arrived.

iv. Search Parcel
   - This feature use to search student parcel using phone number.

Limitation

This system only can be used by staff and student that stay at UTeM hostel, because this system builds for UTeM Hostel only.

1.5. Expected Output

Manual system has more disadvantages than computerized. Nowadays the computerized system is one of the important reasons to improve efficiency in daily work. The main function about this system is to give information about new parcel arrived. Student will check their parcel through system and will not go to office to check their parcel arrived. In addition, all the information about parcel can add, update or delete in the database and saved into the server. This online parcel system will helps the hostel staff to organize parcel systematically without the worries of data losses due to improper storage of manual system using parcel form or sheet. These systems contribute a greater use in providing a system which will be efficient to the student as they can check their parcel from anywhere.

1.6. Conclusion

The Parcel Management UTeM Hostel System based on web will be developed and will give benefit to the hostel staff and student. This system will replace the previous system which use parcel form to record the information about the new parcel. Hopefully the system can help hostel management to manage parcel information and reduce the problem occur while using manual system and make hostel staff and student works more efficient and effective than used manual system.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1. Introduction

In this chapter explains about literature review, project methodology, project requirement and project schedule and milestones. The literature review including domain, existing system and technique. It provides a briefly explanation about the concept behind the research study and also includes some of the existing system review. This chapter also clearly identifies the methodology to be adapted in the project. A project schedule and milestone will be adopted to show how to manage the time for each phases of the project. Other those, project requirement state the requirement to be used in project such as software and hardware requirement.

2.2. Facts and findings

Reason for developing Parcel Management UTeM Hostel System is to solve problem that has been mention in chapter one. Before developing a new system, developer must study and find information that related with this new system. This information can be found on internet and they also can study on current or existing system. The studies of existing system and other information are elaborated in sub topic.

2.2.1. Domain

2.2.2. Existing System

For this part, the research before develop this project are very important. In this project, the case study is the main of method of research that related with this project.

i. Case Study 1: Research at Nationwide Malacca Express Courier Services Bhd

According to En Azreen Ahmad who is Station Manager of Nationwide Malacca Express Courier Services Bhd, the customer can check their status of parcel by calling the NECSB branches, come to NECSB counter or call the receiver. Besides, the NECSB branches do not make backup because the Headquarter of NECSB at Shah Alam will make backup for all branches in Malaysia. Referred the case studies above, this project will be developed to solve current problem about parcel management at UTeM Hostel. For example this project will develop, for student to check their status of parcel. Besides, this project will take seriously to make record secure. Using the manual system use a lot of paper to back up a, make filling cabinets increase compares computerized system, which is easy to backup and more effective.

ii. Case Study 2: Pos Laju Trace & Track

Based on website of Pos Laju called Track and Trace System, (http://poslaju.com.my/track-trace/) these website totally controlled by headquarter of Pos Laju National Courier. The Staff of Pos Laju branches only can use a part of this system. They cannot manage this system totally. If they have any problems about this system they must to refer headquarter of Pos Laju National Courier to solve the problem. So, it can take time and difficult to manage daily job. Similarities between the existing system and system to be developed, the user can check their parcel status, using the search box on the website. Figure 2.1 showed part of the application Track and Trace System of Pos Laju.

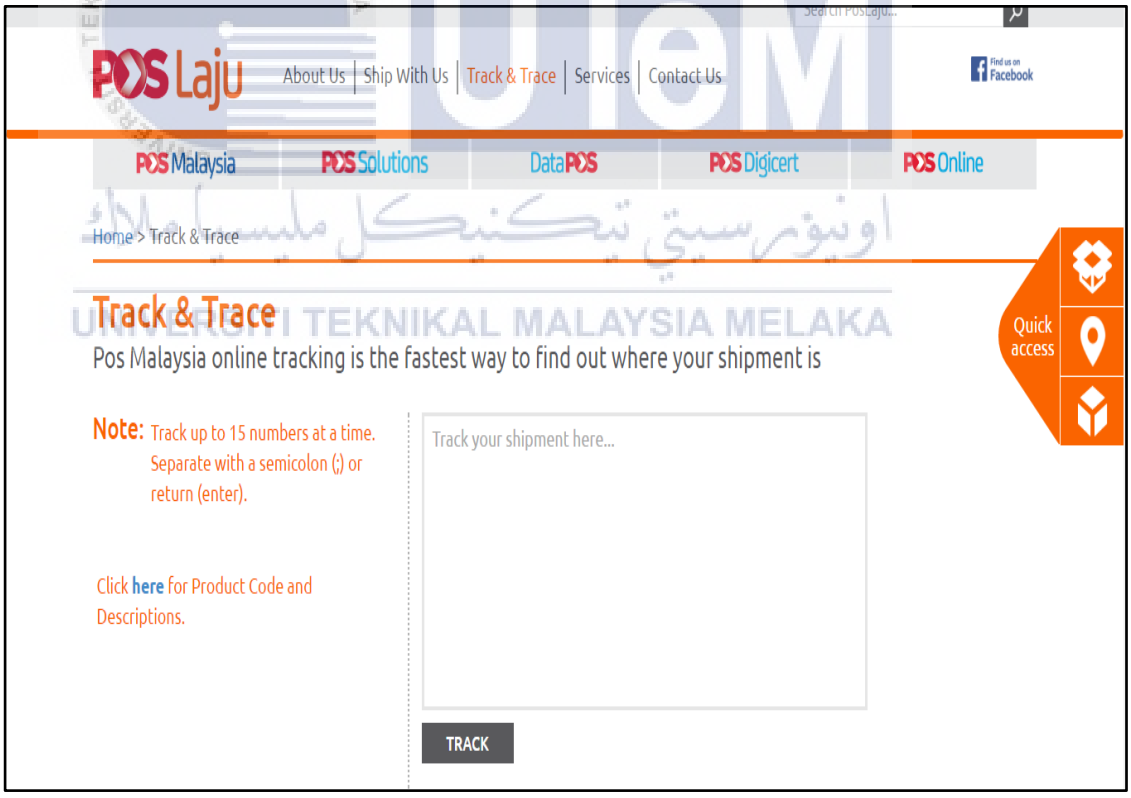

Figure 2.1 : Home page Track and Trace System of Pos Laju

iii. Case Study 3 : Development of integrated E-Parcel Management System

In Universiti Tun Hussein Onn Malaysia (UTHM), the incoming parcel are pooled and handled by System Management Unit under Register Office. The unit then distribute the parcel to particular department as stated in parcel's address. Then the owners have to collect it at the respective department. The whole processes could be done easily of the parcel is small and easy to put in the respective pigeon hole. However, there is possibility the parcel is missing along the transfer process. Based on records it has been sent to administrator and distributed to the respective development but the recipient did not receive the parcel.

Thus, this system is proposed to solve this problem. Using this system whenever a parcel reached unit administrator UTeM Hostel, any parcel received will be entered into the database in the system. After parcel information included in the database, the student can check their status parcel and can take immediate action to collect the parcel.

After review has been done, there is much similarity and comparison between the existing system and the new system that will develop. The comparison of the system based on the methodology, software, hardware, scripting language and the features of the system.

2.2.3. Technique

In system development, all the previous similar system should be review and study. Sampling and documentation of existing similar system is a good start in knowing deeper of the core of the system. Research is carried out at this stage.

In research, any related information is collected using the fact finding technique to collect information on the programming techniques, techniques in building database, online parcel system, system problem, opportunities and directives. This information is very important to verify the functional requirement of the system at the early phase of the project development.

Documentation of previous studies is also searched via internet. Most of documents such as thesis or journal were obtained from eQUIP UTeM Library website. This is helpful in gaining more information, solution and idea that are relevant to this project.

2.3. Project Methodology

The aim of this section is to explain the Parcel Management UTeM Hostel System development approach adopted for this application development. The development includes a system of inter-related phases, procedures, activities and tasks that define the process from the start through to completion build the system. Each phase contributes towards achieving project objectives.

The proposed system is developed in accordance with System Development Life Cycle (SDLC). It is conceptual model used in project management that describe the stages involved in an information system development project from an initial feasibility study through maintenance of the completed system.

SDLC adhere to important phases that are essential for developer such as planning, analysis, design, implementation and maintenance or testing.

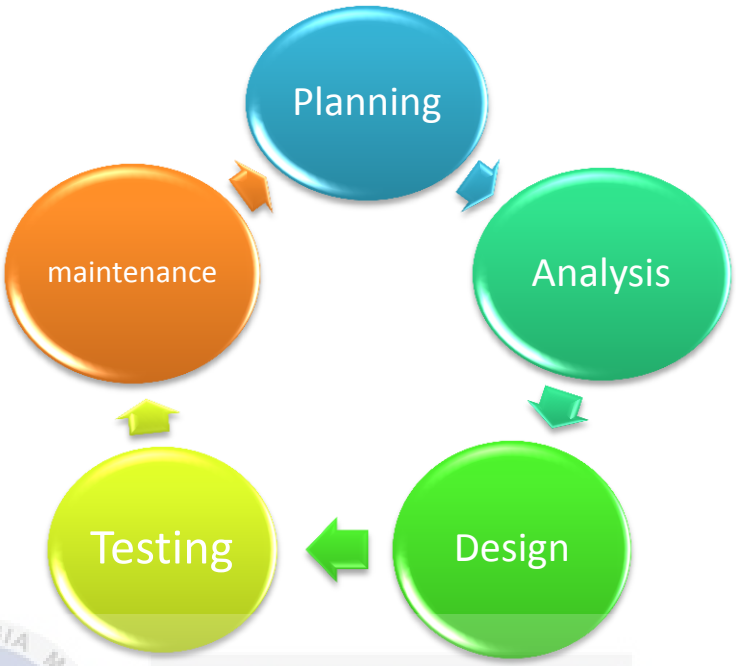

Figure 2.2 : Model Of System Development Life Cycle

a. Planning

Planning phase cover the activities needed for the chapters introduction, Literature Review and Analysis. Planning phase has been made by discussion with lecturers, collecting all data resource from internet, journal, magazines and other resources which related to the project. Planning phase also will clearly plan the activities involved in creating the project through Gantt chart.

b. Analysis

- Analysis is one method used to the project goals to defined functions and operations of the intended application. In this phase, the process used is gathering and interpreting facts, diagnosing problems and recommending improvements to the system. Analysis used to improve or find the advantages that can be carried forward, and avoid any drawbacks and disadvantages in the new system

c. Design

- The design phase involves the actual creation and design of a system. It also describes desired features and operations in detail, including screen layouts, business rules, process diagram and other documentation.

d. Testing

- In the testing phase, the system is tested. Normally, brings all the pieces together into a special testing environment, and then checks for errors, bugs and interoperability. The code is tested at various levels depending on the type of system under development. The system is tested to ensure that interface between modules work. The system works on the intended platform and with the expected volume of data and that the system does what requires.

e. Maintenance

- Inevitably the system will need maintenance. Sometime, there are many reasons for the change. Change could happen because of some unexpected input value into the system. In addition, the changes in the system could directly affect the operation. The system should be developed to accommodate changes that could happen during the post implementation period.

2.4. Project Requirements

There are number of software and hardware requirement needed to develop Parcel Management UTeM Hostel System.

2.4.1. Software Requirement

i. Equipment/Development Tools

Adobe Dreamweaver is easy to use and create web pages. Adobe Dreamweaver is the industry leading web development tool, enable user to efficiently design, develop and maintain standard based websites and applications. With Adobe Dreamweaver, web developers go from start to finish, creating and maintaining basic website to advanced application that support best practices and the latest technologies.

Adobe Photoshop CS used to make a design interface for this project. This software is the professional image editing standard and leader of the Photoshop digital editing and more efficient editing, processing and file handling.

XAMPP is a collection of free software for installing and using the phpMyAdmin. XAMPP is available for other operating system such as Linux, Solaris and Window. In addition, XAMPP is also to build an easy to install distribution for developers to get into the world.

PHP is a server-side scripting language, like ASP. Its scripts are executed on the server. It supports many database like MySQL, Oracle, Sybase, Informix, solid, PostgreSQL, and ODBC. It is open source software

and is free to download and use. It can run in different platforms, like windows, Linux and Unix. PHP is compatible with almost all server used today.

ii. Operating System

Microsoft Window 7 is an operating system for the laptop that will be used in doing the development process. Microsoft Window 7 also suitable for client server application and used for development system and testing the system.

iii. Database System

MySQL server is an open source database application like phpMyAdmin 2.10.3 that free to run or even modify. MySQL is viable competitor to the database application such as Oracle and Microsoft SQL server 2000. MySQL is a database management system (DBMS) for relational database. It is simply collection of data, text, number or binary files that are stored by the DBMS.

iv. Documentation

Microsoft Office Visio 2007 used to design Data Flow Diagram(DFD) and Microsoft Office Project used to design Gantt chart.

Besides, Microsoft Office Word 2010 is Microsoft flagship word processing software. It used for represent whole documentation (Report)

2.4.2. Hardware Requirement

i. Personal Computer

- Dell inspiron N5110
- Version 2009 Service Pack 1
- Processor : Intel(R) core(TM) i5 CPU
- Ram : 2.00GB
- System Type : 32-Bit Operating System

ii. Thumb Drive

- Used to back up and save the whole process of system.

iii. Access (Internet)

- Used to search coding, view tutorial, and find information to complete the documentation. In addition, search information about existing system, to compare other system and current system.

iv. Printer

- Used to print document and report.

2.5. Project Schedule and Milestones

Table 2.1: Project Schedule and Milestone

ACTIVITIES	START DATE	END DATE	RESULT
1.Planning	**11/3/2016**	**25/3/2016**	
Proposal assessment, Producing Chapter I and Chapter II	11/3/2016	18/3/2016	Report Chapter I and Chapter II (Introduction & Literature Review and Project Methodology)
Correction and Improvement	21/3/2016	25/3/2016	
2.Analysis	**28/3/2016**	**1/4/2016**	
Requirement analysis	28/3/2016	1/4/2016	System Requirement
Existing system	**8/4/2016**	**18/4/2016**	Existing system
Producing document Chapter III	8/4/2016	18/4/2016	Report Chapter III (Analysis)
3.Design	**11/4/2016**	**29/4/2016**	
Design User Interface	11/4/2016	15/4/2016	
Design Database	18/4/2016	22/4/2016	
Producing document Chapter IV	25/4/2016	29/4/2016	Report Chapter IV (Design)
4.Implementation	**29/4/2016**	**28/5/2016**	
Login	29/4/2016	3/5/2016	Authentication by the level of user
Manage Hostel Resident	1/5/2016	6/5/2016	Manage information hostel resident

Manage Parcel Information	6/5/2016	12/5/2016	Manage information parcel information
Update Hostel Resident	12/5/2016	18/5/2016	Update the hostel resident information
Update Parcel Information	12/5/2016	20/5/2016	Update the parcel information
Delete Hostel Resident	16/5/2016	20/5/2016	Delete hostel resident information
Generate Statistic	21/5/2016	23/5/2016	Display statistic Parcel receive and Parcel status
Search Parcel Status	26/5/2016	28/5/2016	Check parcel status
Producing document Chapter V	23/5/2016	28/5/2016	Report Chapter V (Implementation)
5.Testing	**23/5/2015`**	**27/5/2016**	
Producing document Chapter VI (Testing)	23/5/2015`	27/5/2016	Report Chapter VI (Testing)
6.Conclusion	**30/5/2016**	**31/5/2016**	
Producing document Chapter VII (Conclusion)	30/5/2016	31/5/2016	Report chapter VII (Conclusion)
Project demo & PSM report	**1/6/2016**	**1/6/2016**	

2.6. Conclusion

In conclusion, the research study has been done successfully. The main objective of the research is not merely to get information related to the project but is to have a clear understanding on the requirement of the proposed system.

Furthermore, the project methodology is identified to simplify the software development process. Platform, development tools, scripting language, and others are also identified in this chapter so that the most appropriate tools and language can be selected for this project with through consideration before getting started to develop the system

CHAPTER III

ANALYSIS

3.1. Introduction

This chapter is specifying of the system requirement of Parcel Management UTeM Hostel System for UTeM Hostel. This analysis chapter includes the analysis of the current system, analysis the new system, analysis for the data requirement, functional and non-functional requirement for the system to be.

3.2. Problem Analysis

At present, there is no automated system in place in the hostel UTeM, to check the parcel arrived or not. Students are required go to office to check whether their parcel has arrived or not. This manual system process is slow, inconveniencing because use manual hard copy form.

In addition, students take a long time to find their name in the log book, after the name is identified in the log book; students have to fill in some information, before taking the parcel on the shelves provided. When use the manual system,

means that use so many papers. Therefore, it takes a long time to find the information about a relevant person. Besides that, manual system does not have their safety, and difficult to backup, compare use a system computerized. The figure 3.1 show about the flow, how the manual system works:

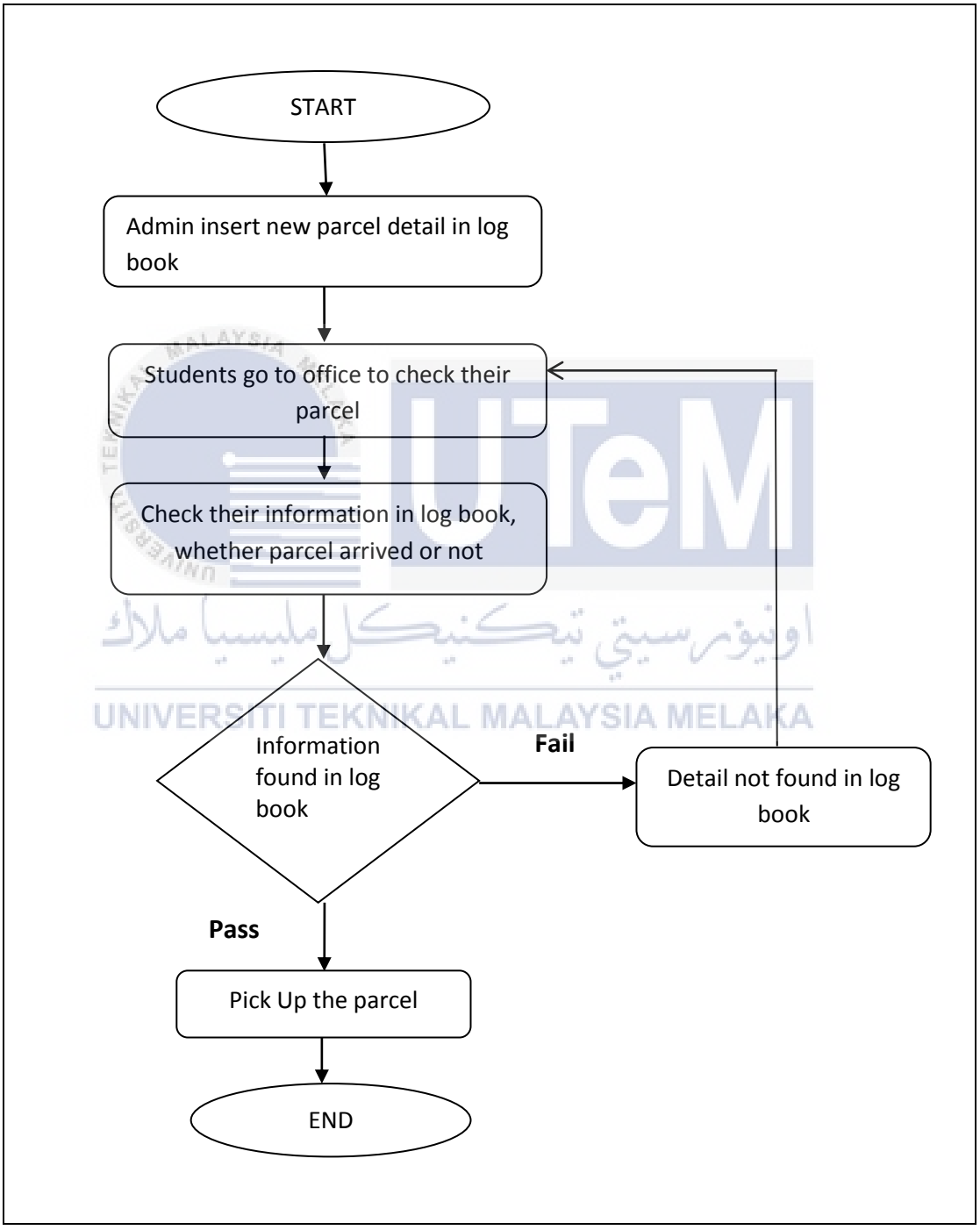

Figure 3.1: Manual System for Parcel Management

3.3. Requirement analysis

Requirement analysis involves Functional Requirement and Non-Functional requirement. Both have the same general characteristics. This section also will discuss about other requirement and it will describe software requirement, hardware requirement and other.

3.3.1. Data Requirement

Parcel Management UTeM Hostel System(PMUHS) using MySQL as Database Management Sytem (DBMS). The table will be describing in the data dictionary in table 3.1, table 3.2 and table 3.3

Table 3.1 : Login Table for Parcel Management UTeM Hostel System

Entity	Attribute	Type/Size	Key
login	id_staff	int(4)	Primary
	Username	varchar(50)	
	Password	varchar(10)	
	hostel	varchar(20)	

Table 3.2 Hostel Resident Table for Parcel Management UTeM Hostel System

Entity	Attribute	Type/Size	Key
Hostelresident	Id	Int(4)	Primary
	matricNumber	varchar(20)	
	name	varchar(50)	
	icRecipent	varchar(20)	
	course	varchar(10)	
	phoneNumber	varchar(20)	
	address	varchar(50)	
	hostelName	varchar(50)	

Table 3.3: Parcel Detail Table for Parcel Management UTeM Hostel System

Entity	Attribute	Type/Size	Key
Parceldetail	tracking number	varchar(20)	Primary
	phoneNumber	varchar(10)	
	dateReceived	Varchar(20)	
	dateCollected	varchar(20)	
	Status	Varchar(10)	
	remark	varchar(50)	

3.3.2. Functional Requirement

This section describes the functional requirement of the Parcel Management UTeM Hostel System.

1. Log in : Prior entering the computerized system the user needs to key in username and password
2. Manage Student Information: This module enable staff register, update or delete student information. The student information involve matric number, name, ic number, course, phone number, room number and hostel name.
3. Manage Parcel Information: Staff can add and update parcel information. The student information involve tracking number, recipient phone number, recipient name, recipient matric number, recipient hostel, date received, date collected, status and remark.
4. Search: Student should be able to view the parcel by searching through the search box.

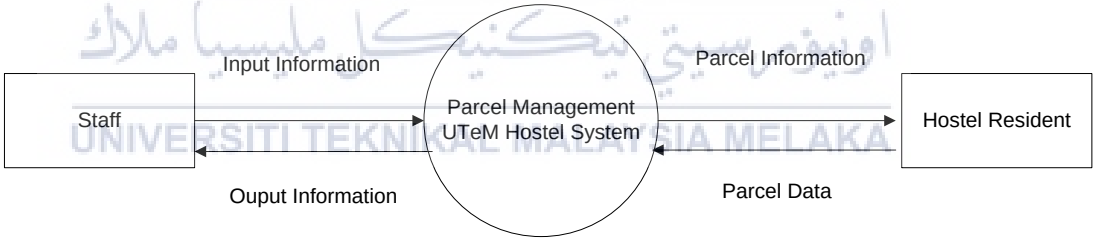

Figure 3.2: Context Diagram Parcel Management System

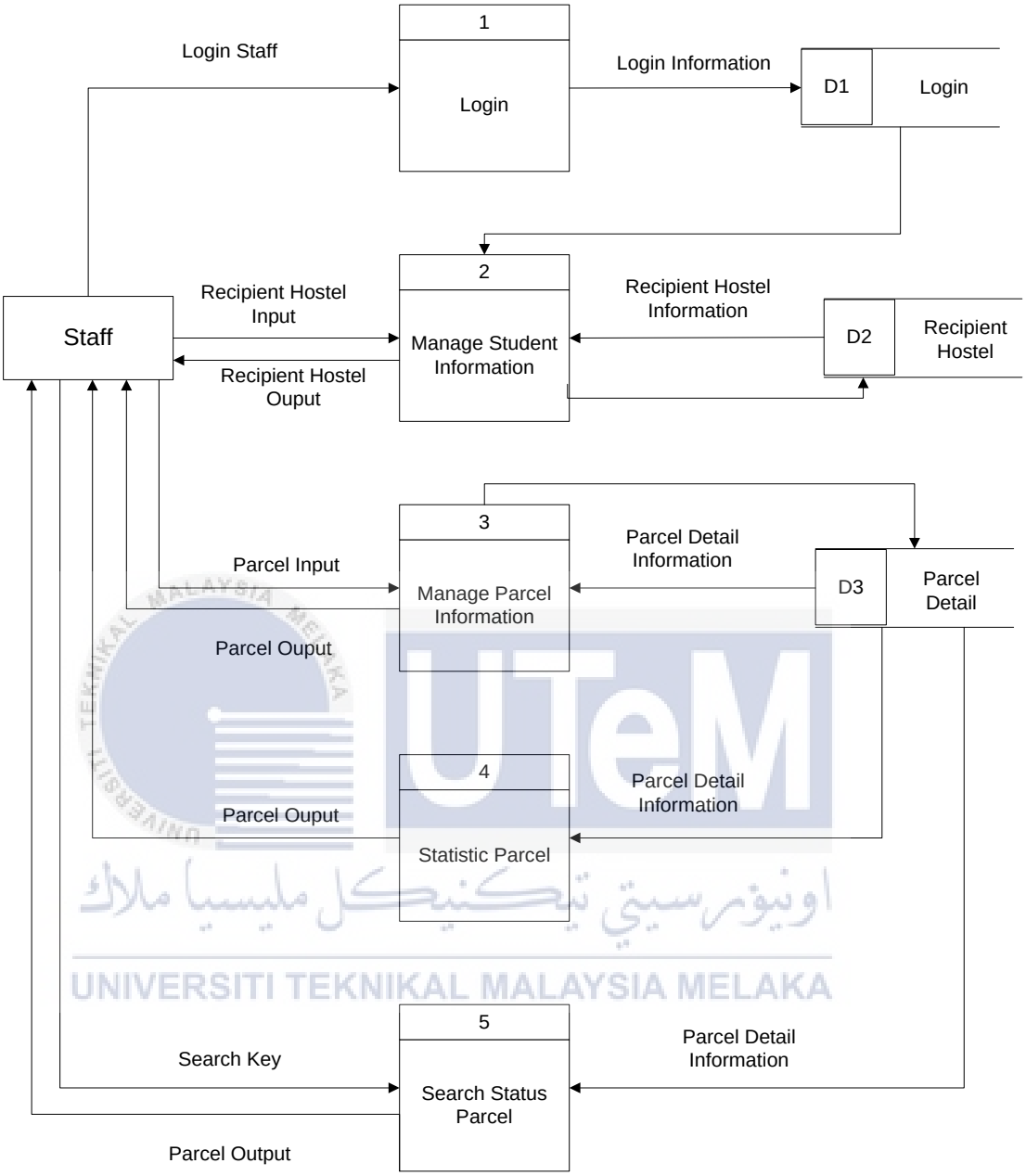

Figure 3.3: DFD Level 0 for Parcel Management UTeM Hostel System

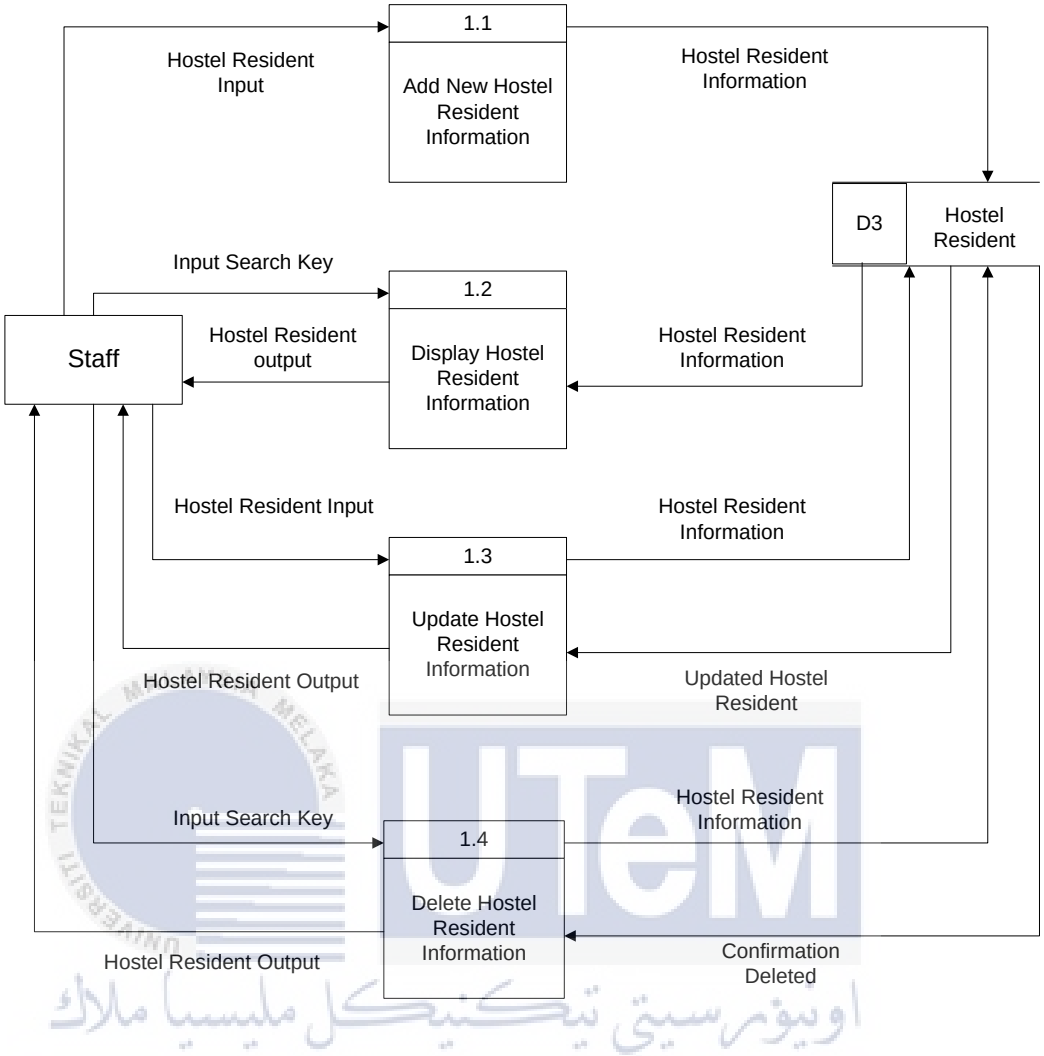

Figure 3.4: DFD Level 1 for Manage Hostel Resident Information

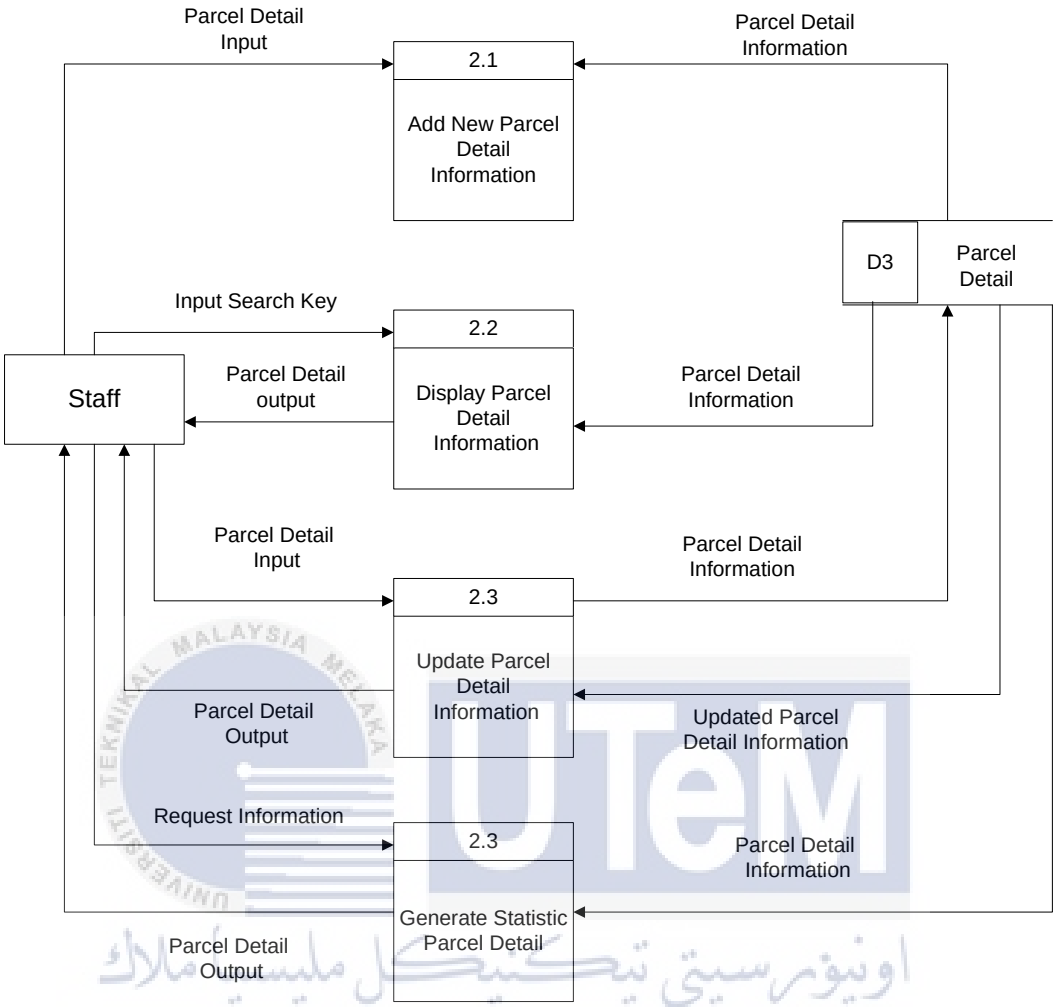

Figure 3.5: DFD Level 2 for Manage Parcel Information

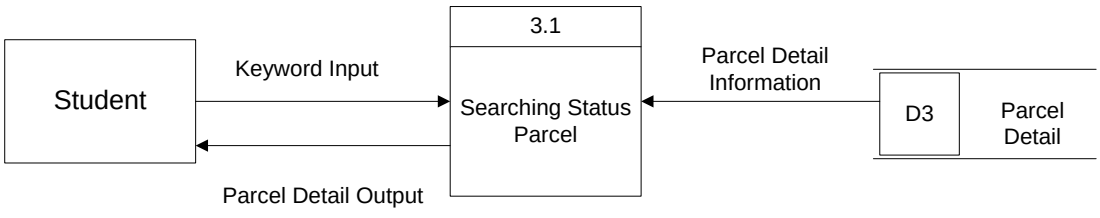

Figure 3.6: DFD Level 3 for Searching Status Parcel

3.3.3. Non-functional Requirement

Non-functional requirement is the requirement that involve in system application process, but this requirement is used as the supporting function of the operational for system application. The non-functional requirement includes:

i. Performance

The system should react or response when user do any operation. The response time should be short and acknowledgment should be shown to indicate that the operation has been complete

ii. Security

Staff will be able to log in Parcel Management UTeM hostel system. Staff will have access to manage parcel information and student information. Access to the system will be protected by the user log in that requires username and password.

iii. Availability

The system is available 24 hour per day, 360 day per year. The system shall not lose any record data and log in staff within 5 second.

iv. Usability

The system can help the user to reach the specific record or operate certain service in anytime in an efficient way.

3.3.4 Other Requirement

As for the complement of the functionality to the system, multiple software and hardware are utilized to support the performance as well developing the system. Regardless of the classification, justifications are explained for the each tools used for the system specifically referred as software development. According to the table, the justifications are based details listed in the previously mentioned from the past chapter.

Table 3.4 : Other requirement for Parcel Management UTeM Hostel System

Other Requirement
Software Requirement i. Equipment/Development Tools ii. Operating System iii. Database System iv. Documentation tool
Hardware Requirement i. Computer Component ii. Printer iii. Thumb drive

3.4. Conclusion

The analysis chapter is specifying each diagram off the current system and the new system. This chapter is one of the important chapters in analysing the current system problem, requirement analysis for new system and so on. The requirements that have been analysed also help the developer or user in managing a good system and can make other user to understand the system.

The analysing starting from problem analysis, requirement analysis is the best way of making a good system by specifying and analysing each stage. The analysis was done sequence from the current system and the analysis has been done for improvement.

The next chapter will explain about the design phase for Parcel Management UTeM Hostel System. The design chapter shows the conceptual and logical database design, system architecture to help developer in develop the Parcel Management UTeM Hostel Management System successfully.

CHAPTER IV

DESIGN

4.1. Introduction

Preliminary design is one of the design phases where the system is build referred to the architecture steps. The step is been suggest for the first impression to the client or user. The preliminary design also known as a prototype for the develop system. The system was designed in the first phase to look of the functional that been included is really enough or supported the application.

Before designing, the input or data for the system is defined first. This is important in producing good output or information. The program design involves the design of each module in the system. Each module is designed in detail and a related diagram is used to represent the modules.

4.2. High-Level Design

To get better understanding on how the system will operates, high level design is used to show the real function of the system. These sub topics cover the system architecture, user interface design and the navigation of Parcel Management UTeM Hostel System.

4.2.1. System Architecture

System architecture is the design or set of relations between the parts of a system. There is no strict definition of which an aspect constitutes system architecture and various organizations define it in different ways.

The system architecture for Parcel Management System involves client, browser, server and other. This system use personal computer as client, Google chrome will be used to access the system. The system architecture for this system can refer in figure 4.1

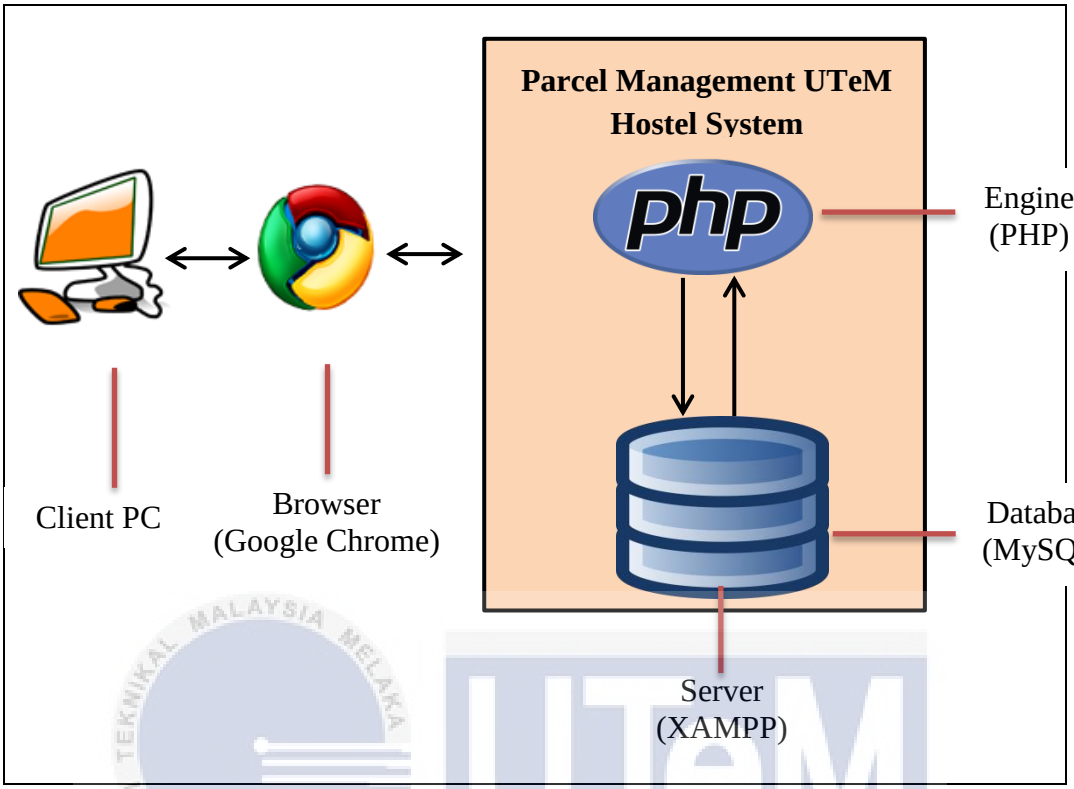

Figure 4.1: System Architecture for Parcel Management UTeM Hostel System

1.2.2. User Interface Design

In the user interface design, sub topic contains the navigation design, input design, output design and database design. Navigation design is for the developer to always keep on track with the activities. Input and output design is for developer to know what data will 'come' to the system and what will 'go' from the system. Database design is for developer to create the suitable database for the system.

Figure 4.2: Main Page for Parcel Management UTeM Hostel System

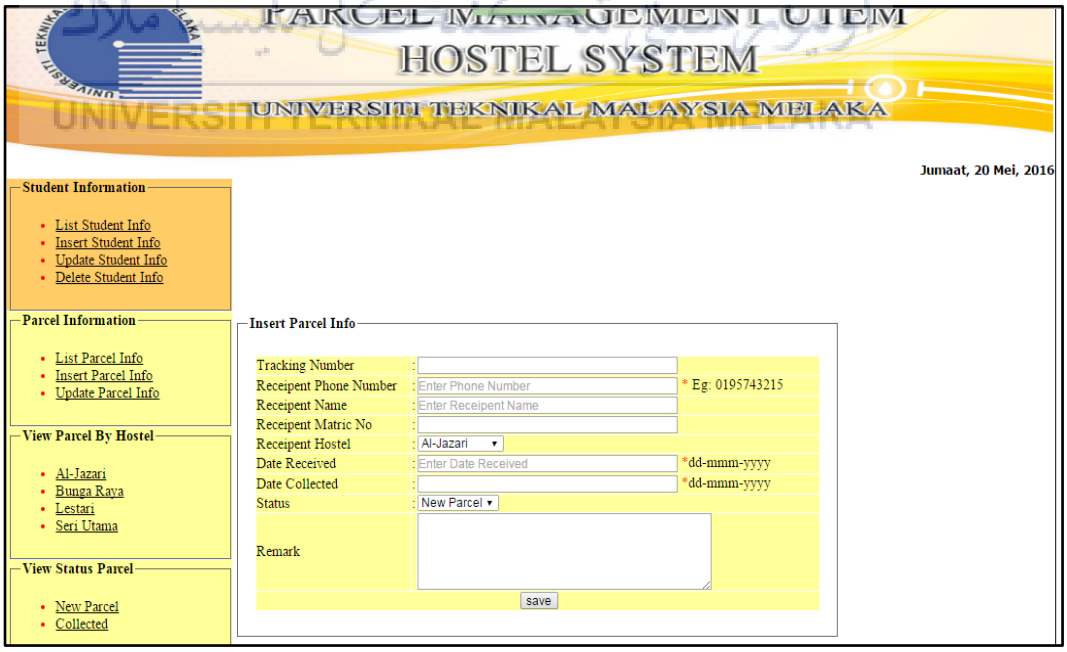

Figure 4.3: Register New Parcel for Parcel Management UTeM Hostel System

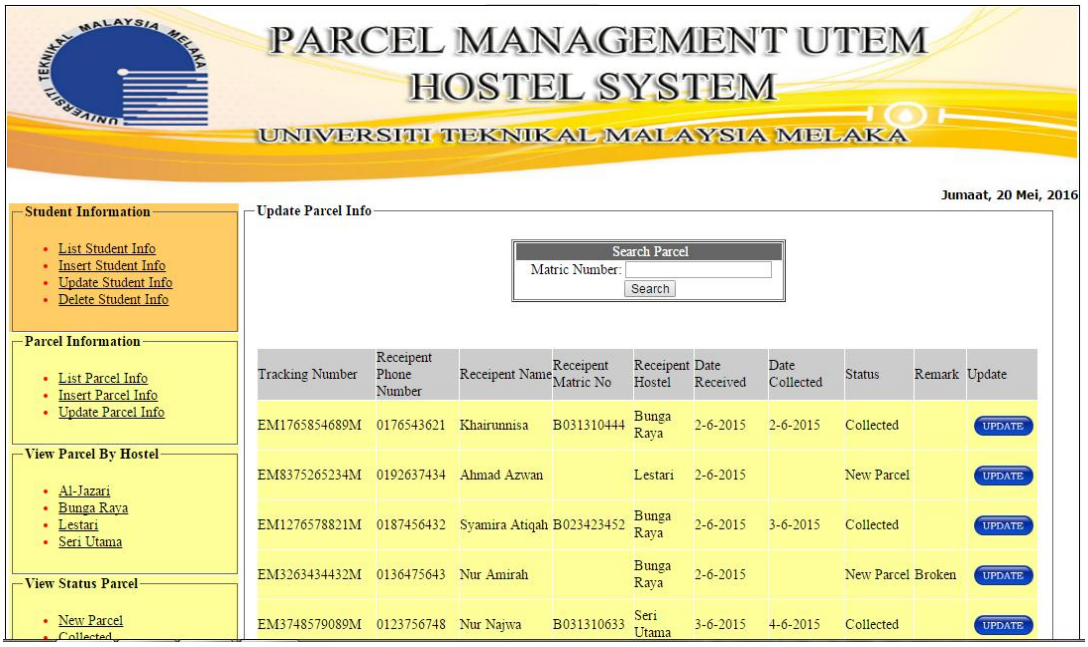

Figure 4.4: Update Parcel for Parcel Management UTeM Hostel System

Figure 4.5: List Parcel by Hostel for Parcel Management UTeM Hostel System

Figure 4.6: List Parcel by Status for Parcel Management UTeM Hostel System

4.2.2.1 Navigation Design

The navigation design is important to make sure the developer of the system is in the track in processes to develop the system. A good navigation design will create short and simple path between elements, minimize travel step steps by creating hierarchies with the fewest possible levels and minimize redundancy by creating only the necessary paths. The navigation design defines and refines the navigation flow and type of navigation form that involves in the Parcel Management UTeM Hostel system.

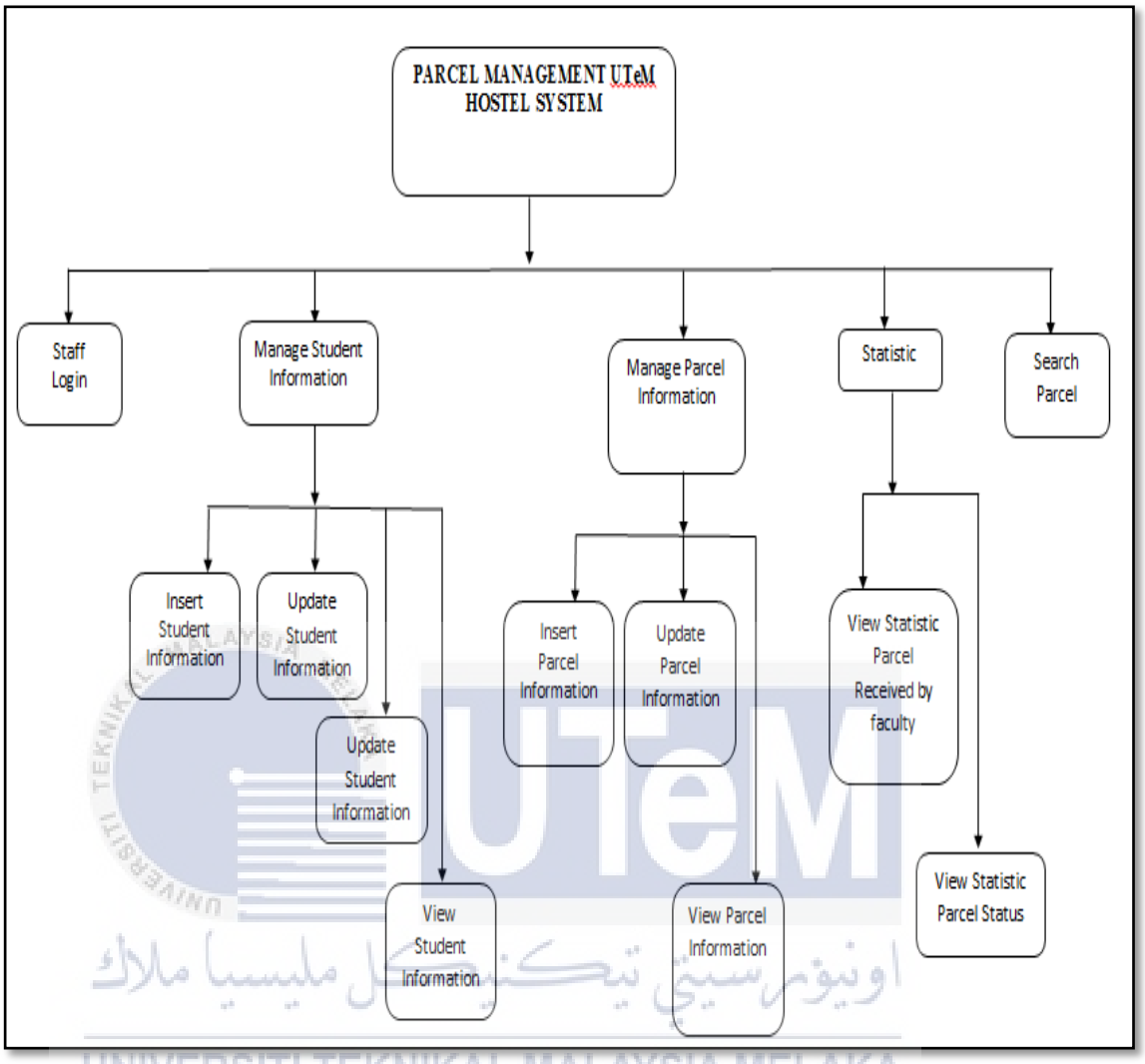

Figure 4.7: Navigation Design for Parcel Management UTeM Hostel System

4.2.2.2 Input Design

Input is the data that user enter into computer, using keyboard, mouse or other device. The input data may be text, numbers or other by Williams and Sawyers (2005).The input design will define and refine the screens used to enter the information in the Parcel Management UTeM Hostel System, as well as any form on which users write or type information. In addition, it also define validation rule for each of input field.

Table 4.1: Input Design For Login Interface

Attribute	Category	Hyperlink or Validation
Username	Text Field	Maximum 20 Character
Password	Text Field	Maximum 10 Character
Login	Button	Must Click to enter system

Table 4.2: Input Design For Student Interface

Attribute	Category	Hyperlink or Validation
Matric Number	Text Field	Maximum 20 Character
Name	Text Field	Maximum 50 Character
IC Number	Text Field	Maximum 12 Character
Course	Select Menu	
Phone Number	Text Field	Maximum 10 Character
Room Number	Text Field	Maximum 15 Character
Hostel Name	Select Menu	
Save	Button	Must Click To Save Data

Table 4.3: Input Design for Parcel Interface

Attribute	Category	Hyperlink or Validation
Tracking Number	Text Field	Maximum 15 Character
Recipient Phone Number	Text Field	Maximum 10 Character
Recipient Name	Text Field	Maximum 50 Character
Recipient Matric No	Text Field	Maximum 12 Character
Recipient Hostel	Select Menu	
Date Received	Text Field	Maximum 10 Character
Date Collected	Text Field	Maximum 10 Character
Status	Select Menu	
Remark	Text Area	Maximum 20 Character
Save	Button	Must Click To Save Data

4.2.2.3 Output Design

For this system output design is to define the types of outputs such as the report about student and parcel information.

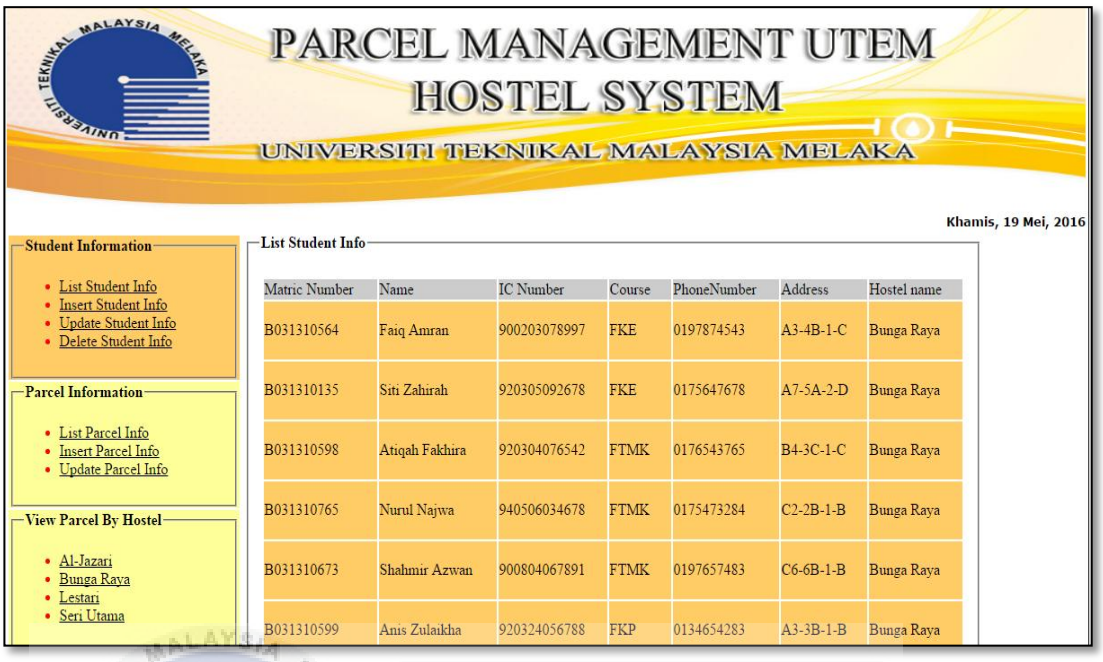

Figure 4.8: Output design for student information

Figure 4.9: Output design for parcel information

4.2.3Database Design

Database design is the process of producing a detail data model of a database. The goal of database design is to represent the data and relationship between data. Beside that it also provide a data model that supports the operations that needs to be performed such as entering, editing, searching and other operation.

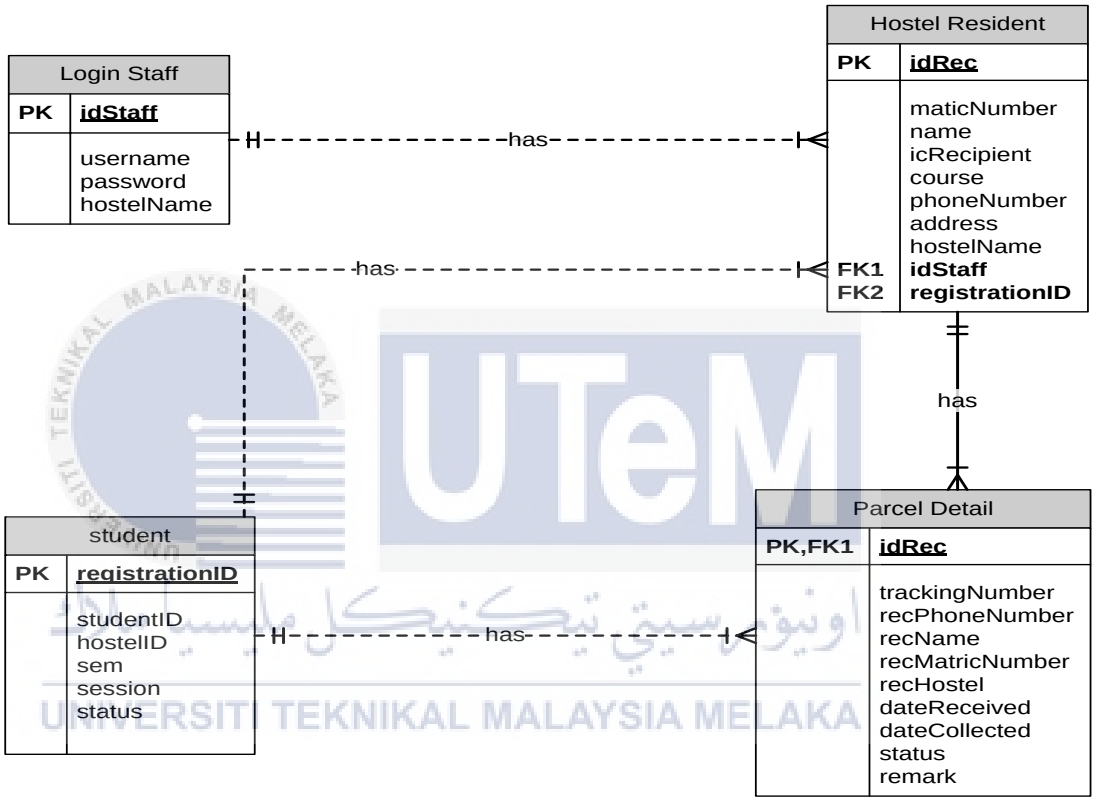

Figure 4.10: Entity Relationship Diagram Parcel Management System

4.2.2.1Conceptual and Logical Database Design

In this sub topic, the conceptual and logical database design will be discussed. The logical database design describes the functions required by the system. That is what to be done but not how it will be done. Logical design is

not concern with hardware and software requirement but rather with the process to be performed.

4.3Detailed Design

In detailed design, the specification may be further elaborated. The highlighting should be on the logic of the design and the approach to satisfy the requirement.

4.3.1. Software Design

Software design will describe every function according to Data Follow Diagram in format of program specification. DFD for Parcel Management UTeM Hostel System will be refer at chapter three.

i. Registration Student Information

Input: Student Information

Output: Page for insert student information

Attribute: matricNumber, name ,icRecipent, course, phoneNumber, address, hostelName.

Responsibility: Insert Student Information

Pseudocode:

BEGIN

1. Staff fill in the registration student information
2. Submit the form
3. If staff didn't fill matric number, name, ic number, phone number and room number

   3.1 Display error message box.

4. Else

4.1 The information saves into the database

END

ii. Update Student Info

Input: Student Information

Output: Page for update student information

Attribute: matricNumber, name ,icRecipent, course, phoneNumber, address, hostelName.

Responsibility: Update Student Information

Pseudocode:

BEGIN

1. Staff fill information into form
2. The Matric Number, Name ,IC Number, Course, Phone Number, Address, Hostel Name display
3. Submit the form
4. The information saves into the database
5. Display update student information

iii. Update Parcel Information

Input: Parcel Information

Output: Page for update Parcel information

Attribute: trackingNumber, recPhoneNumber, recName, recMatricNumber, recHostel, dateReceived, dateCollected, status, remark.

Responsibility: Update parcel Information

Pseudocode:

BEGIN

1. Staff fill information into form
2. The Tracking Number, Recipient Phone Number, Recipient Name, Date Received display
3. Submit the form
4. The information saves into the database
5. Display update parcel information

iv. Delete student information

Input: Student Information

Output: Page for delete student information

Attribute: matricNumber, name ,icRecipent, course, phoneNumber, address, hostelName.

Responsibility: Update Student Information

Pseudocode:

BEGIN

1. Staff click delete student
2. The Matric Number, Name ,IC Number, Course, Phone Number, Address, Hostel Name display
3. Click Button Delete
4. The information will be delete
5. Display student information

v. Searching Parcel

Input: Parcel Information

Output: Home Page Parcel Management UTeM Hostel System

Attribute: trackingNumber, recPhoneNumber, recName, recMatricNumber, recHostel, dateReceived, dateCollected, status, remark.

Responsibility: Display status parcel information

Pseudocode:

BEGIN

1. Search parcel information
2. Insert phone number
3. If the phone number matching
   3.1 Display parcel information
4. Else
   4.1 No parcel information display

4.3.2. Physical Database Design

In the physical database, the entire table in the ERD will be transform into data dictionary. The data dictionary will describe every table specifically. In every table have a lot of attribute, in the data dictionary the data type, size and the primary key of the attribute will be identify. From the data dictionary the MySQL statement will be create below are the statement for creating database and table.

a. Parcel Management UTeM Hostel System

CREATE DATABASE ‘parcel’

b. Create Table Hostel Resident

CREATE TABLE ‘hostelresident’ (
‘matricNumber’ VARCHAR (20) NOT NULL,
‘name’ VARCHAR (50) NOT NULL,
‘icRecipent’ VARCHAR (13) NOT NULL,
‘course’ VARCHAR (10) NOT NULL,
‘phoneNumber’ VARCHAR (10) NOT NULL,
‘address’ VARCHAR (15) NOT NULL,
‘hostelName’ VARCHAR (20) NOT NULL,
PRIMARY KEY (‘id’)

```
);
```

c. Create Table Parcel Detail

```
CREATE TABLE ‘parceldetail’ (
 ‘trackingNumber’ VARCHAR (15) NOT NULL,
‘recPhoneNumber’ VARCHAR (10) NOT NULL,
‘recName’ VARCHAR (50) NOT NULL,
‘recMatricNumber’ VARCHAR (12) NOT NULL,
‘recHostel’ VARCHAR (10) NOT NULL,
‘dateReceived’ VARCHAR (20) NOT NULL,
‘dateCollected’ VARCHAR (20) NOT NULL,
‘status’ VARCHAR (20) NOT NULL,
‘remark’ VARCHAR (20) NOT NULL,
PRIMARY KEY (‘idRec’)
);
```


4.4. Conclusion

This chapter covered the design phase for this project. This design phase it will have many step to make sure that all the requirement detailed state in this phase. In user interface design, it will describe the navigation design, the input and output design for this project. This part also covered the conceptual and logical database design of this system.

The next chapter will explain about the conclusion of Parcel Management UTeM Hostel System. The chapter will be concluded all previous chapter. This chapter include observation on weaknesses and strength, proposition for improvement and contribution.

CHAPTER V

IMPLEMENTATION

5.1 Introduction

In this chapter, the result for the whole project is presented. Basically, implementation is a phase where the developed system is shifted into beta stage, for testing and bug fixing.

The database implementation section, describe in detail how and where the queries are used in the system. The software configuration management covers one sub topic which is the configuration environment setup. It will describe in detail about the process needed to set up and configure for the system.

5.2 Software Development Environment setup

Software development environment setup is part from implementation used to assembling system application and makes sure the system can work effectively.

The programming language been selected to create Parcel Management UTeM Hostel System (PMUHS) is PHP,XAMPP as the web server and MySQL as the database. The environment setup involves the software setup. There is setup and

development tool in Adobe Dreamweaver CS5 and phpMyAdmin, this software need to be installing before setup the database.

Parcel Management UTeM Hostel System is an application that implements web based technology and the three tier architecture had been chosen. The figure 5.1 below is mentioned the three-tier architecture included client tier, server tier and database tier.

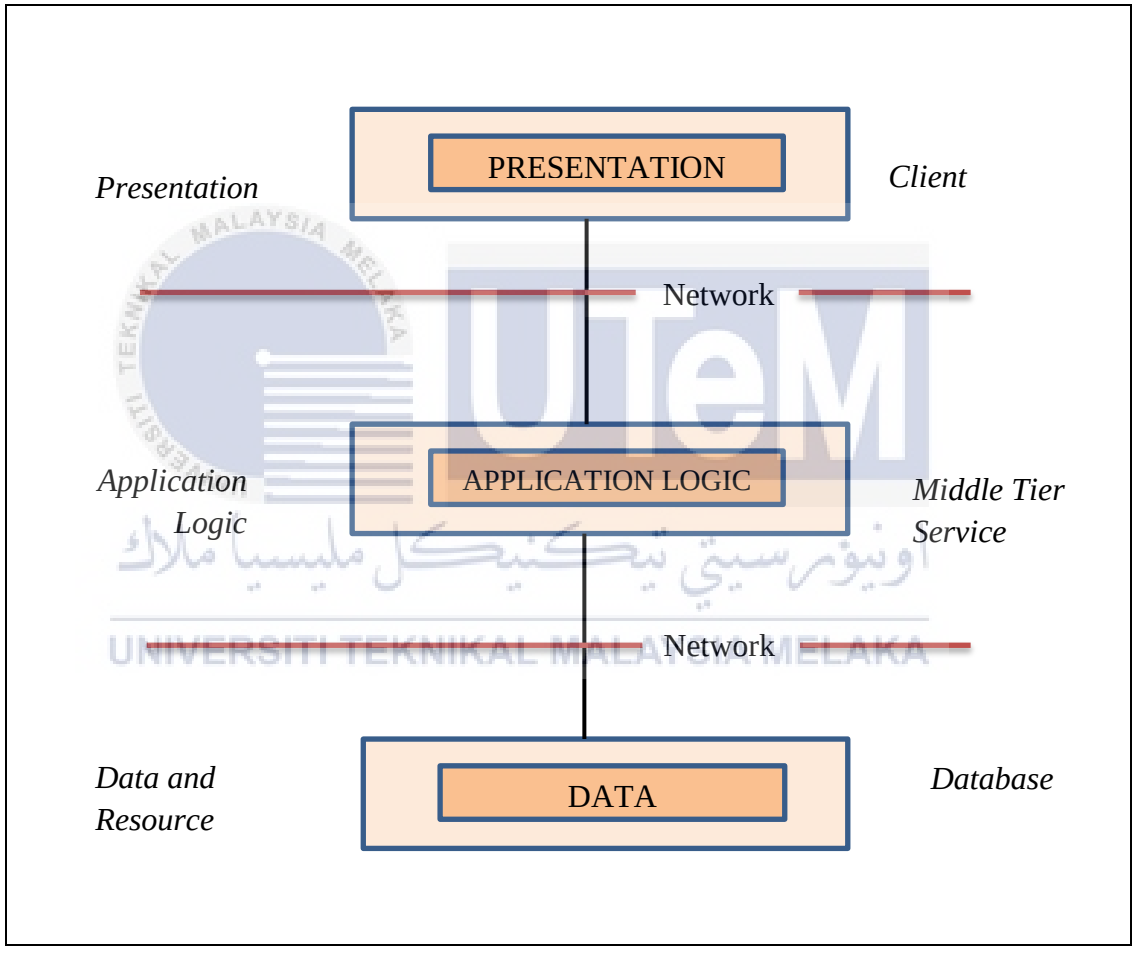

Figure 5.1: Three-tier architecture Parcel Management UTeM Hostel System

5.3 Software Configuration Management

This implementation phase related software configuration management, which are database setup, requires configuring properly. The XAMPP Server required to creating the server, MySQL database has been used to create and store data. The steps configuration of each software development will explain at the configuration setup

The following section will describe to major aspect of what software configuration management, which is configuration environment setup and version control procedure

5.3.1 Configuration Environment Setup

i. Set up PHP for Windows

1. Go to the other website that provide installer package XAMPP and downloaded the installer and install in Windows. Choose the Basic package installer.
2. Need to close all applications on computer, and double-click the installer package downloaded.
3. Accept the default installation location and click “Next”. The Dialog box will open as shown in figure 5.2

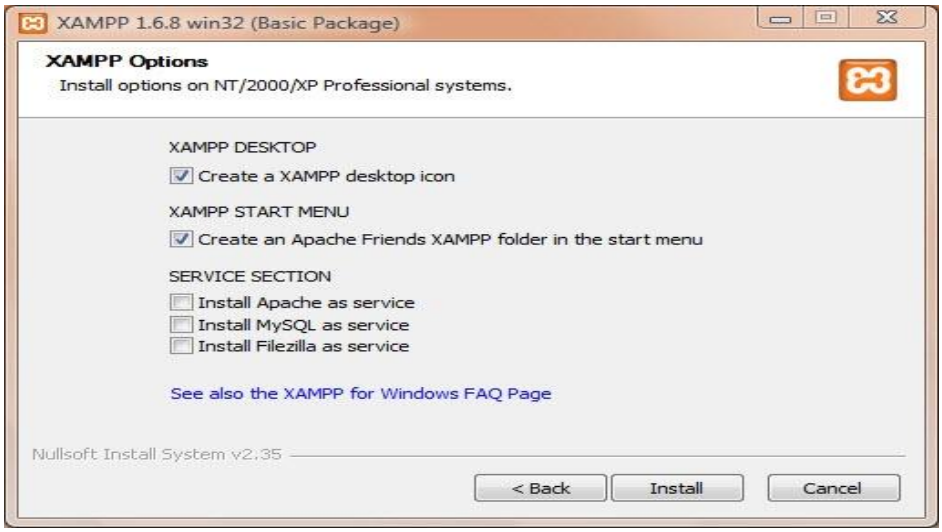

Figure 5.2 : Dialog Box XAMPP installation options.

4. Click Install after made a choices. The installation process takes a few minutes.
5. At the end of the installation process, Click "Yes" to start the XAMPP control panel.

ii. Start the Server

To start the Apache and MySQL servers, click the Start button alongside Apache and MySQL in the XAMPP control panel. MySQL usually starts quickly, but it might take a little longer (less than a minute) for Apache to start. Confirmation that they have started successfully is displayed alongside, and the label on the Start buttons changes to Stop, as shown in Figure 5.3.

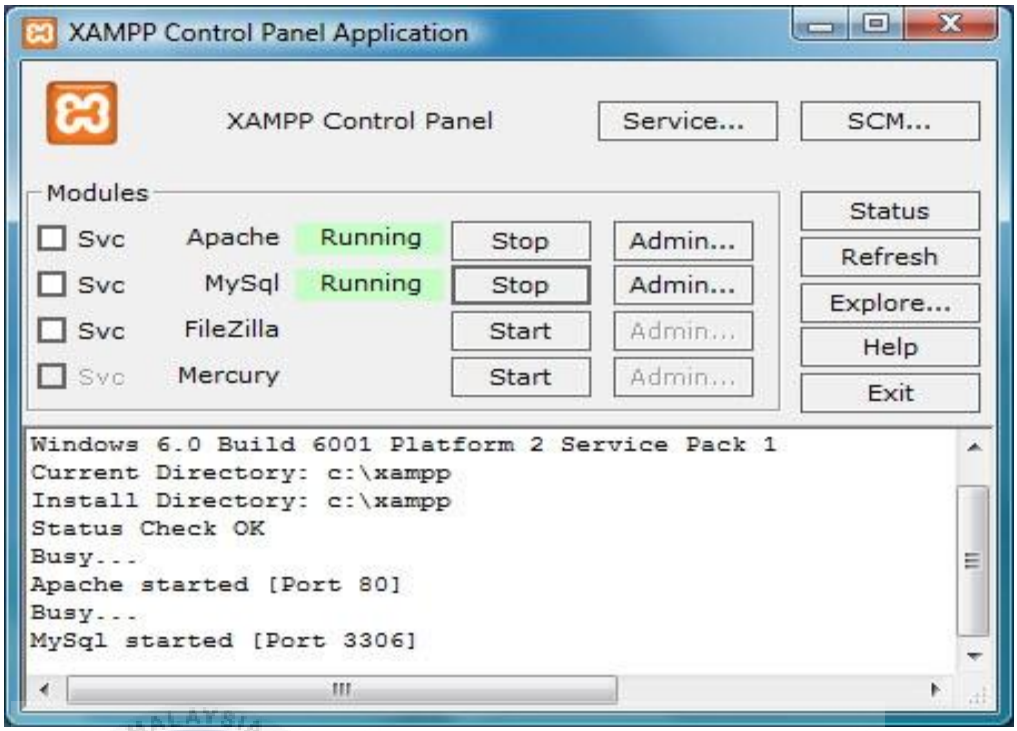

Figure 5.3: Start and stop the servers in the XAMPP control panel.

5.3.2 Version Control Procedure

A version control procedure is to ensure every enhancement that has been made to the system is recorded. Table 5.1 show the version of Parcel Management UTeM Hostel System (PMUHS)

Table 5.1 Version Control Procedure

Version	Description
PMUHS v.0.1	This is the first version involve creating and design the interface and no function included
PMUHS v.0.2	This version is designing the database and also include module registration student and parcel

PMUHS v.0.3	This version is developing the function requirement needed for the system
PMUHS v.0.4	Validate functional requirement that has been develop before and correct errors that occur from previous system
PMUHS v.0.5	Full version of the system. All tests are done for all modules. The system is fully functioning
PMUHS v.0.6	The system is ready to release

5.4 Implementation Status

The progresses of the development status for each of the module are shown as below. The table include detail for module name, description, status and duration.

Table 5.2 show the progress of the development status of Parcel Management UTeM Hostel System.

Table 5.2: Implementation Status

Module name	Description	Status	Duration	Date
System Login (login.php)	Main to access the system, responsible for staff access the system	100% Complete	1 Week	29.4.2016 - 6.5.2016
Insert Hostel Resident Information (insert_page.php)	Design interface and create connection to database, apply coding for this function. Testing and modify the design and coding.	100% Complete	4 Week	1.4.2016- 1.5.2016

Insert Parcel Detail Information (insert_parcel_page.php)	Design interface and create connection to database, apply coding for this function. Testing and modify the design and coding.	100% Complete	4 Week	1.4.2016-1.5.2016
Update and Delete Hostel Resident Information (update_displaystudent.php) (delete_page.php)	Responsible for update Hostel Resident information with update, delete option	100% Complete	2 Week	12.5.2016-18.5.2016
Update Parcel Information (update_displayparcel.php)	Responsible for update Parcel information.	100% Complete	2 Week	12.5.2016-24.5.2016
Searching Hostel Resident Information (student_search.php) Parcel Detail (trackingnumber_search.php)	Design interface and create connection to database, apply coding for this function. Testing and modify the design and coding.	100% Complete	1 Week	26.5.2016 – 2.6.2016
Check Parcel Status	Responsible to check parcel status	100% Complete	1 Week	26.5.2016 – 2.6.2016

5.5 Conclusion

The implementation process is started when the system is build. The implementation process is phase in which overall system is implemented based on the system design. The implementation process in this chapter had include the configuration and setting for the database and software that are used to build Parcel Management UTeM Hostel System.

The software configuration management had obtained procedure which stated the method for version control for PMUHS. At the same time, the implementation status had produced the schedule of the implementation progress based on module in the system

The next chapter is testing phase which will conduct the testing for this system in next PSM II. The testing phase includes Test Plan, Test Strategy and Test Design.

CHAPTER VI

TESTING

6.1 Introduction

This chapter is about the testing of Parcel Management UTeM Hostel System. Testing phase is the last phase in the system development. This phase is important to ensure the system functionally and to ensure that the Parcel Management UTeM Hostel System meets the specification. This chapter will focused on the test cases and the testing result.

Basically testing process will start from the small component to large component. The early stage of testing, developer only focused on single component called unit. Then the integration test will be conducted by integration two or more units into a module. Finally, the complete test will be done to detect any errors before delivering the system to end user.

6.2 Test Plan

A test plan is a systematic approach to testing a system such as a machine or software. The plan typically contains a details understanding of what the eventual workflow will be.

The software test plan is used as the basis of project management control throughout the testing process and contains information specifying the approach to testing, Test Organization Test Environment and Test Schedule.

6.2.1 Test Organization

Test organization describes the people that involves in the testing phases. In test organization, the group has been built up to test the system. People in the group are responsible in managing, executing, designing, checking, and resolving the testing activities. For the Parcel Management UTeM Hostel System, system developer will act as a main tester because the system developer knows the procedure and functional codes, module and the architecture of the system. System developer perform the test all the time to make sure the system fulfil the user requirement, correct output produce and integration among module are correct. Table

Table 6.1 Test organization involve in Parcel Management UTeM Hostel System

Test Level	People Involve
Unit Testing	System Developer
Integration Testing	System Developer
System Testing	System Developer
Acceptance Testing	Independent Individual / External

6.2.2 Test Environment

Test environment describe what environment the system will be tested. It includes the hardware, software and network used to test the system. Test environment is the developer uses to developed and maintain the system. Table 6.2 show the test environment specification.

Table 6.2 : Test Environment Specification

System Configuration	Specification
Operating System	Window 7 Home Premium
Database	MySQL
Web Server	Apache
RAM	2.00 GB
Processor	Intel (R) Core (TM) i5 2.40ghZ
Software	• Google Chrome • Adobe Dreamweaver CS5 • Xampp 1.6.3a
Database Directory	C:\xampp\htdoc\FolderName

6.2.3 Test Schedule

Testing phase can be dividing into three which are unit testing, integration, testing and user acceptance. Test schedule describe the testing activity done in the period of time. Table 6.3 show the Parcel Management UTeM Hostel System test schedule.

Table 6.3 : Parcel Management UTeM Hostel System test schedule

Module/Component	Test Level	Duration	Test Cycle	Date
System Login (User Authentication)	Unit testing, Integration testing, User Acceptance.	3 days	6 Times	14.6.2016 – 16.6.2016
Register parcel information	Unit testing, Integration testing, User Acceptance.	3 days	6 Times	20.6.2016 – 23.6.2016
Update parcel information	Unit testing, Integration testing, User Acceptance.	4 days	4 Times	26.6.2016 – 29.6.2016

Insert/ Delete student information	Unit testing, Integration testing, User Acceptance.	5 days	6 times	29.6.2016 – 3.7.2016
Update student information	Unit testing, Integration testing, User Acceptance.	4 days	6 times	4.7.2016 – 7.7.2016
Check Parcel Status	Unit testing, Integration testing, User Acceptance.	3 days	3 times	10.7.2016 – 13.7.2016
Report Preparing	Unit testing, Integration testing, User Acceptance.	3 days	4 times	15.7.2016 – 18.7.2016

6.3 Test Strategy

Test strategy identify the overall approach to testing, identifying what levels of testing are to be applied and the method, techniques and tools be used. The purpose of a test strategy is to clarify the major tasks and challenges of the test project. Developing a test strategy which efficiently meets the needs is critical to the success of software development process.

Black-box testing approaches have been chosen to conduct the testing for Parcel Management UTeM Hostel System. These techniques will assist in designing the test case that validate and verify the correctness of the Parcel Management UTeM Hostel System.

Black-box testing takes an external perspective of the test object to derive test cases. It can be functional or non-functional, through usually functional. The test designer selects valid and invalid input and determines the correct output. There is no knowledge of how the system under test is constructed.

6.3.1 Classes of tests

Many testing strategies are available for testing a system in order to develop the test case. The developer and the tester are using the testing is tested by using equivalence partitioning, integration test is tested by using performance testing and reliability testing and system testing is using the positive and negative testing and also error guessing in the test script.

i) Output Correctness Testing

As the name suggests, test case are designed by walking through the relevant specification. Each test case one or more statements of specification. It is often practical to make the sequence of the cases correspond to the sequence of statements in the specification for the unit under test.

ii) Positive and Negative Testing

Positive testing is intended to verify that a system conform to its stated requirements. The negative testing is designed to investigate the behaviour of the AUT (Application Under Testing) outside the strict scope of the requirement specification.

iii) Error Guessing

Error guessing itself is not a testing techniques but rather a skill that can be applied to all of the other testing techniques to produce more effectives test. Error guessing is the ability to find errors or defect in the AUT by what appears to be intuition.

iv) Security Testing

System quality, reliability and security are tightly coupled. Intruders to open security holes can exploit flaws in system. With the rapid development of the internet, system security problems are becoming even more severe. The purpose of security testing of these system include identifying and removing system flaws that may potentially lead to security violations, and validating the effectiveness of security measures. Simulated security attacks can be performed to find vulnerabilities.

6.4 Test Design

A number of test cases will be identified for each item to be tested at each level of testing. Each test case will specify how the implementation of particular requirement or design decision is to be tested and the criteria for success for the test.

6.4.1 Test Description

The testing will be carried out in order to identify the test case and expected result for each module that is designed and documented.

Table 6.5 : Test case, description and expected result for Parcel Management UTeM Hostel System

Module	Test Step	Expected Output
System Login	Provide valid staff ID and password	• The login is successful if valid username and password is entered. If the username and password is correct, main interface will be displayed.
	Provide invalid	• The login is unsuccessful if username

	staff ID and password	and password is not correct, message box will display to notify user to insert the correct password • The user need to re-enter the username and password again
Register parcel information	Fill all text fields in register parcel form and click save	• Complete entering new parcel information is working properly and automatically saved in database
	Not fill all text field in register parcel form and click save	• If the parcel information is no complete, message box will pop out to inform the user for the incomplete form • The data that has been saved in database can be retrieving and viewed properly
Update parcel information	Fill all text fields in update parcel form and click update	• The updating parcel information is working properly and automatically saved in database
	Not complete fill all text fields in update parcel form and click update	• If the parcel information is not complete, message box will pop out to inform the user for the incomplete form • The data that has been saved in database can be retrieving and viewed properly
Register student information	Fill all text fields in register student form and click save	• The managing student information is working properly and automatically saved in database

	Not fill all text field in register student form and click save	• If the student information is no complete, message box will pop out to inform the user for the incomplete form • The data that has been saved in database can be retrieving and viewed properly
Update student information	Fill all text fields in update student form and click update	• The updating student information is working properly and automatically saved in database
	Not complete fill all text fields in update parcel form and click update	• If the student information is no complete, message box will pop out to inform the user for the incomplete form • The data that has been saved in database can be retrieving and viewed properly
Check Parcel Status	Entering phone number and tracking number in text field	• The data that has been request can be viewed properly
Report Preparing	Click the “statistic parcel received” button.	• The system generates report to show parcel received by hostel • Bar graph is display statistic parcel received by hostel
	Click the “statistic parcel status” button.	• The system generates report to show parcel status (New Parcel/ Collected) • Bar graph is display parcel status (New Parcel/ Collected)

6.4.2 Test Data

Test data will contain list of example input data that involved in testing phase for each tested function.

i) Login Form

Table 6.6 show the test data is conduct according to the login form of the system. The analysis involve in this module is the admin login.

Table 6.6 Test Data of Admin Login

Tester Identification	Real Test Data 1	Real Test Data 2	Real Test Data 3
username	syaqira	syaqira	syaqira
password	S12345		683849
Result	User can access Login Form successfully	User cannot access the Login Form because the password is not entered	User cannot access the Login Form because the password is not matched with database

ii) Register New Parcel Information

Table 6.7 show the test data for new parcel information of the system. The analysis involve in this module is register new parcel.

Table 6.7 : Test Data Register New Parcel Information

Tester Identification	Real Test Data 1	Real Test Data 2
Tracking number	EM238392347W	
Recipient phone number	0194754384	
Recipient name	Erin Maisarah	Erin Maisarah
Recipient matric no	B033485898	B033485898
Recipient hostel	Seri Utama	Seri Utama
Date Received	06/22/2016	06/22/2016
Status	New Parcel	New Parcel
Remark		
Result	The entering new parcel information is working properly and saved in database	The entering new parcel information is unsuccessful and not saved in database, because the form is not completed.

iii) Update Parcel Information

Table 6.8 show the test data for update parcel information of the system. The analysis involve in this module is update new parcel.

Table 6.8 : Test Data Update New Parcel Information

Tester Identification	Real Test Data 1	Real Test Data 2
Tracking number	EM238392347W	
Recipient phone number	0194754384	
Recipient name	Erin Maisarah	Erin Maisarah
Recipient matric no	B033485898	B033485898
Recipient hostel	Seri Utama	Seri Utama
Date Collected	06/25/2016	06/25/2016
Status	**Collected**	**Collected**
remark		
result	Parcel information can be updated successful	Parcel information cannot be updated successful because the form is not completed

iv) Register Student Information

Table 6.9 show the test data for update parcel information of the system. The analysis involve in this module is update new parcel.

Table 6.9 : Test Data Register New Student Information

Tester Identification	Real Test Data 1	Real Test Data 2
Matric Number	B031310567	
Student Name	Ali Omar	Ali Omar
IC Number	900221041135	900221041135
Course	FTMK	FTMK
Phone Number	0198475324	
Room Number	A4-4D-1-D	A4-4D-1-D
Hostel Name	Lestari	Lestari
result	The entering new student information is working properly and automatically saved in database	The entering new student information is unsuccessful and not saved in database, because the form is not completed.

v) Update Student Information

Table 6.10 show the test data for update parcel information of the system. The analysis involve in this module is update new parcel.

Table 6.10: Test Data Update Student Information

Tester Identification	Real Test Data 1	Real Test Data 2
Matric Number	B031310567	B031310567
Student Name	**Ali Umar**	**Ali Umar**
IC Number	900221041135	
Course	FTMK	FTMK
Phone Number	**0198475111**	**0198475111**
Room Number	A4-4D-1-D	A4-4D-1-D
Hostel Name	Lestari	Lestari
result	Student information can be updated successful	Student information cannot be updated successful because the form is not completed

6.5 Test Result and Analysis

Test result and analysis is consisting of the expected output and the description of the feedback by the user. After testing the system and if errors are found during testing, the errors will be recorded. The test cases are the input to test the system and the predict result from these inputs visualizing if the system operated according to its specification.

Table 6.11 : Test Result And Analysis Login

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1	Provide valid username and password	Username:”syaqira” Password:”s181091”	Login success and redirect to home page	Login success and redirect to home page	Pass
2	Provide invalid username and password	Username:”123**” Password:”llal342”	Error message displayed “invalid”	Error message displayed “invalid”	Fail
3	Provide valid username and invalid password	username:”syaqira” Password:” **&(ab”	Error message displayed “invalid”	Error message displayed “invalid”	Fail
4	Provide invalid username and valid password	Username:”syaqira” Password:”s181091”	Error message displayed “invalid”	Error message displayed “invalid”	Fail
5	Not insert any username and password	Staff ID :” ” Password:” ”	Error message displayed “invalid”	Error message displayed “invalid”	Fail

Table 6.12 : Test Result And Analysis Register Parcel Information

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1	Fill all text fields and click save	Tracking number =” EM2942453438M” Recipient phone number =”0198745673 ” Recipient name =”Siti Amira” Recipient matric number=”B034758493” Recipient hostel=”Bunga Raya” Date received =”1.7.2016” status =”New Parcel” Remark =”Free Defect”	Administrator should be able to add new parcel information into database and message appears “Data have recorded”. Redirect to display parcel record page.	Administrator should be able to add new parcel information into database and message appears “Data have recorded”. Redirect to display parcel record page.	Pass
2	Not fill Tracking ,recipient name	Tracking number =”” Recipient phone number =”0198745673 ” Recipient name =”” Recipient matric number=”B034758493” Recipient	Error message displayed “Please Fill the form” and fail to add new parcel information into database	Error message displayed “Please Fill the form” and fail to add new parcel information	Fail

		hostel=”Bunga Raya” Date received =”1.7.2016” status =”New Parcel” Remark =”Free Defect”		into database	
3.	Blank all fields	Tracking number =”” Recipient phone number =” ” Recipient name =”” Recipient matric number=”” Recipient hostel=”” Date received =”” status =”” Remark =””	Error message displayed “Please Fill the form” and fail to add new parcel information into database	Error message displayed “Please Fill the form” and fail to add new parcel information into database	Fail

Table 6.13 : Test Result And Analysis Update Parcel Information

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/ Fail)
1	Fill all text fields and click update	Tracking number =”TW348430234M” Recipient phone number =”0198734657 ” Recipient name	Administrator should be able to update parcel information into database and message	Administrator should be able to update parcel information into database	Pass

		="Raihan Amir" Recipient matric number="B031310567" Recipient hostel="Al-Jazari" Date collected ="2.7.2016" status ="Collected" Remark ="Ripped"	appears "Data have recorded". Redirect to display parcel record page.	and message appears "Data have recorded". Redirect to display parcel record page.	
2	Not fill date collected	Tracking number ="EM29424534213M" Recipient phone number ="0195463237 " Recipient name ="Kamal Adli" Recipient matric number="B031346758" Recipient hostel="Al-Jazari" Date collected ="" status ="Collected" Remark ="fragile"	Error message displayed "Please Fill the form" and fail to update parcel information into database	Error message displayed "Please Fill the form" and fail to update parcel information into database	Fail
3.	Blank all fields	Tracking number ="" Recipient phone number =" "	Error message displayed "Please Fill the form" and fail	Error message displayed "Please Fill the form" and	Fail

		Recipient name =”” Recipient matric number=”” Recipient hostel=”” Date received =”” status =”” Remark =””	to update parcel information into database	fail to update parcel information into database	

Table 6.14 : Test Result And Analysis Register Student Information

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/ Fail)
1	Fill all text fields and click save	Matric number-“B043234568” Student name=”Khairul Alif” Ic number=”900807044331” Course=”FKE” Phone number=”0124665784” Room number=”A2-4B-3D-1” Hostel name=”Lestari”	Administrator should be able to add new student information into database and message appears “Data have recorded”. Redirect to display student record page.	Administrator should be able to add new student information into database and message appears “Data have recorded”. Redirect to display student record page.	Pass

2	Not fill matric number, student name,ic number, phone number	Matric number-“” Student name=”” Ic number=”” Course=”FKE” Phone number=”0176574384” Room number=” A2-4B-3D-1” Hostel name=”Lestari”	Error message displayed “Please Fill the form” and fail to add new student information into database	Error message displayed “Please Fill the form” and fail to add new student information into database	Fail
3.	Blank all fields	Matric number-“” Student name=”” Ic number=”” Course=”” Phone number=”” Room number=”” Hostel name=””	Error message displayed “Please Fill the form” and fail to add new student information into database	Error message displayed “Please Fill the form” and fail to add new student information into database	Fail

Table 6.15 : Test Result And Analysis Update Student Information

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/ Fail)
1	Fill all text fields and click	Matric number-“B043234568” Student name=”Khairul	Administrator should be able to update student	Administrator should be able to update student	Pass

	update	Alif” Ic number=”900807044331” Course=”FKE” Phone number=”0124665784” Room number=”B2-1C-3Z-6” Hostel name=”Bunga Raya”	information into database and message appears “Data have recorded”. Redirect to display student record page.	information into database and message appears “Data have recorded”. Redirect to display student record page.	
2	Not fill room number, hostel name	Matric number-“B043234568” Student name=”Khairul Alif” Ic number=”900807044331” Course=”FKE” Phone number=”0124665784” Room number=”” Hostel name=””	Error message displayed “Please Fill the form” and fail to update student information into database	Error message displayed “Please Fill the form” and fail to update student information into database	Fail
3.	Blank all fields	Matric number-“” Student name=”” Ic number=””	Error message displayed “Please Fill the form” and fail	Error message displayed “Please Fill the form” and	Fail

		Course=”” Phone number=”” Room number=”” Hostel name=””	to update student information into database	fail to update student information into database	

Table 6.16 : Test Result And Analysis Delete Student Information

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1	Click “DELETE” button	Click “DELETE” button	The confirmation message will appear. ”Are you sure want to delete the information?”	The confirmation message will appear. ”Are you sure want to delete the information?”	Pass
2	Click “Cancel” button on confirmation message.	Click “Cancel” button on confirmation message.	Delete student record fail and back to current page.	Delete student record fail and back to current page.	Pass
3	Click “Ok” button on confirmation message.	Click “Ok” button on confirmation message.	Successfully delete student information	Successfully delete student information	Pass

Table 6.17 : Test Result And Analysis Report

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1	Click the "STATISTIC PARCEL RECEIVED" button.	Click the "STATISTIC PARCEL RECEIVED" button.	The statistic parcel received by hostel information will be displayed	The statistic parcel received by hostel information will be displayed	Pass
2	Click the "STATISTIC PARCEL STATUS" button.	Click the "STATISTIC PARCEL STATUS" button.	The statistic parcel by status new parcel and collected will be displayed	The statistic parcel by status new parcel and collected will be displayed	Pass

6.6 Conclusions

Testing is a process used to help identify the correctness, completeness and quality of the developed computer software. In this project, testing process is conducted to assure the Parcel Management UTeM Hostel System meets the requirements that are already stated in the previous chapter. Testing also performed to identify errors as many as possible to avoid any software defect before the product is going to use by the customers or user.

This chapter gives an overview of the test plan being used which explained about the environment of testing and test schedule to manage cycles and duration of the project. This section also explained about the selected strategy being used with test case, identification, test cases and expected result for each individually. The next chapter will be discussing about conclusion of the project with observation on strength, weakness and proposition for improvement to the project.

CHAPTER VII

CONCLUSION

7.1 Observation on Weakness and Strength

This chapter was present summary of the whole previous chapter. Parcel Management UTeM Hostel System will be developed as a web-based application that manages all parcel information every day. Each project has their strength and weakness. The strength and weakness can be identifying after the system complete.

The strength that can be identifying from this system is Parcel Management UTeM Hostel System can retrieve information in short of time. Student can check the parcel status information that wants through this system in a short time.

The weakness of the Parcel Management UTeM Hostel System this system only based on website not mobile application. In addition this system does not provide alert notification to notify student to check their parcel.

7.2 Propositions for Improvement

This system still needs an improvement to make it much better and it is great if this system add with alert function. This system also can be added with hand phone notification function that can inform student if there is new parcel arrived in Parcel Management UTeM Hostel System.

7.3 Contribution

The Parcel Management UTeM Hostel System will help student to check their parcel status more systematically. The system also gives benefit for the UTeM Hostel staff to manage Hostel Resident and Parcel information more effectively.

7.4 Conclusion

Parcel Management UTeM Hostel System developed involves a phase by phase development from the project background, analysis and design. This project will be used by the UTeM Hostel staff to make management easily. In the future, hope that Parcel Management UTeM Hostel System has the ability to add more features such as alert notification and make this system as mobile application to.

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APPENDIX

PARCEL MANAGEMENT UTEM HOSTEL SYSTEM

APPENDIX A

MILESTONE PARCEL MANAGEMENT UTEM HOSTEL SYSTEM

MILESTONE PARCEL MANAGEMENT UTEM HOSTEL SYSTEM

ACTIVITIES	START DATE	END DATE	RESULT
1.Planning	**11/3/2016**	**25/3/2016**	
Proposal assessment, Producing Chapter I and Chapter II	11/3/2016	18/3/2016	Report Chapter I and Chapter II (Introduction & Literature Review and Project Methodology)
Correction and Improvement	21/3/2016	25/3/2016	
2.Analysis	**28/3/2016**	**1/4/2016**	
Requirement analysis	28/3/2016	1/4/2016	System Requirement
Existing system	**8/4/2016**	**18/4/2016**	Existing system
Producing document Chapter III	8/4/2016	18/4/2016	Report Chapter III (Analysis)
3.Design	**11/4/2016**	**29/4/2016**	
Design User Interface	11/4/2016	15/4/2016	
Design Database	18/4/2016	22/4/2016	
Producing document Chapter IV	25/4/2016	29/4/2016	Report Chapter IV (Design)
4.Implementation	**29/4/2016**	**28/5/2016**	
Login	29/4/2016	3/5/2016	Authentication by the level of user
Manage Hostel Resident	1/5/2016	6/5/2016	Manage information hostel resident

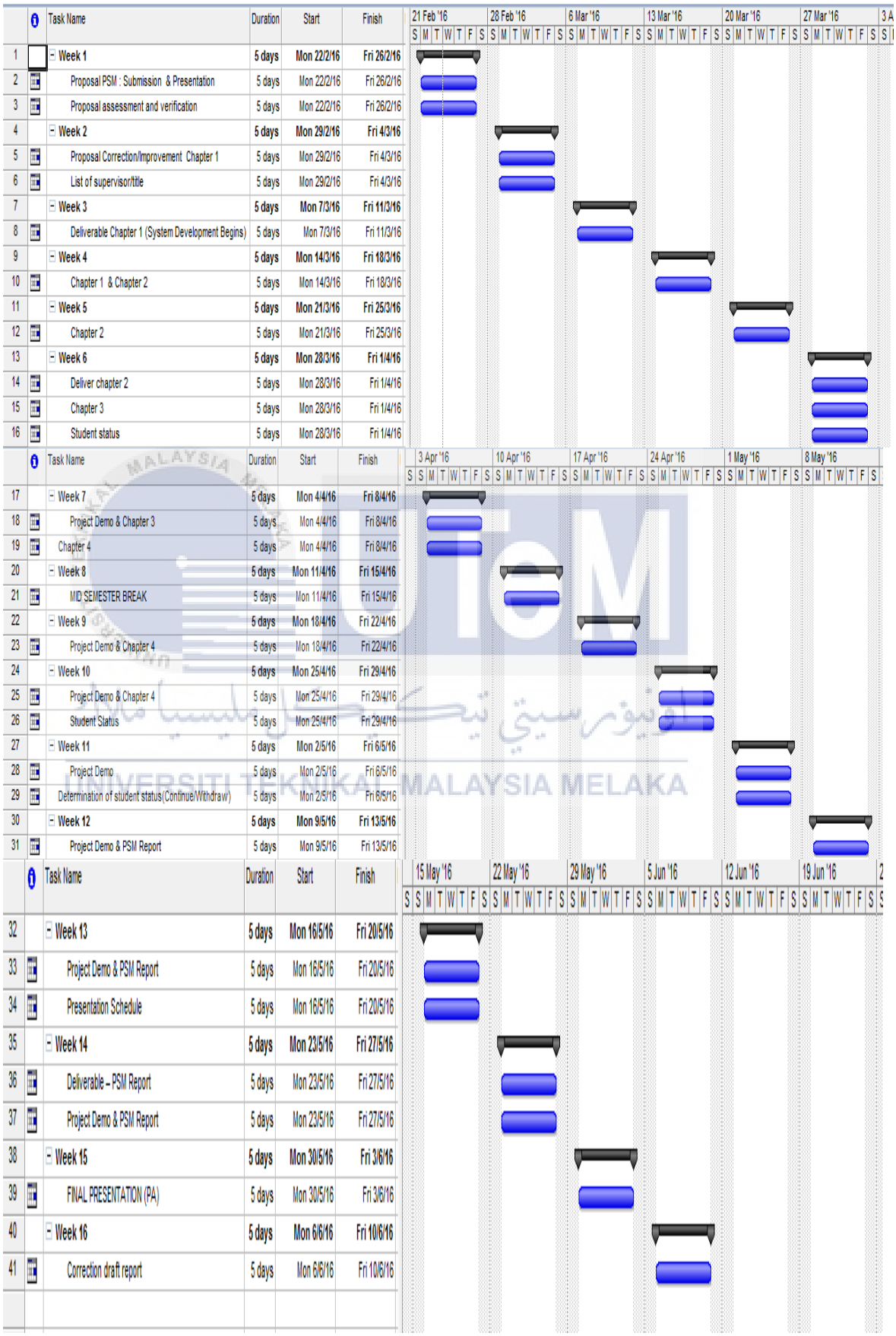
Manage Parcel Information	6/5/2016	12/5/2016	Manage information parcel information
Update Hostel Resident	12/5/2016	18/5/2016	Update the hostel resident information
Update Parcel Information	12/5/2016	20/5/2016	Update the parcel information
Delete Hostel Resident	16/5/2016	20/5/2016	Delete hostel resident information
Generate Statistic	21/5/2016	23/5/2016	Display statistic Parcel receive and Parcel status
Search Parcel Status	26/5/2016	28/5/2016	Check parcel status
Producing document Chapter V	23/5/2016	28/5/2016	Report Chapter V (Implementation)
5.Testing	**23/5/2015`**	**27/5/2016**	
Producing document Chapter VI (Testing)	23/5/2015`	27/5/2016	Report Chapter VI (Testing)
6.Conclusion	**30/5/2016**	**31/5/2016**	
Producing document Chapter VII (Conclusion)	30/5/2016	31/5/2016	Report chapter VII (Conclusion)
Project Demo & PSM 1 Report	**1/6/2016**	**1/6/2016**	
7.Testing	**13/7/2016**	**10/8/2016**	
Producing full document Chapter VI (Testing)	13/7/2016	20/7/2016	Complete Report Chapter VI (Testing)
Test every module of the system	20/7/2016	10/8/2016	

8.Conclusion	**11/8/2016**	**16/8/2016**	
Observation Weakness & Strength of the system	11/8/2016	16/8/2016	
Project Demo & PSM Report 2	**17/8/2016**	**17/8/2016**	
Correction Full Report	19/8/2016	26/8/2016	
Submit full report	26/8/2016	26/8/2016	

APPENDIX B

GANTT CHART PARCEL MANAGEMENT UTEM HOSTEL SYSTEM

GANT CHART PARCEL MANAGEMENT UTEM HOSTEL SYSTEM



	Task Name	Duration	Start	Finish
1	Week 1	5 days	Mon 22/2/16	Fri 26/2/16
2	Proposal PSM : Submission & Presentation	5 days	Mon 22/2/16	Fri 26/2/16
3	Proposal assessment and verification	5 days	Mon 22/2/16	Fri 26/2/16
4	Week 2	5 days	Mon 29/2/16	Fri 4/3/16
5	Proposal Correction/Improvement Chapter 1	5 days	Mon 29/2/16	Fri 4/3/16
6	List of supervisor/title	5 days	Mon 29/2/16	Fri 4/3/16
7	Week 3	5 days	Mon 7/3/16	Fri 11/3/16
8	Deliverable Chapter 1 (System Development Begins)	5 days	Mon 7/3/16	Fri 11/3/16
9	Week 4	5 days	Mon 14/3/16	Fri 18/3/16
10	Chapter 1 & Chapter 2	5 days	Mon 14/3/16	Fri 18/3/16
11	Week 5	5 days	Mon 21/3/16	Fri 25/3/16
12	Chapter 2	5 days	Mon 21/3/16	Fri 25/3/16
13	Week 6	5 days	Mon 28/3/16	Fri 1/4/16
14	Deliver chapter 2	5 days	Mon 28/3/16	Fri 1/4/16
15	Chapter 3	5 days	Mon 28/3/16	Fri 1/4/16
16	Student status	5 days	Mon 28/3/16	Fri 1/4/16
17	Week 7	5 days	Mon 4/4/16	Fri 8/4/16
18	Project Demo & Chapter 3	5 days	Mon 4/4/16	Fri 8/4/16
19	Chapter 4	5 days	Mon 4/4/16	Fri 8/4/16
20	Week 8	5 days	Mon 11/4/16	Fri 15/4/16
21	MID SEMESTER BREAK	5 days	Mon 11/4/16	Fri 15/4/16
22	Week 9	5 days	Mon 18/4/16	Fri 22/4/16
23	Project Demo & Chapter 4	5 days	Mon 18/4/16	Fri 22/4/16
24	Week 10	5 days	Mon 25/4/16	Fri 29/4/16
25	Project Demo & Chapter 4	5 days	Mon 25/4/16	Fri 29/4/16
26	Student Status	5 days	Mon 25/4/16	Fri 29/4/16
27	Week 11	5 days	Mon 2/5/16	Fri 6/5/16
28	Project Demo	5 days	Mon 2/5/16	Fri 6/5/16
29	Determination of student status(Continue/Withdraw)	5 days	Mon 2/5/16	Fri 6/5/16
30	Week 12	5 days	Mon 9/5/16	Fri 13/5/16
31	Project Demo & PSM Report	5 days	Mon 9/5/16	Fri 13/5/16
32	Week 13	5 days	Mon 16/5/16	Fri 20/5/16
33	Project Demo & PSM Report	5 days	Mon 16/5/16	Fri 20/5/16
34	Presentation Schedule	5 days	Mon 16/5/16	Fri 20/5/16
35	Week 14	5 days	Mon 23/5/16	Fri 27/5/16
36	Deliverable – PSM Report	5 days	Mon 23/5/16	Fri 27/5/16
37	Project Demo & PSM Report	5 days	Mon 23/5/16	Fri 27/5/16
38	Week 15	5 days	Mon 30/5/16	Fri 3/6/16
39	FINAL PRESENTATION (PA)	5 days	Mon 30/5/16	Fri 3/6/16
40	Week 16	5 days	Mon 6/6/16	Fri 10/6/16
41	Correction draft report	5 days	Mon 6/6/16	Fri 10/6/16