RMR MOBILE CAFÉ ORDERING AND INVENTORY SYSTEM

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BORANG PENGESAHAN STATUS TESIS*

JUDUL: RMR MOBILE CAFÉ ORDERING AND INVENTORY SYSTEM

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RMR MOBILE CAFÉ ORDERING AND INVENTORY SYSTEM

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This report is submitted in partial fulfilment of the requirements for the Bachelor of Computer Science (Database Management)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
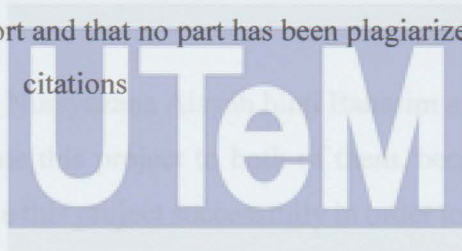UNIVERSITY TEKNIKAL MALAYSIA MELAKA

2017

DECLARATION

I hereby declare that this project report entitled

RMR MOBILE CAFÉ ORDERING AND INVENTORY SYSTEM

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

STUDENT: _____ Date: 16.8.2017

(NURSYAHIRAH SYAFIQAH BINTI BAHARIM)

SUPERVISOR: _____ Date: 16.8.2017

(SYAHIDAH BINTI MOHTAR)

DEDICATION

I dedicate my project and dissertation work my lovely parents Baharim bin Mat Noor and Zarida binti Ghasali that always support and encourage me to complete this final year project. They also always give me inspiration to be strong while having a problem in this project development.

I also dedicate this project to my twins, Nursyahirah Syahidah binti Baharim who are always make sure that I did not sleep when doing this project. She also always gives me a guide how to complete this dissertation.
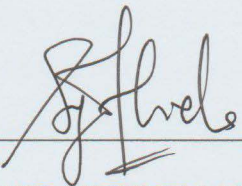
To my youngest sister and brother, Nursyazana Aisyah binti Baharim and Muhammad Ziyad Farhi bin Baharim, I dedicate this project to both of them. because they have been the impetus for me to complete this project successfully in order to be an example to them.

ACKNOWLEDGEMENTS

ABSTRACT

The system to be developed is RMR Mobile Cafe Ordering and Inventory System. This system will help entrepreneur of RMR Mobile Cafe to take orders from their customers through online. This is because RMR Mobile Cafe is a business carried out using a food truck that offers a catering service for those who want to make gatherings such as birthday parties, family days and weddings. With this system, customers simply enter the data required by RMR Mobile Cafe such as quantity of food needed by the customer. In addition, this system also can manage the inventory of RMR Mobile Cafe. It will store stock in, stock out, supplier information and sales of the food in the database. The problem statement for this project is the data that stored manually by the entrepreneur and customer is not organize, inventory data easily lost due to irregular data and last but not least, entrepreneur difficult to generate report. The objective of this system is to organize and save the data systematically, to store the inventory data securely and lastly, to generate report based on data stored. The methodology that used to develop this system is Agile Development methodology. The significance of this project is to commercialize the product offered by the RMR Mobile Cafe according to current business trends such as e-commerce conducted on online platform. Also found that entrepreneurs of RMR Mobile Cafe did not have expertise in manage their inventory. So, this system will help RMR Mobile cafe to manage their company's inventories and orders that been made by their customers easily if the quantity of order is many. The domain of this system is just focusing on ordering for catering only and inventory of RMR Mobile Cafe.

ABSTRAK

Sistem yang akan dibangunkan adalah *RMR Mobile Café Inventory and Ordering System*. Sistem ini akan membantu pengusaha RMR Mobile Cafe untuk mengambil pesanan daripada pelanggan mereka secara atas talian. Hal ini demikian kerana RMR Mobile Cafe adalah perniagaan yang dijalankan menggunakan trak makanan yang menawarkan perkhidmatan katering untuk mereka yang ingin membuat majlis keramaian seperti majlis hari jadi, hari keluarga dan majlis perkahwinan. Dengan adanya sistem ini, pelanggan hanya masukkan data yang diperlukan oleh RMR Mobile Cafe seperti kuantiti makanan yang diperlukan oleh pelanggan. Di samping itu, sistem ini juga boleh menguruskan inventori RMR Mobile Cafe. Ia akan menyimpan data stok masuk, stok keluar, maklumat pembekal dan jualan makanan di dalam pangkalan data. Kenyataan masalah untuk projek ini adalah data yang disimpan secara manual oleh usahawan dan pelanggan tidak teratur, data inventori mudah hilang disebabkan oleh data yang tidak teratur dan akhir sekali, usahawan sukar untuk menjana laporan daripada data yang telah disimpan desebabkan oleh data yang disimpan tidak lengkap. Objektif sistem ini adalah untuk menyusun dan menyimpan data secara sistematik, untuk menyimpan data inventori dengan selamat dan akhir sekali, untuk menjana laporan berdasarkan data yang disimpan. Metodologi yang digunakan untuk membangunkan sistem ini adalah metodologi Pembangunan Agile. Kepentingan projek ini adalah untuk mengkomersilkan produk yang ditawarkan oleh RMR Mobile Cafe mengikut perkembangan perniagaan semasa seperti e-dagang yang dijalankan pada platform atas talian. Juga didapati bahawa usahawan RMR Mobile Cafe kurang mempunyai kepakaran dalam menguruskan inventori mereka. Jadi, sistem ini akan membantu kafe RMR Mobile untuk menguruskan inventori dan pesanan yang telah dibuat oleh pelanggan mereka dengan mudah jika kuantiti pesanan adalah banyak. Sistem ini hanya memberi tumpuan kepada pesanan katering makanan sahaja dan inventori RMR Mobile Cafe.

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LIST OF ABBREVIATIONS

RMRMCOAIS   -   RMR Mobile Café Ordering and Inventory System

ERD   -   Entity Relationship Diagram

SME   Small Medium Enterprise

CHAPTER I

INTRODUCTION

1.1 PROJECT BACKGROUND

Generally, there is no accepted worldwide definition of Small Medium Enterprise (SMEs) (Hooi, 2006). SMEs in Malaysia is sorely based on annual sales turnover and the total number of full-time (Hashim and Abdullah, 2000, SEMCORP, 2008). As mentioned by Hashim (2000), SMEs in Malaysia can be divided into three main sectors such as general business, manufacturing and agriculture. Small and medium enterprises (SMEs) refers to a business or company that has a paid-up capital of RM25, 000 and uses between 50-200 employees. Most SME in the country focused on its food, textiles, batik, metal, and so on. Although the large potential of SME's in the context of our country, but it faces many challenges in the development effort. Therefore, the reason of RMR Mobile Café is chosen as small and medium entrepreneurs to use this system. RMR Mobile Cafe is food businesses that was using the food truck.

The system that want develop is RMR Mobile Café Ordering and Inventory System(RMRMCOAIS). This system will help RMR Mobile Cafe entrepreneurs to gain

market in the business industry easily through online order. Because RMR Mobile Cafe offers a service for those who want to make an event such as a birthday party, family day and also weddings. Therefore, they only need to order through this system only by entering the data required by RMR Mobile Cafe such as the quantity of food needed by the customer.

In addition, this system can also manage inventory of RMR Mobile Cafe. It will store stock-in, stock-out, raw material supplier information and calculate the sales along with profit margins. This system can also help entrepreneur RMR Mobile Cafe to know which foods are most popular among customers by creating statistics. With these statistics RMR Mobile Cafe entrepreneurs can increase the number of stocks of raw materials to minimize the risk of stocks running out too fast.

1.2 Problem Statements

1. The data that stored manually is not organize.
    Entrepreneur stored the data using manual Mobile Café take their customer's order by using smart phone application and copy it back in the book. The order that made by the customer is many and it will make the data of order stored not organize.

2. Inventory data easily lost.

Entrepreneurs make the inventory manually using paper. This will cause many problems if the stored data is lost due to the negligence of entrepreneurs and also the occurrence of natural disasters.

3. Difficult to generate report.

The report is difficult to be generate due to the data stored is not organize and always lose. The report cannot be generate if the data is not complete.

1.3 Objectives

1. To organize and save the data systematically.

2. To store the inventory data securely.

3. To generate report based on data stored.
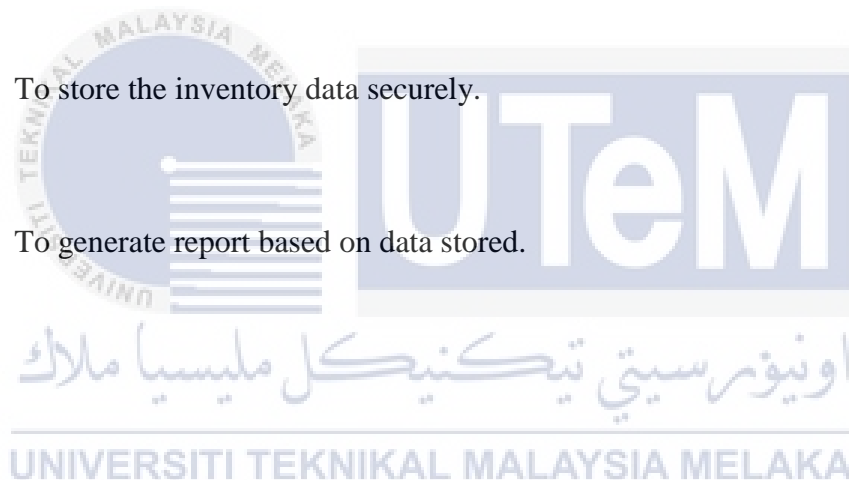
1.4 Scope

System scope:

This system helps RMR Mobile Cafe to market their products and manage their inventory. This system also enables customers to make booking if interested to order food from RMR Mobile Cafe.

User scope:

The target user of the system are staff and customer.

With this system entrepreneur are able to:

- Can stored their supplier information.

- Can manage and view the data contained in the inventory.

- See order information made by customers.

Sub-System Scope:

The system is used in RMR Mobile Café Ordering and Inventory System (RMRMCOAIS) its major functions include:

1. Module Authentication User.

    - User can register to save their information before make payment. So, they do not have to enter the information twice for the next time.

    - After register, users can login to the system.

    - Users must enter username and password that have been registered for system identify which users login.

    - Users also can add, update and delete the information.

2. Module Order.

- In this module, users can make order to by their food.
- Users also can add, update and delete the information.

3. Module Finance.

- In this module, user can make a payment for their product.

4. Module Inventory.

- In this module, information about the availability of the product is provided.
- Entrepreneur can manage their product stock.

5. Search Module.

- This system will able to search the information of product and customer details by entering the keyword.
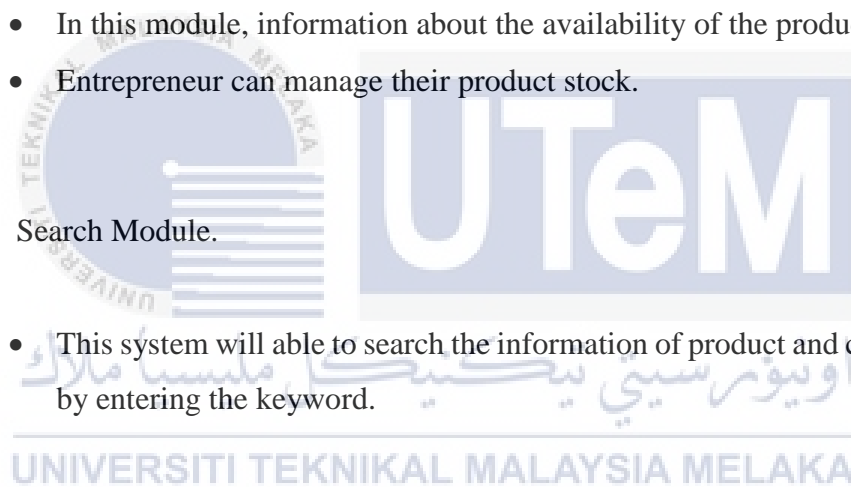
1.5 Project Significant

The inspiration for developing RMR Mobile Café Ordering and Inventory System (RMRMCOAIS) for this project I would like to highlight the products provided by entrepreneurs, especially small medium enterprises RMR Mobile cafes. I also found that entrepreneurs RMR Mobile Cafe does not have a good inventory management. Because of that I want to develop this system in order to facilitate entrepreneurs RMR Mobile Cafe manage their inventory. They also can manage orders that have been

made by their customers as easily as if the order is made is many, they cannot manage their order and the possibility for order the data lost is high furthermore every order is taken manually. Therefore, I hope this system will help them to manage their order and inventory.

1.6 Expected Output

RMRMCOAIS expected result of this is that the system is useful to all small and medium industry entrepreneurs. By using this system,I also hope that it can make it easier for entrepreneurs to manage inventories and market their products as well as to make the people of Malaysia to support local products so that it can help to raise the country's economy.

1.7 Conclusion

To summarize, this chapter will introduce the system which is RMR Mobile Café Ordering and Inventory System (RMRMCOAIS) is a system to help RMR Mobile Cafe to market their products to be known throughout Malaysia. Local people can order their products through this system. This system also enables RMR Mobile Cafe to manage the inventory of their product. Each product data will be stored in a database on the inventory. This chapter also has identify the problem statement that are faced by the RMR Mobile cafe and other local SME entrepreneur .To overcome this problem, the objective has be determined and the scope of the system was defined .The project significant and expected result of this project also has be decribe in this chapter. For the next chapter,it will decribe the methodology that will be used.

CHAPTER II

PROJECT METHODOLOGY AND PLANNING

2.1 Introduction

This chapter will explain the details of the methodology that will be used to complete the project more organized and with strategies in place to deal with any problems if they occur. Methodology will guide throughout this project, it will help by giving steps to follow and targets to meet project from the start to completion. For System Development Life Cycle (SDLC), this project will be used Agile Development methodology. Agile is based on adaptive software development methods in which the SDLC model as the traditional waterfall model is based on the prediction approach. There will be a lot of tests carried out as the project is developing a system to detect defects before. This is to ensure that our systems meet all the requirements and to avoid waste of time and cost in the long run. Any changes will be put through a rigorous change management controls and priorities.

2.2 Project Methodology

The system development life cycle framework provides a sequence of activities for system designers and developers to follow. It consists of a set of steps or phases in which each phase of the SDLC uses the results of the previous one. This project use agile software development life cycle which is the project is divided into first features that need to be developed. The agile SDLC adheres to important phases that are important to this project, such as:

1. Planning:

    Planning is the first step of the software development life cycle. In planning phase, the objective of the project is defined and the requirements to develop the project are considered. An estimate of resources, such as personnel and costs, is prepared for this project. All the project's information will be analyzed to see if there is an alternative solution for this project. If there is no other viable alternative, the information is assembled into a project plan and presented to management for approval (Kaye Morris).

2. Analysis:

    System analysis is the process of collecting data and facts, understand the processes involved, identify problems and recommend proposals can be implemented to improve the functioning of the system. This involves reviewing business processes, collect operational data, understand the flow of information, identify barriers and develop solutions to overcome the shortcomings of the system to achieve the organization's goals. Analysis system also includes dividing a complex process that involves the entire system, identify and process data manually ("What is System Development Life Cycle?").

3. Design:

Design phase comes after a good understanding of customer requirement, this phase determines the elements of its system, components, systems, modules, different of architectural and interface and the type of data through the system. It does not require software that is expensive and great for designing the system because generally it can be done easily just use a pen and piece of paper to determine how the system will look like and how it will function, and then design a system that is detailed and expanded produced, and it will meet all functional and technical requirements, logically and physically (Motea Alwan,2015).

4. Implementation and deployment.

This phase comes after completely understand how the system requirements and specifications, it is the actual construction process after designs are complete and illustrated the system as required.

In Software Development Life Cycle, the actual code will be written in this phase, and if the system consists of hardware and implementation phases will contain configuration and fine-tuning of the hardware to meet the requirements and specific functions of the system.

In this phase, the system is ready to be used and installed at customer premises This system is ready to be run, and live productive, end-user training is required to ensure that they indeed know how to use and become familiar with the system, the implementation phase may take long as it depends on the complexity of systems and solutions it presents (Motea Alwan,2015).

5. System Testing and Integration

In the testing phase, it is done by making a validation test, a combination of developer testing at the design stage and agile acceptance testing at the level of needs. Confirmation test is equivalent agile "Testing against specification"

because it confirms that the system is built for the customer in accordance with all the requirements required by them ("The Agile System Development Life Cycle (SDLC)").

After coding the entire system program, test plans should be developed and run on a given set of test data. Output test trials should be match with the expected results. Tests must be conducted according to the test program and system test.

For the program system test it should be done when the program has been coded and compiled and brought to the working conditions, it must be tested individually with the test data are available. All validation and verification are checked and in case of any unwanted errors occur must be noted and debugged (error corrected).

For system test, after running a test program for every program and system errors are identified, the test system will do. At this stage, the tests performed on real data. At every stage of implementation, results or outputs of the system will be analyzed. If during analysis is carried out, it was found that the output does not match with the expected output of the system. steps to be taken is to, certain errors in the program will be identified and then tested again to get the expected output. All modules are free to be brought together and all the interfaces between the various modules to be tested, the entire set of software testing to prove that the modules work correctly as an application or system or package.

6. Deployment and Maintenance

Deployment and implementation phase is when the system has been fully tested and no major errors that remain in the system, it is time to produce a system in which customers can use this system. When the system is released to the customer, there will usually be a team in charge of the maintenance of

any post-production issues. If there are any issues encountered in the production of the development team will be notified and will depend on how severe the issue at hand, it may either require that the hot-fix is created and delivered within a short time or if not so severe, it can wait until version next software (Ghahrai, 2015).

2.3 Project Schedule and Milestones
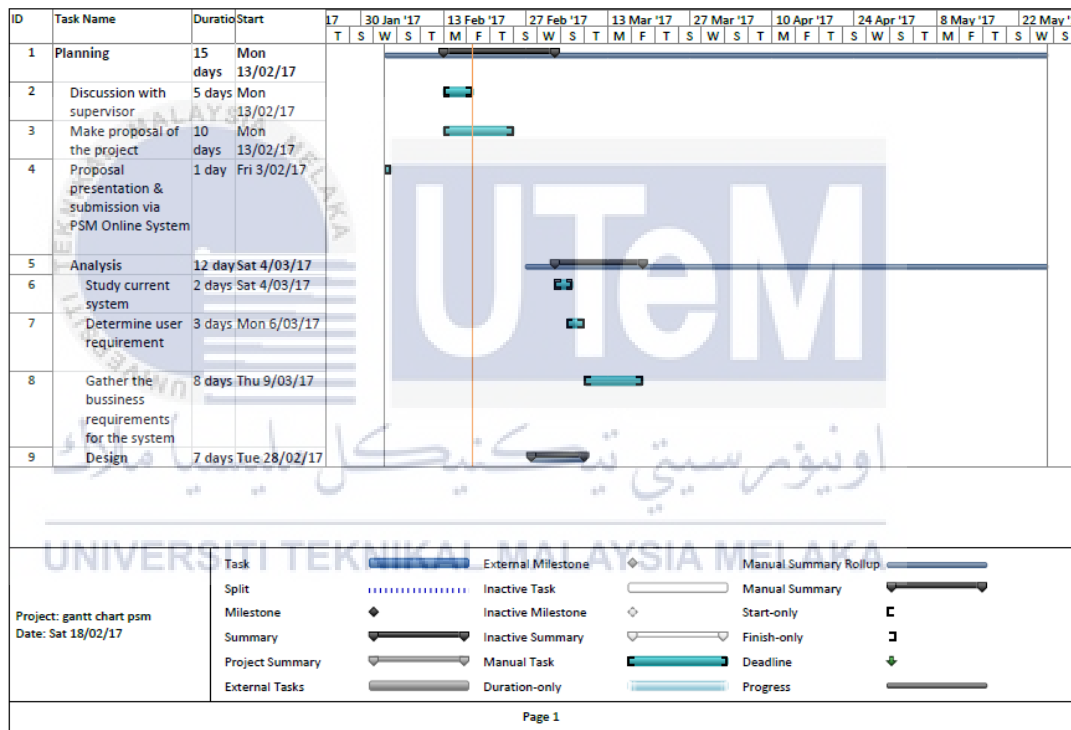
Figure 2.1 RMRMCOAIS Gantt Chart

Figure 2.2 RMRMCOAIS Gantt Chart

ID	Task Name	Duration	Start
18	Perform the testing of the system	24 days	Tue 7/03/17
19	Write the documentation	30 days	Mon 27/02/17
20	Maintenance	36 days	Fri 7/04/17

Project: gantt chart psm
Date: Sat 18/02/17

Task		External Milestone		Manual Summary Rollup	
Split		Inactive Task		Manual Summary	
Milestone		Inactive Milestone		Start-only	
Summary		Inactive Summary		Finish-only	
Project Summary		Manual Task		Deadline	
External Tasks		Duration-only		Progress	

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Figure 2.3 RMRMCOAIS Gantt Chart

Table 2.1 Milestone of RMRMCOAIS

ID	Task Name	Duration	Start	Finish
1	**Planning**	**15 days**	**Mon 13/02/17**	**Fri 3/03/17**
2	Discussion with supervisor	5 days	Mon 13/02/17	Fri 17/02/17
3	Make proposal of the project	10 days	Mon 13/02/17	Fri 24/02/17
4	Proposal presentation & submission via PSM Online System	1 day	Fri 3/03/17	Fri 3/03/17
5	**Analysis**	**12 days**	**Sat 4/03/17**	**Sat 18/03/17**
6	Study current system	2 days	Sat 4/03/17	Mon 6/03/17
7	Determine user requirement	3 days	Mon 6/03/17	Wed 8/03/17
8	Gather the bussiness requirements for the system	8 days	Thu 9/03/17	Sat 18/03/17
9	**Design**	**7 days**	**Tue 28/02/17**	**Wed 8/03/17**
10	Design the technical architecture required to support the system	7 days	Tue 28/02/17	Wed 8/03/17
11	**Implementation**	**30 days**	**Mon 27/02/17**	**Fri 7/04/17**
12	Design the system models	7 days	Tue 28/02/17	Wed 8/03/17
13	**Develop Program**	**30 days**	**Mon 27/02/17**	**Fri 7/04/17**
14	Build the technical architetecture	30 days	Mon 27/02/17	Fri 7/04/17
15	Build the database and programs	30 days	Mon 27/02/17	Fri 7/04/17
16	**Testing**	**26 days**	**Fri 3/03/17**	**Fri 7/04/17**
17	Write the test condition	2 days	Fri 3/03/17	Sun 5/03/17
18	Perform the testing of the system	24 days	Tue 7/03/17	Fri 7/04/17
19	Write the documentation	30 days	Mon 27/02/17	Fri 7/04/17
20	Maintenance	36 days	Fri 7/04/17	Fri 26/05/17
21	PSM 1 SHOWCASE	1 day	Wed 24/05/17	Wed 24/05/17

2.4 Conclusion

In conclusion, this chapter explains the method that will be applied to develop this system so that the system will be done with systematically and smoothly. To ensure that the system can be built smoothly, this chapter shows the Gantt chart and milestones of the project. For the next chapter, it explains about the analysis phase and how it would be developed.

CHAPTER III

ANALYSIS

3.1 Introduction

Analysis is the process of studying a procedure or business of the current system to identify its problem for create a new system that will solve the problem in order to achieve the objective. Analysing the requirement is the most important for a project to solve the problem in efficient way. Each requirement has to analyse to ensure that the requirement can be include in the software without causing breaks or problems with system functionality. In this chapter also has study about the current system for make an improvement of this system. Once the information about the current operations and the requirements for a replacement system have been collected, this intelligence must somehow be organized in order to be useful during analysis and design. Organizing, or structuring, system requirements is the second major activity of the analysis phase. The requirements structuring techniques are used to unambiguously describe and structure the current system and the alternatives for the replacement system.

3.2 Problem Analysis

This system is developed to computerized the manual system which currently used by the RMR Mobile Cafe. Previously, RMR Mobile Café take their customer's order by using smart phone application and copy it back in the book. This will cause the probability to lost data is high because of message sent by the client inadvertently delete before they copy it into book that devoted for storing customer's order data. For inventory management, RMR Mobile Café does not have specific file to store their inventory data event with manual system. This is because they lack of knowledge about manage the inventory with proper way. Inventory management is important for company to maintain the right balance of stock in their warehouses. Company do not want to lose a sale because did not have enough inventory to fill an order. They also do not want to have excess inventory taking up space in warehouses unnecessarily. Too much inventory can trigger profit losses because of RMR Mobile Cafe is a catering business and it has several disadvantages as it may have expired or rotten food of product will be expired and get damaged.

The problem statement in this project is data that stored by customer and entrepreneur manually is not organize as mentioned above. Entrepreneurs do not keep inventory data organizely but only wrote in the book or a piece of paper if he has time to store the inventory data. When data is not stored organizable, it will be difficult for entrepreneur to review the order and inventory data as a reference in future

Second problem statement is inventory data easily lost. Inventory data easily lost due to the way of the data stored. RMR Mobile Café did not have official office to store their inventory data so they just keep the records in anywhere inside their house. This situation will make the record accidentally discard. If there is natural disaster happen, the data also can be lost.

Last but not least, data not stored organizely and data easily lost will cause the difficulty to generate sales report. Report will be generated based on the data that has been stored. Report will become not complete if the data stored are not complete. Sales reports mean

nothing if they are not completed properly, produced in a timely manner or contain helpful information to assess a business.

3.3 The Proposed Improvement or Solution

Diagram 3.3.1 and Diagram 3.3.2 describe the proposed improvement of the current system.

Main Function (Customer Order)
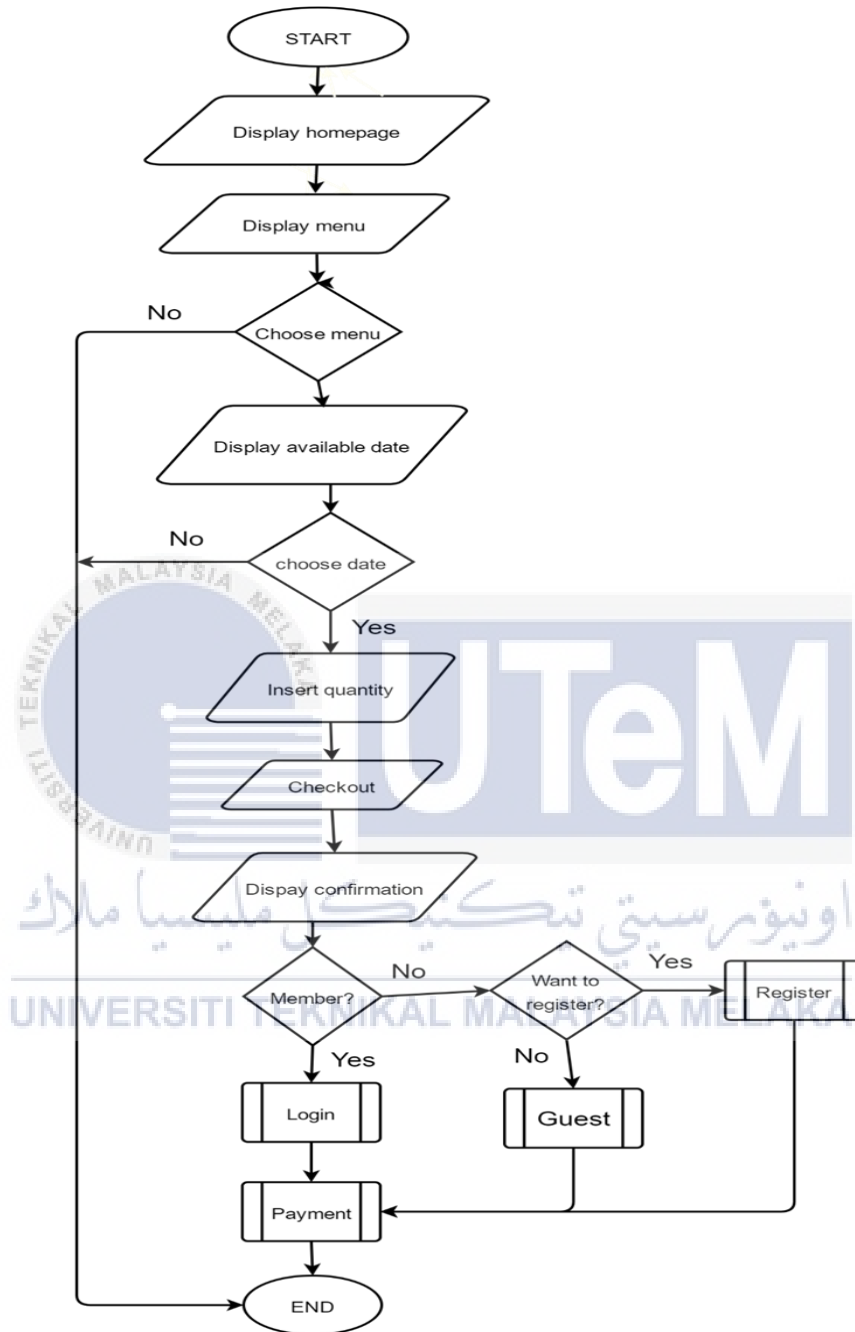
Figure 3.1 Flowchart of improvement system

Main Function (Staff)
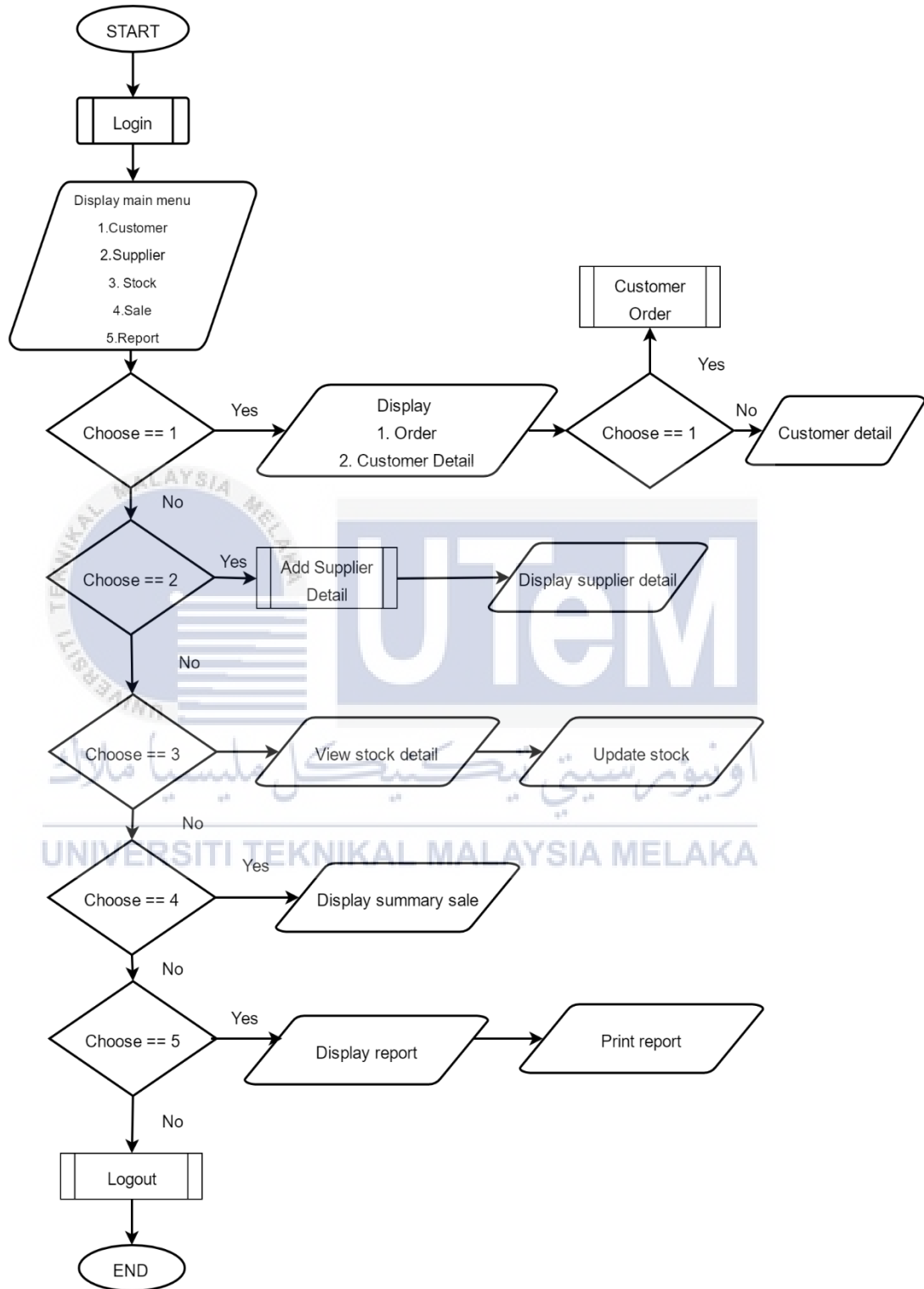
Figure 3.2 Flowchart of improvement system

3.4. Requirement Analysis of the to-be system

3.4.1 Functional Requirement

3.4.1.1 General

Table 3.4.1.1 present the general functional requirement that directly relate to the entire of RMR Mobile Cafe Ordering and Inventory System.

Table 3.1 Functional General Requirement

Requirement	Description
G01	A server shall host the RMRMCOAIS and provide system data processing and storage capability.
G02	The system interface shall provide a customer with all the customer system functionality.
G03	The system interface shall provide a staff with all the staff system functionality.
G04	A system able to generate a report based on the data stored in the database.

3.4.1.2 Customer

Table 3.4.1.2 present the customer functional requirement that directly relate to the entire of RMR Mobile Cafe Ordering and Inventory System.

Table 3.2 Functional Customer Requirement

Requirement	Description
C01	A customer able to see the detail of menu by click the button order.
C02	A customer able to order the package chosen.
C03	A customer can order set of packages according to customer required quantity.
C04	A customer able to be a member by register to the system.
C05	A customer can order as a guest if they do not want to be member.
C06	A member can login by entering username and password.
C07	A customer can remove order if they want to cancel the order.
C08	A customer can update the quantity of order.
C09	A customer can view invoice before make a payment to make a confirmation.
C10	A customer can print invoice.
C11	A customer can make payment through online banking system.

3.4.1.3 Staff

Table 3.4.1.2 present the staff functional requirement that directly relate to the entire of RMR Mobile Cafe Ordering and Inventory System.

Table 3.3 Functional Staff Requirement

Requirement	Description
S01	A staff able to login by insert username and password.
S02	A staff able to register to the system by insert required data.
S03	A staff able to update their detail data.
S04	A staff able to delete the detail of the data.
S05	A staff able to see order that had made by the customer.
S06	A staff can handle the order.
S07	A staff can insert data of food.
S08	A staff can insert data of packagemenu.
S09	A staff can insert data supplier.
S10	A staff able to view data of supplier.
S11	A staff able to insert data of stock.
S12	A staff able to view data of stock.
S13	A staff able to view payment that had made by the customer.
S12	A staff can view the report based on data recorded in the database.

3.4.1.4 Data Flow Diagram

3.4.1.4.1 Context Diagram
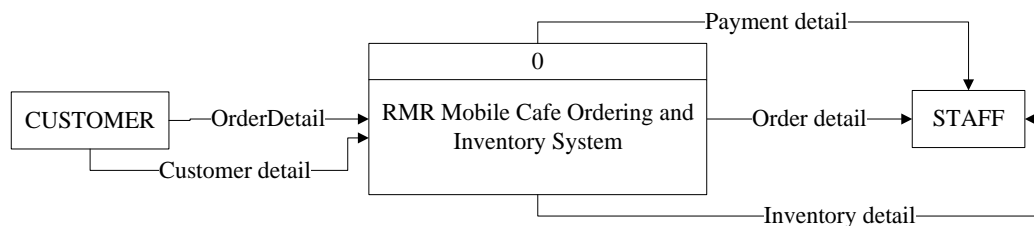
Figure 3.3 Context Diagram

3.4.1.4.2 Data Flow Diagram Level 0
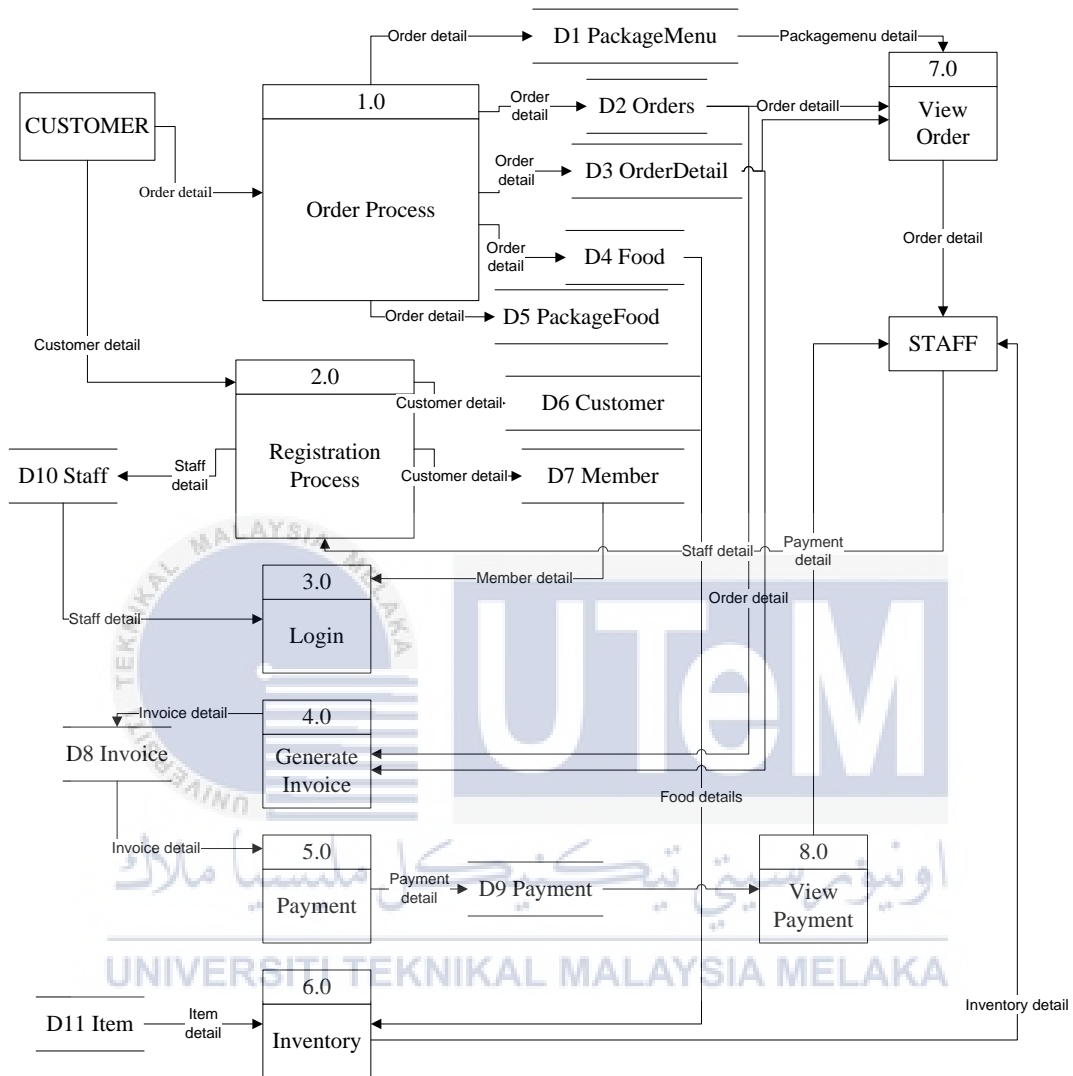
Figure 3.4 Data Flow Diagram Level 0

3.4.2 Non-Functional Requirement

The non-functional of this system are performance, usability, efficiency, usability and security performance.

3.4.2.1 Performance Requirement

Table 3.4.2.1 presents the identified non-functional performance requirement that directly relate to the entire RMRMCOAIS.

Table 3.4 Non-Functional Performance Requirement

Requirement	Description
P01	The server shall be capable of supporting an arbitrary number of surface computers, tablets and displays, that is, shall provide no limit on how many devices are in the system.
P02	The server shall be capable for supporting an arbitrary number of active orders
P03	The server shall be capable of supporting an arbitrary number of active customer payment so that there is no data of payment shall be lost under any circumstances.

3.4.2.2 Usability Requirement

Table 3.4.2.2 presents the identified non-functional usability requirement that directly relate to the entire RMRMCOAIS.

Table 3.5 Non-Functional Usability Requirement

Requirement	Description
U01	The system reduce amount of text input that should be insert by the user.
U02	This system should be user friendly and easy to handle for user who are not familiar with online transaction.

3.4.2.3 Efficiency Requirement

Table 3.4.2.3 presents the identified non-functional efficiency requirement that directly relate to the entire RMRMCOAIS.

Table 3.6 Non-Functional Efficiency Requirement

Requirement	Description
E01	The system allow staff to view the data that had stored in database.
E02	The system allow customer to make order.
E03	The system allow customer to make payment via online banking.

3.4.2.4 Security Requirement

Table 3.4.2.4 presents the identified non-functional security requirement that directly relate to the entire RMRMCOAIS.

Table 3.7 Non-Functional Security Requirement

Requirement	Description
Y01	The system provides a highly security on protecting customer and staff data
Y02	Some confidential data should restrict to only authorize user to access the data.

3.4.3 Others Requirement

3.4.3.1 Software that will be used.

Table 3.4.3.1 presents the software that will be used that directly relate to the entire RMRMCOAIS.

Table 3.8 Software That Will Be Used.

Software	Description
Microsoft Visio 2010	Microsoft Office Visio 2007 used to design Entity Relationship Diagram (ERD) and UML Diagram for develop the RMR Mobile Café
Microsoft Visio 2010	Microsoft Office Project 2007 is used to create Gantt Chart of the project.
Adobe Photoshop CS5	AdobePhotoshopCS5is used to customize the image or icon for the system. AdobePhotoshopCS5is also used for making header of the system in user interface.

Software	Description
XAMPP 3.2.2	XAMPP 3.2.2 is a collection of free software for installing and using the Apache Web server 2.0. Basically, it is an Apache 2.0 distribution that includes the Apache Web server 2.0 and PHP Version 5.6.30. XAMPP 3.2.2 is also to build an easy to install distribution for developers to get into the world of Apache 2.0.
Windows 10	Windows 10 are the operating system that suitable for client server application, and also used for the development computer and testing terminal.
Oracle Database	Oracle database (Oracle DB) is a relational database management system (RDBMS) from the Oracle Corporation. Originally developed in 1977 by Lawrence Ellison and other developers, Oracle DB is one of the most trusted and widely-used relational database engines.
SQL Developer	Oracle SQL Developer (internally often: "sql developer") is an Integrated development environment (IDE) for working with SQL in Oracle databases.
Microsoft Office Word 2016	It used for writing the whole documentation of this project.

3.4.3.2 Hardware that will be used.

Table 3.4.3.2 presents the hardware that will be used that directly relate to the entire RMRMCOAIS.

Table 3.9 Hardware That Will Be Used

Hardware	Specification
Processor	Intel (R) Core(TM) i5-4200U CPU @ 1.60GHz 2.30 GHz
Memory	6.0 GB
Graphic Card	Nvidia Geforce

3.5 Conclusion

In conclusion, this chapter explain about the analysis phase that increase the understanding of the system. In this chapter also, conclude the requirement needed for this project. It describes about functional requirement, non-functional requirement, software and hardware that used. In chapter 4, will explain more detail about the design of the system which include Entity Relationship Diagram(ERD), Data Definition Language (DDL), and others.

CHAPTER IV

DESIGN

4.1 Introduction

Design is the important phase that will concrete understanding of how the system will operate. Design is the phase that tightly related to the previous system development phase which is analysis phase. Design will appear as a data flow a manual and automated process or between source when the system input and output is developed. During this phase, we will be supplemented the conceptual data model from the analysis phase with the new data requirements. These are identified for make a design of system input and outputs then transform all the data requirement that have been collected into a new type of data model and the relational database model. This phase also will be designing the interface that describe the pattern of interaction between user and the system.

4.2 Introductory preview to this chapter

4.2.1. Conceptual Design

Conceptual design is the first stage of the system design process. The purposed of conceptual design is to build a conceptual model based on the analysis that have been collected in the analysis phase. Entity relationship diagram and business rule are designed in this phase.

4.2.1.1Entity Relationship Diagram(ERD)

Entity relationship diagram (ERD) is a graphical diagram that show the relationship of entities in the database. To build a perfect system, the ERD must be perfect first because it is very important as a reference to a developer to store data and link the table. It is also will give a better visual for the developer because it gives graphical and diagrammatical representation of various entities, their attributer and relationship between entities. So, developer will have a clear understanding of the data structure and minimize redundancy of data.

Figure 4.1 shows a ERD for this project.
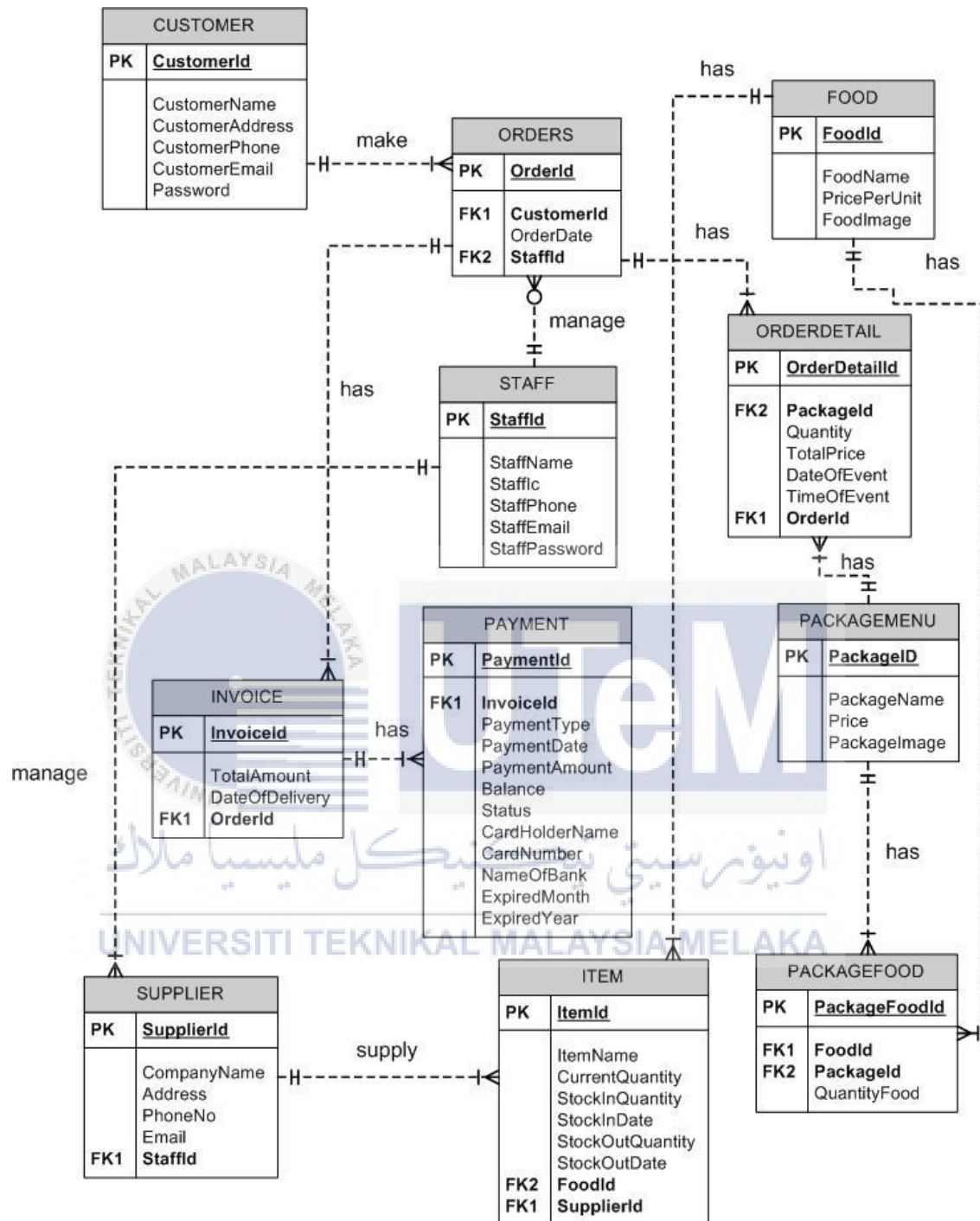
Figure 4.1 Entity Relationship Diagram(ERD)

4.2.1.2 Business Rule

Table 4.2.1.2 present the relationship of data in the form of business rule.

Table 4.1 Business Rule of RMRMCOAIS

No.	Description
1.	A CUSTOMER may make one or many ORDERS while ORDERS must make by only one CUSTOMER.
2.	ORDERS may have one or many ORDERDETAIL while ORDERDETAILS must only have one ORDERS.
3.	ORDERDETAIL may has one PACKAGEMENU while PACKAGEMENU may have one or many ORDERDETAIL.
4.	PACKAGEMENU may have one or many PACKAGEFOOD while PACKAGEFOOD may have only one PACKAGEMENU.
5.	PACKAGEFOOD must has only one FOOD while FOOD may have many or one in PACKAGEFOOD.
6.	FOOD may have one or many ITEM while ITEM must only have one FOOD.
7.	ITEM may supply by one SUPPLIER while SUPPLIER may supply one or more ITEM.
8.	STAFF may manage on or many SUPPLIER while SUPPLIER may be managed by one STAFF.
9.	INVOICE may have one ORDERS while ORDERS may have one or more INVOICE.
10.	INVOICE may have many time PAYMENT while PAYMENT has only one INVOICE.
11.	STAFF may manage many or not manage ORDERS while ORDERS may manage by one SUPPLIER.

4.2.2 Logical Design

Logical design involves the arrangement of data into a series of logical relationships which is entities and attributes. It will define the business entities which will eventually become a complete table. Process of normalization is needed in this process to break down the entities and remove the redundancy of data. The activities that involves in logical design is design the data dictionary and create the query design.

4.2.2.1 Data Dictionary.

Data dictionary is detail of the information about each of attribute in business data. In data dictionary, it contains a list of all table in the database, number of record in each table and the name of each field.
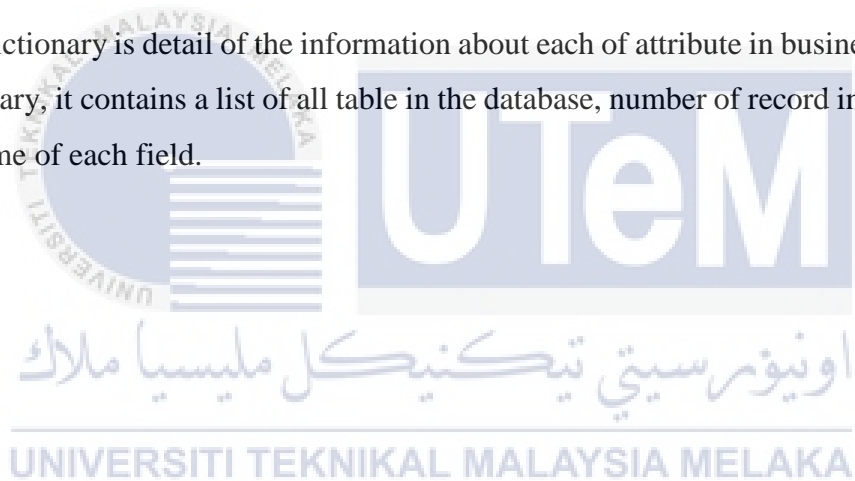
Table 4.2 Data Dictionary of Table Customer

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Customerid	Identifier of customer	Varchar2 (100)	Primary key		Yes	001-99999	############
CustomerName	Name of customer	Varchar2 (500)			Yes		xxxxx
Customer Address	Address of customer	Varchar2 (100)			Yes		xxxxx
CustomerPhone	Customer phone number	Varchar2 (14)			Yes		######
CustomerEmail	Email customer	Varchar2 (50)			Yes		xxxxxx
Password	Customer password	Varchar2 (10)			Yes		xxxx

Table 4.3 Data Dictionary of Table Staff.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	
Staffid	Identifier of staff	Varchar2 (25)	Primary key		Yes	001-100	X###
StaffName	Name of staff	Varchar2 (25)			Yes		xxxx
StaffIc	Identity card number	Varchar2 (15)			Yes		############
StaffPhone	Staff phone number	Varchar2 (15)			Yes		###########
StaffEmail	Email staff	Varchar2 (50)			Yes		xxxxx
StaffPassword	Password of staff	Varchar2 (20)			Yes		xxxxx

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Table 4.4 Data Dictionary of Table Food.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Foodid	Identifier of food	Varchar2 (100)	Primary key		Yes	001-30	X###
FoodName	Name of food	Varchar2 (25)			Yes		xxxxx
PricePerUnit	Price of food	Number (38,2)			Yes		##.##
FoodImage	Image of food	BFile			Yes		

Table 4.5 Data Dictionary of Table Orders.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Orderid	Identifier of order	Varchar2 (100)	Primary key		Yes	001-999999	X###
OrderDate	Date of Order	Date			Yes		dd/mm/yyyy
Customerid	Identifier of customer	Varchar2 (100)	Foreign Key	Customer	Yes		
Staffid	Identifier of staff	Varchar2 (100)	Foreign Key	Staff	Yes	001-10	

Table 4.6 Data Dictionary of Table PackageMenu.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Packageid	Identifier of package	Varchar2 (100)	Primary key		Yes	001-10	X###
PackageName	Name of package	Varchar2 (20)			Yes		xxx
Price	Price of package	Number (4,2)			Yes		##.##
PackageImage	Image of image	BFile			Yes		

Table 4.7 Data Dictionary of Table OrderDetail.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Order Detailid	Identifier of orderdetail	Varchar2 (100)	Primary key		Yes	001-999999	X###
Orderid	Identifier of order	Varchar2 (100)	Foreign Key	Orders	Yes	001-999999	X###
Packageid	Identifier of package	Varchar2	Foreign Key	Package menu	Yes	100	X###
Quantity	Quantity of order	Varchar2 (100)			Yes	50-9999	###
TotalPrice	Total Price of order	Number (38,2)			Yes		##.##
DateOf Event	Date Of Event	Date			Yes		dd/mm/yyyy
TimeOf Event	Time of event	Varchar2			Yes		hh:mm

Table 4.8 Data Dictionary of Table PackageFood.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Package Foodid	Identified of packagefood	Varchar2(100)	Primary key		Yes	001-100	X###
FoodId	Identifier of food	Varchar2(100)	Foreign Key	Food	Yes	001-100	X###
QuantityFood	Quantity of food	Number (38)			Yes	50-1000	####

Table 4.9 Data Dictionary of Table Invoice.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Invoiceid	Identifier of invoice	Varchar2 (100)	Primary key		Yes	001-999999	X###
TotalAmount	Total amount of order	Number (38,2)			Yes		##.##
DateOf Delivery	Date of delivery	Date			Yes		dd/mm/yy
Orderid	Identifier of order	Varchar2 (100)	Foreign Key	Orders	Yes	001-999999	X###

Table 4.10 Data Dictionary of Table Payment.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Paymentid	Identifier of payment	Varchar2 (100)	Primary key		Yes	001-999999	X###
Invoiceid	Identifier of invoce	Varchar2 (100)	Foreign Key	Invoice	Yes	001-999999	X###
PaymentType	Type of payment	Varchar2 (20)			Yes		XXXX
PaymentDate	Date of payment	Date			Yes		dd/mm/yyyy
Payment Amount	Amount of payment	Number (38,2)			Yes		##.##
Balance	Balance of payment	Number (38,2)			Yes		##.##
Status	Status of Peyment	Varhar2 (25)			Yes		xxxx

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Cardoldername	Name of cardholder	Varchar2 (100)			Yes		xxxx
Cardnumber	Number of card	Varchar2 (100)			Yes		###
NameOfBank	Name of bank	Varchar2 (100)			Yes		Xxxx
ExpiredMonth	Expired of Month	Varchar2 (100)			Yes		mm
ExpiredYear		Varchar2 (100)			Yes		yyyy

Table 4.11 Data Dictionary of Table Supplier.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Supplierid	Identifier of supplier	Varchar2 (100)	Primary key		Yes	001-100	X###
CompanyName	Name of company	Varchar2 (50)			Yes		xxxx
Address	Address of company	Varchar2 (50)			Yes		xxxxx
PhoneNo	Phone number of company	Varchar2 (20)			Yes		###########
Email	Email of company	Varchar2 (100)			Yes		xxxxxx
Staffid	Identifier of staff	Varchar2 (100)	Foreign Key	Staff	Yes	001-100	X###

Table 4.12 Data Dictionary of Table Item.

Attribute Name	Content	Data Type	Constraint	Ref Table	Required	Range	Format
Itemid	Identifier of item	Varchar2 (100)	Primary key		Yes	001-100	X###
ItemName	Name of item	Varchar2 (25)			Yes		xxxx
Current Quantity	Quantity of item	Integer			Yes		###
StockIn Quantity	Quantity of stock in	Integer			Yes		###
StockInDate	Date of stock in	Date			Yes		dd/mm/yyyy
StockOut Quantity	Quantity of stock out	Integer			Yes		##
Foodid	Identifier of food	Varchar2	Foreign Key	Food	Yes		X###

Supplierid	Identifier of supplier	Varchar2	Foreign Key	Supplier	Yes		X###
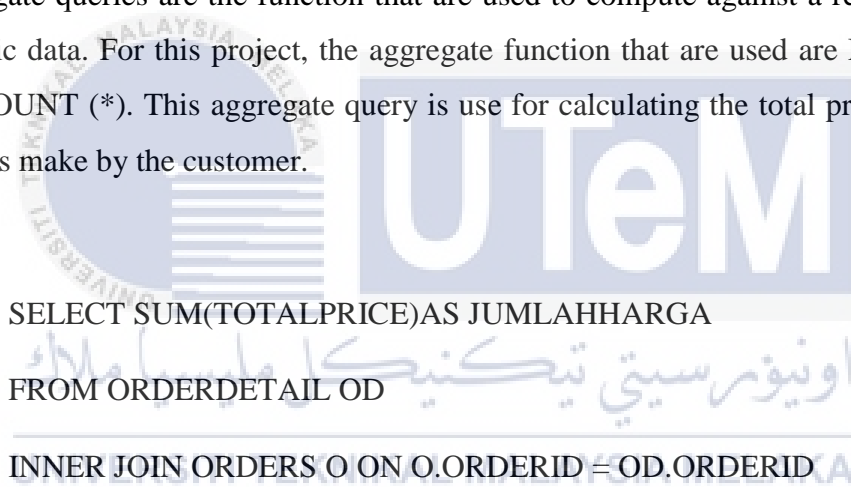
4.2.2.2 Query Design

Query design is an extraction of the data from database and formats it in a readable form. Database query must be written in the language the database requires which is Structured Query Language (SQL). In this project aggregate, join and subqueries has been used to extract the data.

1. Aggregate Queries

Aggregate queries are the function that are used to compute against a return column of numeric data. For this project, the aggregate function that are used are MAX, COUNT and COUNT (*). This aggregate query is use for calculating the total price of the order that has make by the customer.

```
SELECT SUM(TOTALPRICE)AS JUMLAHHARGA

FROM ORDERDETAIL OD

INNER JOIN ORDERS O ON O.ORDERID = OD.ORDERID

WHERE O.ORDERID = (SELECT MAX(ORDERID)

FROM ORDERS

WHERE O.CUSTOMERID='951026085676');
```

2. Join Queries

Join query are used to retrieved data from multiple table. In this project, join query is use for joining four table which is table FOOD, ORDERDETAIL, PACKAGEFOOD and PACKAGEMENU.

SELECT OD.ORDERDETAILID, PM.PACKAGEID, PM.PACKAGENAME,

PF.PACKAGEFOODID ,PF.QUANTITYFOOD,

F.FOODID ,F.FOODNAME

FROM ORDERDETAIL OD

I   NNER JOIN PACKAGEMENU PM ON PM.PACKAGEID = OD.PACKAGEID

INNER JOIN PACKAGEFOOD PF ON PF.PACKAGEID = PM.PACKAGEID

INNER JOIN FOOD F ON F. FOODID=PF.FOODID;

Subqueries

Subqueries is a query within a query. SQL subquery is usually added in the WHERE Clause of the SQL statement. It is also an alternate way of returning data from multiple tables.

```
SELECT I.INVOICEID, I.TOTALAMOUNT, O.ORDERID, O.ORDERDATE,
C.CUSTOMERNAME,C.CUSTOMERID

FROM INVOICE I

INNER JOIN ORDERS O ON O.ORDERID = I.ORDERID

INNER JOIN CUSTOMER C ON C.CUSTOMERID = O.CUSTOMERID

WHERE CUSTOMERNAME='YAYA'

AND INVOICEID= (SELECT MAX(INVOICEID) FROM INVOICE) ;
```

4.2.3 Physical Design

Physical design is a graphical representation that show the internal and external entities of the system, and the flows of the input and output of these system. This will describe how the data is given as an input into a system, how it is processed and how it will display as an output.

4.2.3.1 Trigger

Trigger is the function that will run automatically when specific actions occur within a database. Trigger is defined to run when changes are made to a table's data. This trigger mostly used for maintaining the integrity of the data in the database. In this project, trigger is used for generating primary key for each table. Besides, trigger also will be used for storing the current stock quantity. It will automatically calculate the current quantity after the value of stock out and stock in inserted. Hence, for the history table of the inventory this project will use after trigger to create the audit trails.

4.2.3.2 Stored Procedure

Stored procedure is a group of SQL statement that form logical unit and perform a task. It also used to encapsulate a set of operations or queries to execute on a database. This procedure will be called from either a remote program, another stored procedure or command line. For this system, stored procedure is using PL/SQL as its language. In this project, stored procedure is using for managing the staff table which is insert staff data into the database and display the staff data via user interface.

4.3 Graphical User Interface (GUI) Design

Graphical User Interface is a user interface that enable user to communicate with the computer through symbol, visual metaphors and pointing devices rather than using only text through command line. By using GUI user will understand easily and attracted to use the system. Hence, user did not need to know any programming language if they want to use this system.

Figure 4.2 Interface for Login and Register

In Figure 4.1, it shows the customer registration and login. Before customer want to make order, they have to register and login first.
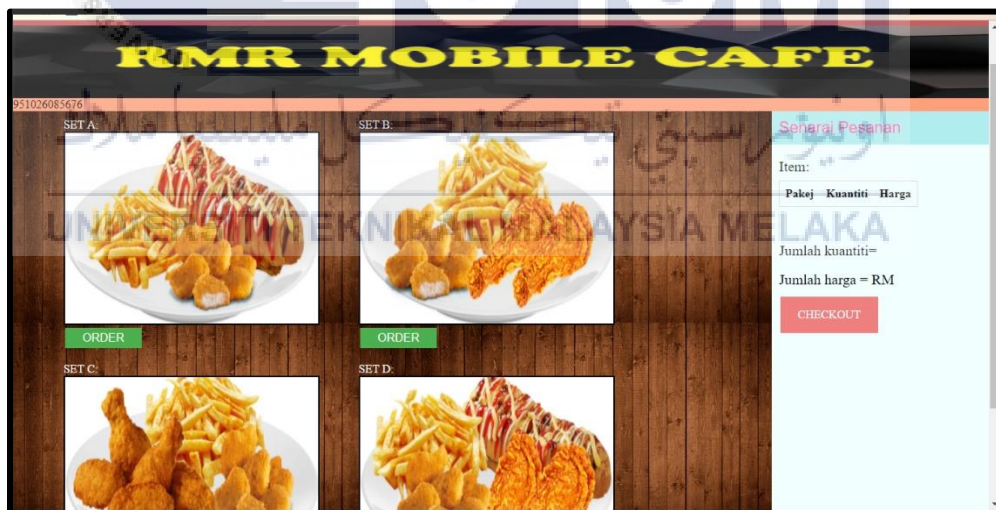
Figure 4.3 Interface Homepage for User

Figure 4.2 shows the list of the package that has been offer by the RMR Mobile Café. This page also is for the customer to start making order.

Figure 4.4 Interface for Order Detail

In Figure 4.3, it shows the page of the order detail. In this page, customer can update and cancel the order. Customer also have to key in the order detail form to proceed the order.

Figure 4.5 Interface for User to View Invoice

Figure 4.4 show the invoice for the customer after they finish key in the order detail form. In this invoice, the customer can know the total amount of the total price and the amount of the deposit to be paid before they make payment.
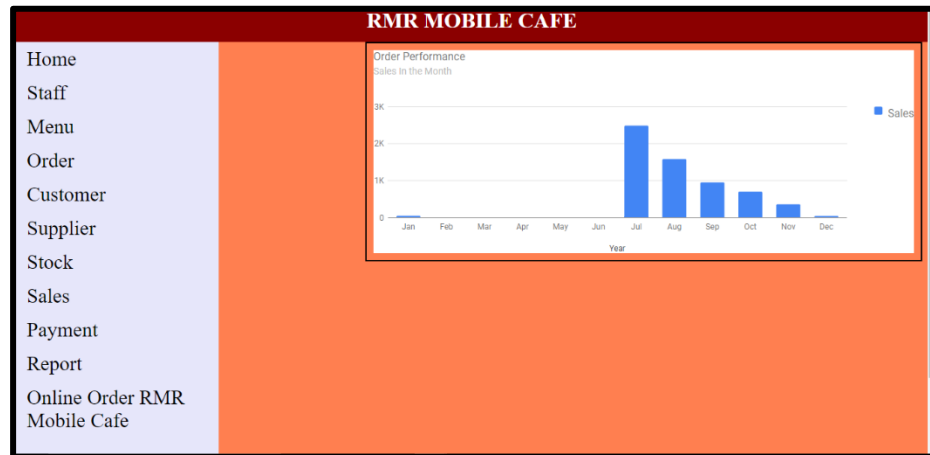
Figure 4.6 Interface Homepage for Staff

This Figure 4.5 shows the homepage for the staff. In this page, staff can view the report of the order that has been made by the customer.
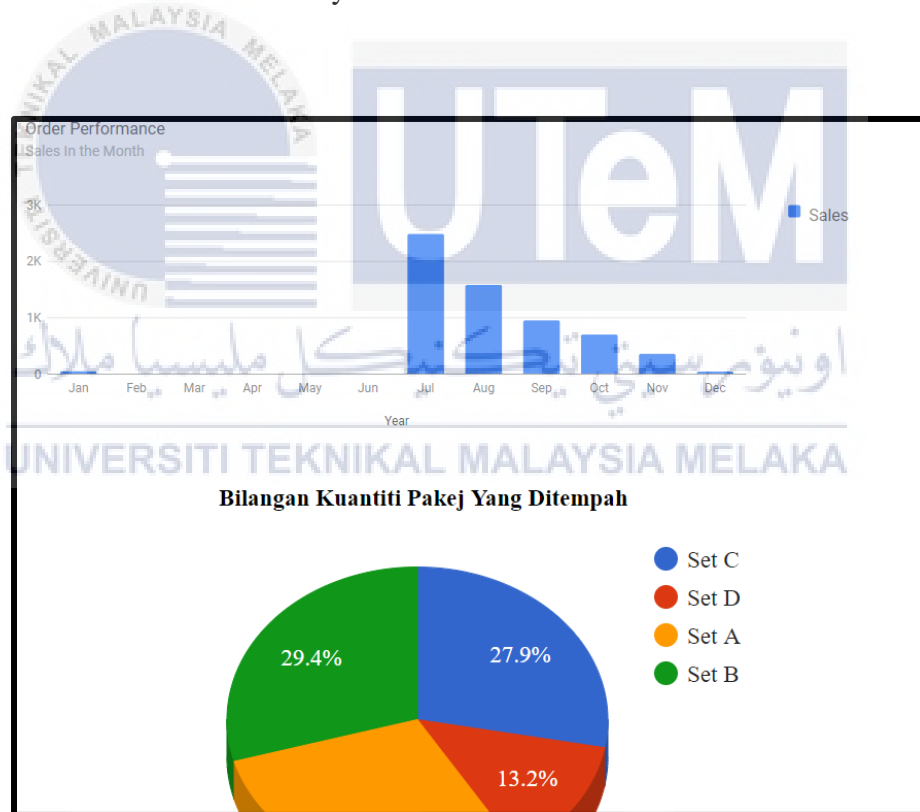
Figure 4.7 Interface for Staff to View Report

Figure 4.6 shows the report of the order and quality package. Staff can know their popular package that has been order by the customer.

Figure 4.8 Interface Registration Staff

Figure 4.7 shows inventory record that should be key in by staff. Staff can update and delete the inventory record.
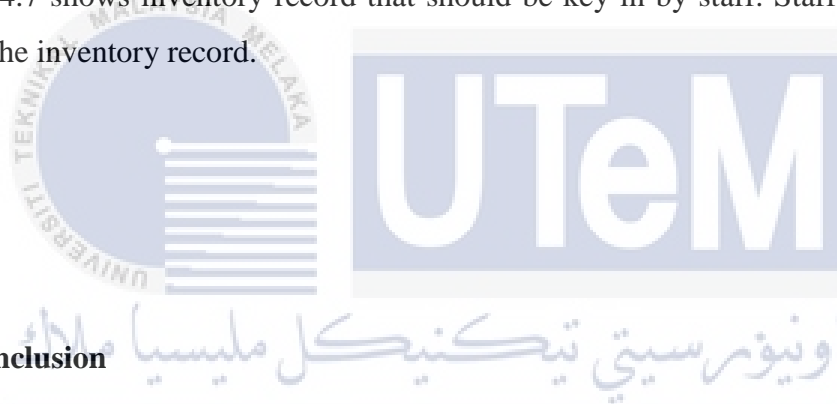
4.4 Conclusion

In conclusion, this chapter explain about the design of the system before implement into the system. Design is the importance phase for developer to develop the system smoothly without any error because it need us to design start from the data should be stored in the database which is entity relationship diagram until user interface design. For the next chapter, it will explain more detail about the implementation phase. Implementation is the phase that refers to the final process of moving the solution from development status to production status.

CHAPTER V

IMPLEMENTATION

5.1 Introduction

The previous chapter has explained with detail about the design of the system that want to develop as a guidance for the developer to develop the system smoothly. In this chapter, it will explain about the implementation process that will be implement during the development process. Implementation is the last two phases of the system development life cycle. In this implementation process, there is three phase which is coding, integration and testing, and installation. In the codding phase, there will includes the implementation of the design specified in the design document into executable programming language code. If the system is designed properly and followed the requirements needed by the customer accurately, the coding process is more streamlined. Once coding has begun, the testing process can begin and proceed in parallel.

5.2 Software Development Environment Setup

In this project, XAMPP will be used as a web server and Oracle 11g as a database management system. XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends that consist of the Apache HTTP Server and interpreters for scripts written in PHP programming language. XAMPP is a local web server which help the developer to develop the web application by using their computer and run the browser at the local environment and local machine.

5.2.1 Installation of XAMPP on Windows 10

1. Download XAMPP from Apache Friends.

Figure 5.1. Download XAMPP

2. Double the file that has been downloaded to run the installer.
3. Click OK on the warning to continue the installation

4. The Welcome to the XAMPP Setup Wizard screen will appear. Click 'Next' to continue.

Figure 5.2 Welcome Page of XAMPP

5. The Choose Components screen will appear next. This screen will allow you to choose which components would like to install. To run XAMPP properly, all components checked need to be installed. Click 'Next' to continue.
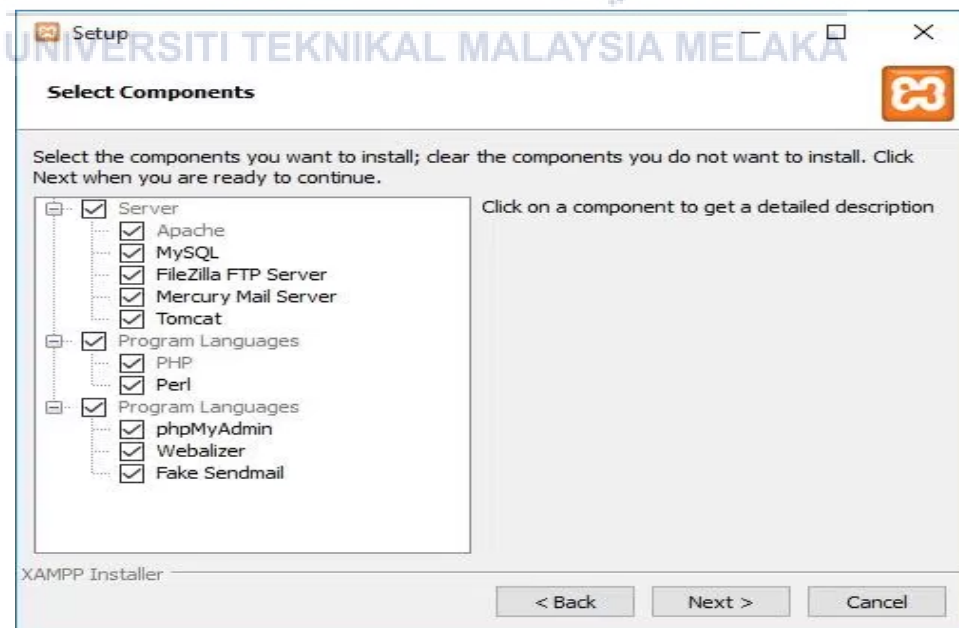
Figure 5.3 Select Components page

6. Uncheck the 'Learn more about Bitnami for XAMPP' and click 'Next'.

Figure 5.4 XAMPP Installation

7. Leave the default install location settings or choose another folder to install the XAMPP and click 'Next' to start the installation.
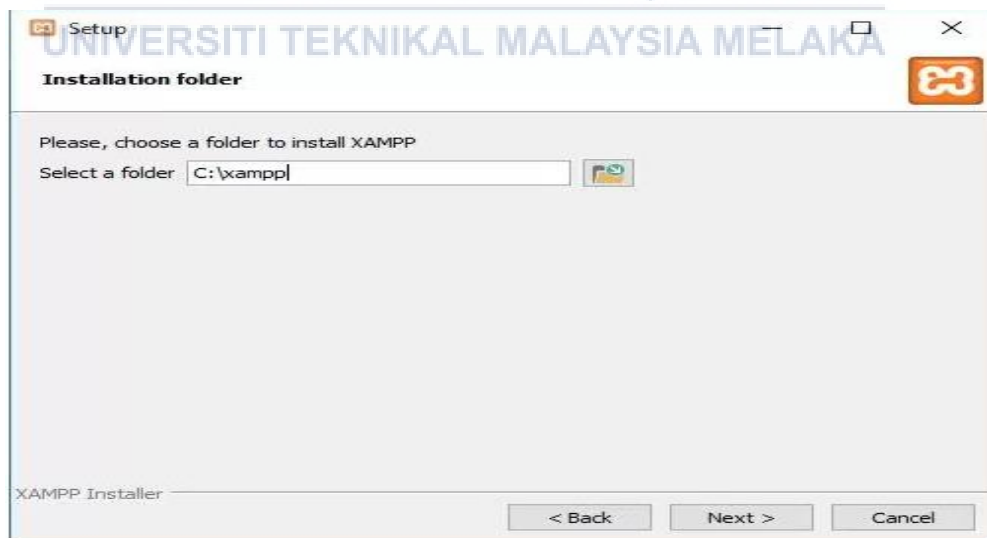
Figure 5.5 XAMPP Installation Folder

8. During the installation, Windows will prompt to allow certain services to communicate through the firewall. Click 'Allow access' through the firewall for private.
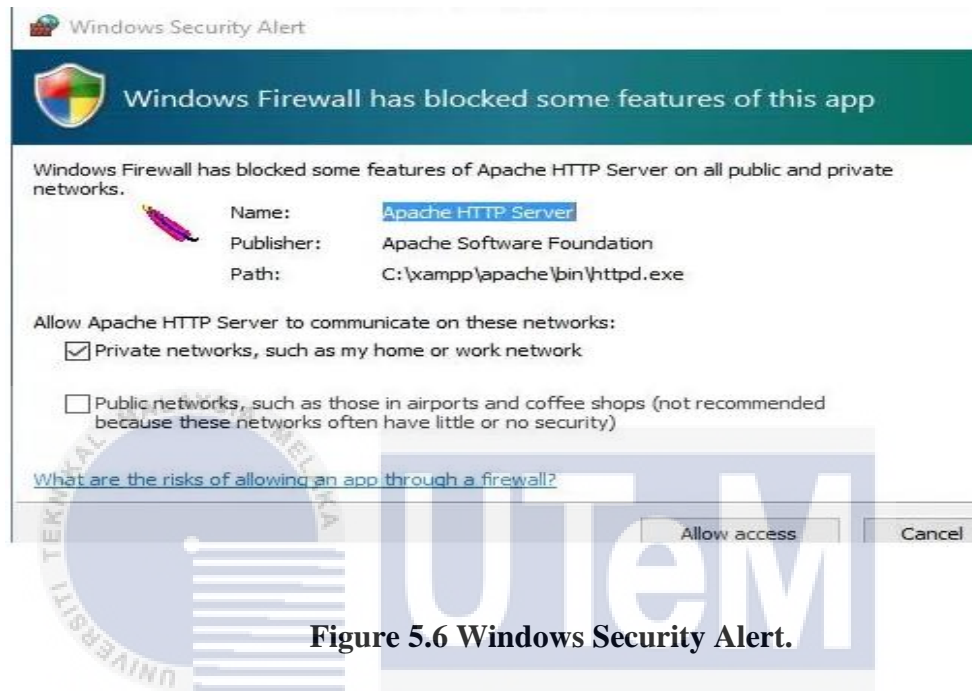
Figure 5.6 Windows Security Alert.

9. Click 'Finish' to complete the installation and to start using XAMPP Control Panel.
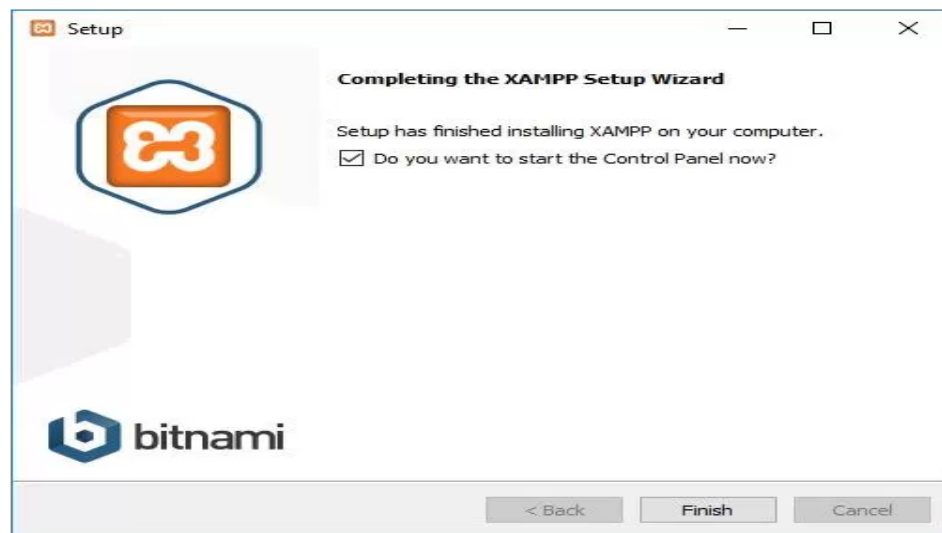
Figure 5.7 Completing the XAMPP Setup Wizard.

10   Starting XAMPP. The XAMPP Control Panel allows you to manually start and
     stop   Apache   and   MySQL,   or   install   them   as   servic
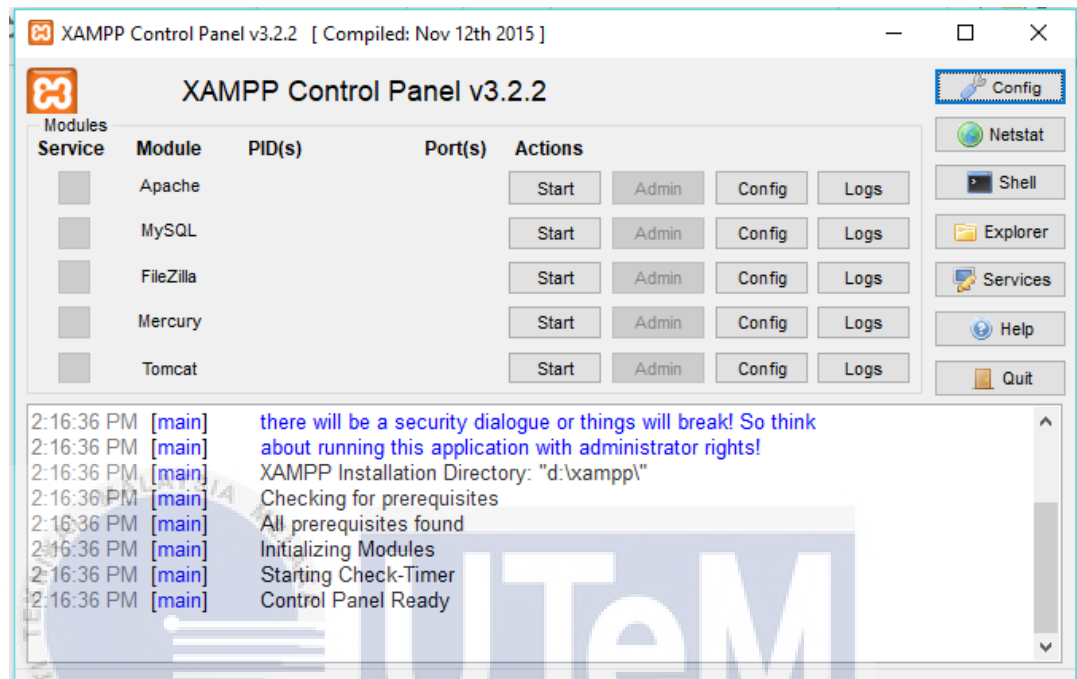
Figure 5.8 XAMPP Control Panel.

11 To start Apache manually, click the Start button under Actions next to that
    module.

5.2.2 Installation of Oracle 11g on Windows 10

1. Oracle Universal installer is required to install the Oracle 11g We can download
    the installer from the Oracle page. From the directory where the file was unzipped
    and double-click on setup.exe from the directory.

2. Select the Oracle Database 11g and click 'Next'.
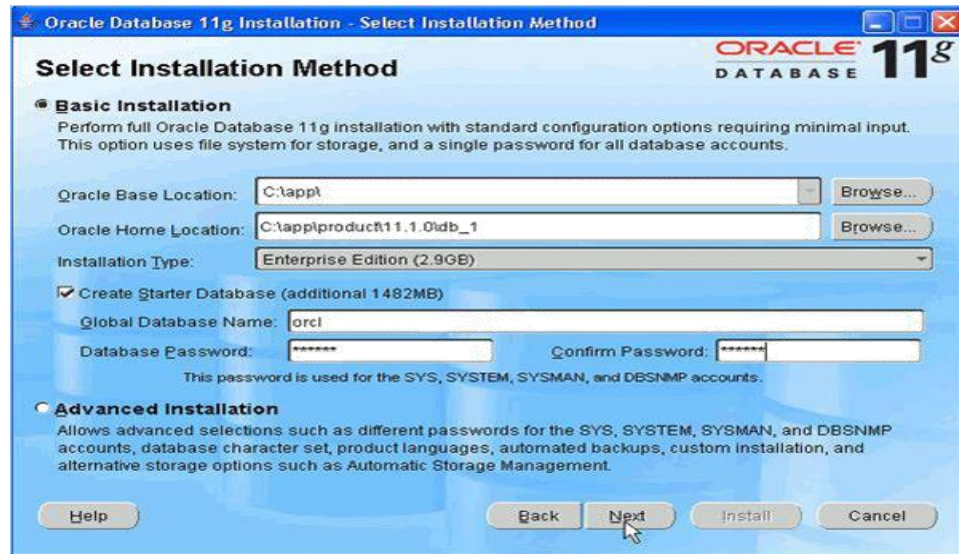
Figure 5.9 Select Installation Method

3. We need to perform a basic installation with a starter database. Enter orcl for the Global Database Name and syafiqah26 for Database Password and Confirm Password. Then, click 'Next'.

4. Oracle Configuration Manager allows to associate the configuration information with Metalink account. Choose to enable it on this window. Then, click 'Next'.

Figure 5.10 Oracle Configuration Manager Registration

5. The Summary window to verify what is to be installed. Then, click 'Install'.
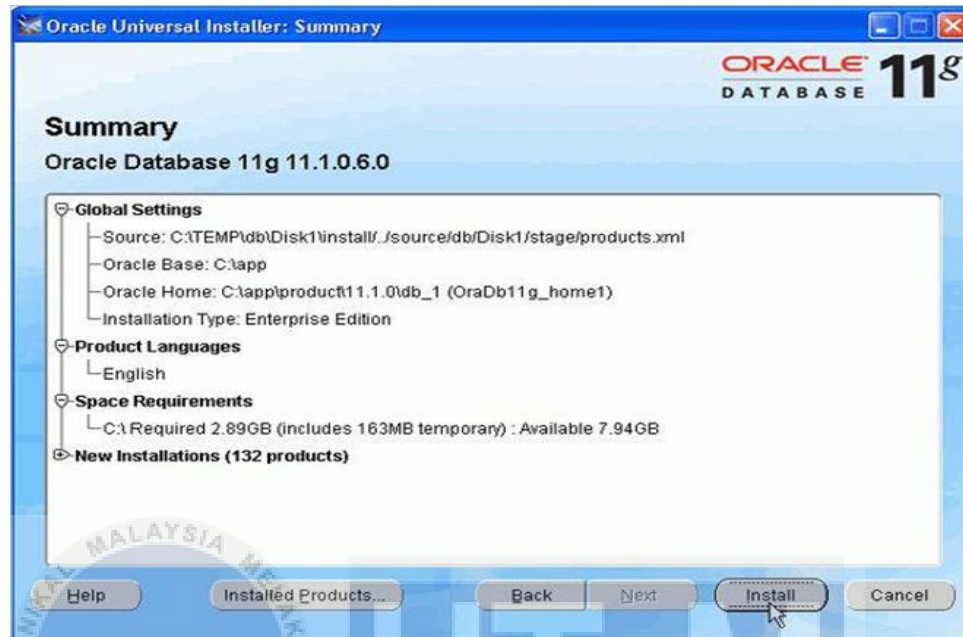
Figure 5.11 Summary

6. The progress window will appear

Figure 5.12 Installation of Oracle 11g

7. The Configuration Assistants window appears.

Figure 5.13 Configuration Assistants

8. The database is now being created.
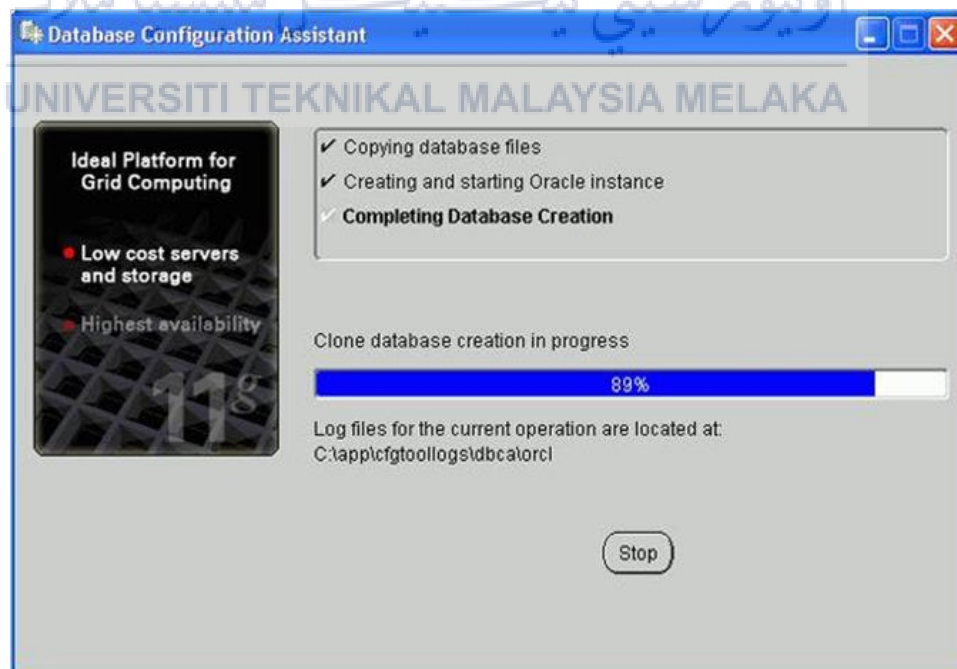
Figure 5.14 Database Configuration Assistant

9. When the database has been created, unlock the users to use. Then, click'OK'.
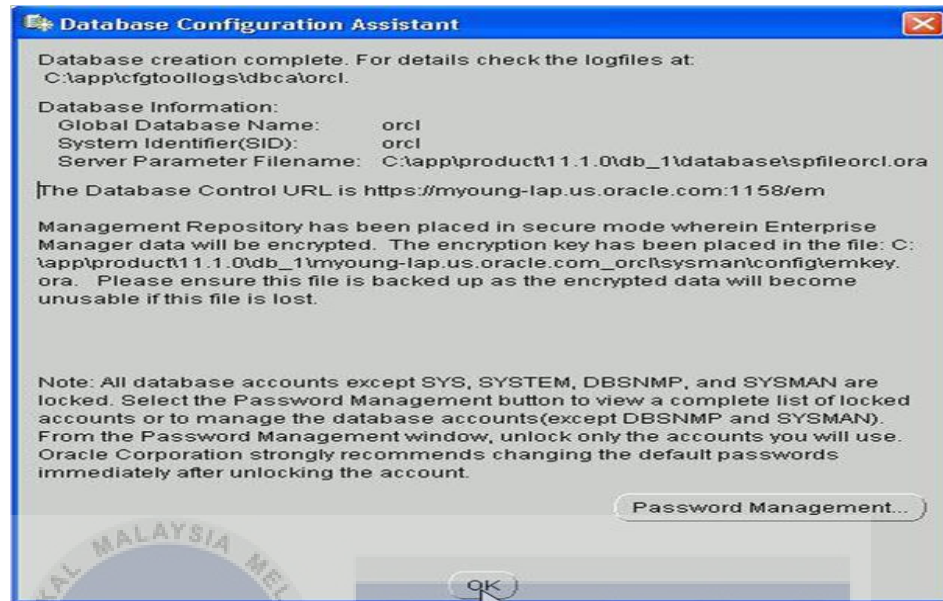
Figure 5.15 Database Configuration Assistant

10. Click 'Exit' and click 'Yes' to confirm the exit.

Figure 5.16 End of Installation

11. To test the installation successfully completed, open the browse and enter this URL: https://<hostname>:1158/em

The <hostname> should be change to the machine name, IP address or localhost because Enterprise Manager Database Control is a secure site and need a certificate. Select the Accept this certificate permanently option, then click 'OK'.

Figure 5.17 Website Certified

5.3 Database Implementation

Database implementation is a phase where the installation of the DBMS on the required hardware, optimize the database to run on hardware and software platform and create the database and load the data into the database begin.

5.3.1 Data Definition Language for Database Objects.

Data Definition Language (DDL) is used for defining the different structure in a database. This DDL statement can create, modify and remove the database object such as tables, indexes, and users. The command DDL statement that are used in this project are CREATE, ALLTER and DROP.

Data Definition Language for table Customer
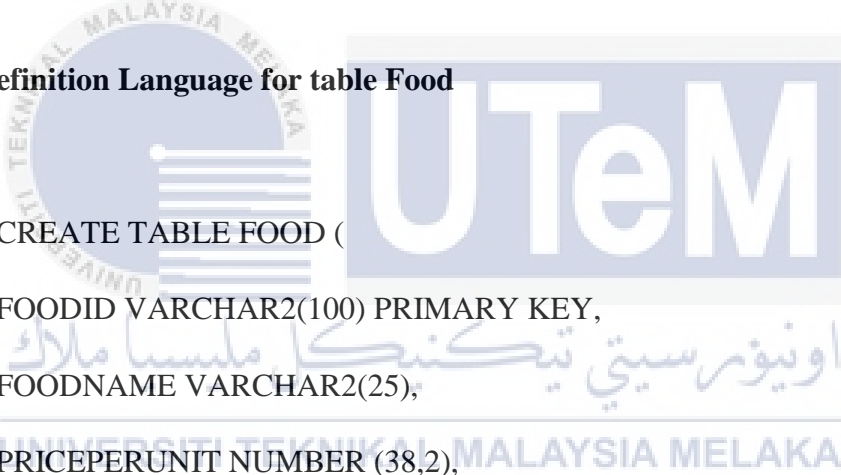
```
CREATE TABLE CUSTOMER (
CUSTOMERID VARCHAR2(100) PRIMARY KEY,
CUSTOMERNAME VARCHAR2(500),
CUSTOMERADDRESS VARCHAR2(100),
CUSTOMERPHONE VARCHAR2(15),
CUSTOMEREMAIL VARCHAR2(50),
PASSWORD VARCHAR2(10)
);
```

Data Definition Language for table Staff

```
CREATE TABLE STAFF (

STAFFID VARCHAR2(25) PRIMARY KEY,

STAFFNAME VARCHAR2(25),

STAFFIC VARCHAR2(10),

STAFFPHONE VARCHAR2 (15),

STAFFEMAIL VARCHAR2(50) );
```

Data Definition Language for table Food

```
CREATE TABLE FOOD (

FOODID VARCHAR2(100) PRIMARY KEY,

FOODNAME VARCHAR2(25),

PRICEPERUNIT NUMBER (38,2),

FOODIMAGE BLOB

);
```

Data Definition Language for table Order

```
CREATE TABLE ORDERS (

ORDERID VARCHAR2(100),

ORDERDATE DATE,

CUSTOMERID VARCHAR2(100),

STAFFID VARCHAR2(100),

CONSTRAINT FK_CUSTOMER FOREIGN KEY (CUSTOMERID)

REFERENCES CUSTOMER(CUSTOMERID),

CONSTRAINT FK_STAFF FOREIGN KEY (STAFFID)

REFERENCES STAFF(STAFFID)

);
```

Data Definition Language for table PackageMeu

```
CREATE TABLE PACKAGEMENU (

PACKAGEID VARCHAR2(100) PRIMARY KEY,

PACKAGENAME VARCHAR2(20),

PRICE NUMBER(4,2),

PACKAGEIMAGE BFILE

);
```
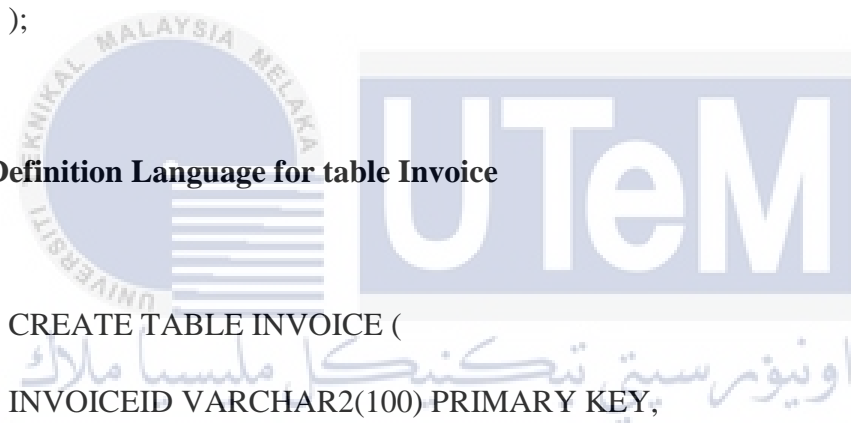
Data Definition Language for table PackageFood

```
CREATE TABE PACKAGEFOOD (

PACKAGEFOODID VARCHAR2(100) PRIMARY KEY,

FOODID VARCHAR2(100),

QUANTITYFOOD NUMBER (38),

CONSTRAINT FK_PACKAGEFOD FOREIGN KEY (FOODID)

REFERENCES FOOD(FOODID)

);
```

Data Definition Language for table Invoice
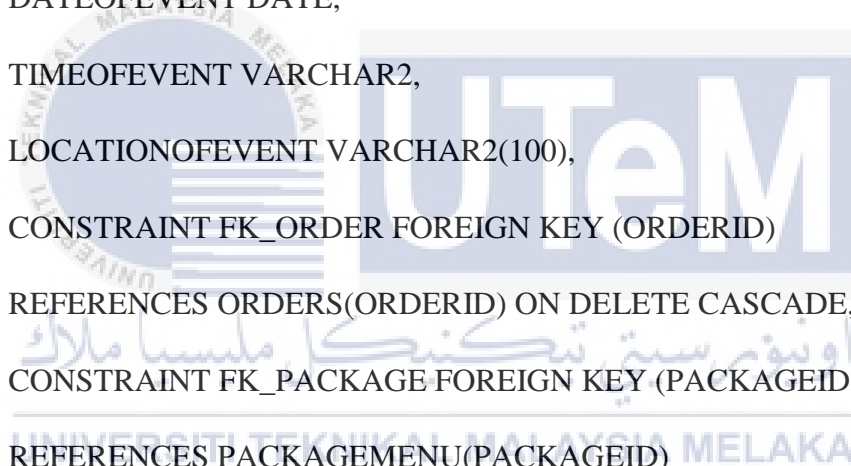
```
CREATE TABLE INVOICE (

INVOICEID VARCHAR2(100) PRIMARY KEY,

TOTALAMOUNT NUMBER(38,2),

DATEOFDELIVERY DATE,

ORDERID VARCHAR2(100),

CONSTRAINT FK_INVOICE FOREIGN KEY(ORDERID)

REFERENCES ORDERS(ORDERID)

);
```
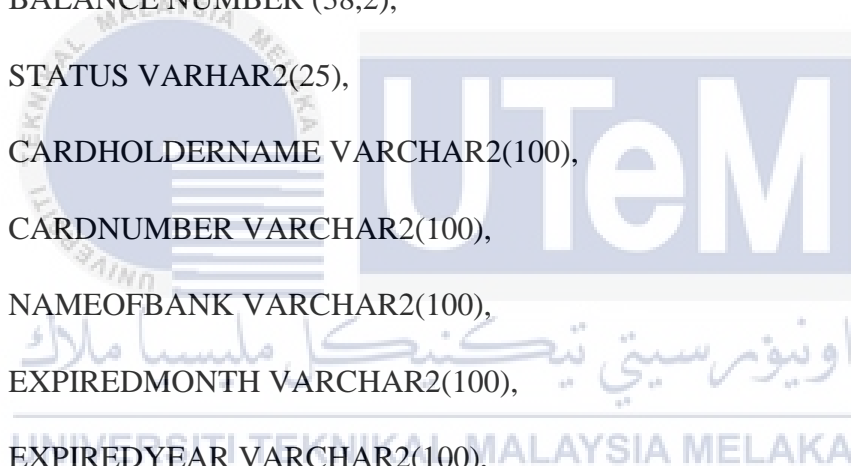
Data Definition Language for table OrderDetail

```
CREATE TABE ORDERDETAIL (

ORDERDETAILID VARCHAR2(100) PRIMARY KEY,

ORDERID VARHAR2(100),

PACKAGEID VARCHAR2(100),

QUANTITY VARCHAR2(50),

TOTALPRICE NUMBER (38,2),

DATEOFEVENT DATE,

TIMEOFEVENT VARCHAR2,

LOCATIONOFEVENT VARCHAR2(100),

CONSTRAINT FK_ORDER FOREIGN KEY (ORDERID)

REFERENCES ORDERS(ORDERID) ON DELETE CASCADE,

CONSTRAINT FK_PACKAGE FOREIGN KEY (PACKAGEID)

REFERENCES PACKAGEMENU(PACKAGEID)

);
```

Data definition Language for table Payment

```
CREATE TABLE PAYMENT (

PAYMENTID VARCHAR2(100) PRIMARY KEY,

INVOICEID VARCHAR2(100),

PAYMENTTYPE VARCHAR2(10),

PAYMENTDATE DATE,

PAYMENTAMOUNT NUMBER (38,2),

BALANCE NUMBER (38,2),

STATUS VARHAR2(25),

CARDHOLDERNAME VARCHAR2(100),

CARDNUMBER VARCHAR2(100),

NAMEOFBANK VARCHAR2(100),

EXPIREDMONTH VARCHAR2(100),

EXPIREDYEAR VARCHAR2(100),

CONSTRAINT FK_PAYMENT FOREIGN KEY (INVOICEID)

REFERENCES PAYMENT(PAYMENTID)

);
```
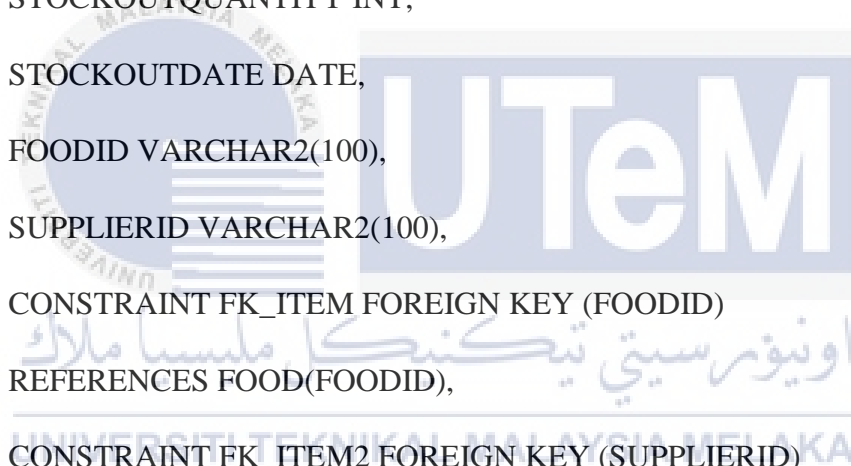
Data Definition Language for table Supplier

```
CREATE TABLE SUPPLIER (

SUPPLIERID VARCHAR2(100) PRIMARY KEY,

COMPANYNAME VARCHAR2(50),

ADDRESS VARCHAR2(50),

PHONENO VARCHAR2(20),

EMAIL VARCHAR2(2),

STAFFID VARCHAR2(100),

CONSTRAINT FK_SUPPIER FOREIGN KEY(STAFFID)

REFERENCES STAFF(STAFFID)

);
```

Data Definition Language for table Item

CREATE TABLE ITEM (

ITEMID VARCHAR2(100) PRIMARY KEY,

ITEMNAME VARCHAR2(25),

CURRENTQUANTITY INT,

STOCKINQUANTITY INT,

STOCKINDATE DATE,

STOCKOUTQUANTITY INT,

STOCKOUTDATE DATE,

FOODID VARCHAR2(100),

SUPPLIERID VARCHAR2(100),

CONSTRAINT FK_ITEM FOREIGN KEY (FOODID)

REFERENCES FOOD(FOODID),

CONSTRAINT FK_ITEM2 FOREIGN KEY (SUPPLIERID)

REFERENCES SUPPLIER(SUPPLIERID)

);

5.3.2 Implementation of Main Process in PHP

Stored Procedure in Oracle

This stored procedure is for joining the four table from the database

```
CREATE OR REPLACE PROCEDURE SHOWORDERCUSTOMER (
P_ORDERCUSTOMER OUT SYS_REFCURSOR)
IS
BEGIN
OPEN P_ORDERCUSTOMER FOR
SELECT
O.ORDERID,O.ORDERDATE,C.CUSTOMERNAME,P.PACKAGENAME,OD.D
ATEOFEVENT,OD.QUANTITY,
OD. TIMEOFEVENT, OD. LOCATIONEVENT
FROM PACKAGEMENU P
INNER JOIN ORDERDETAIL OD ON OD. PACKAGEID=P.PACKAGEID
INNER JOIN ORDERS O ON O. ORDERID= OD. ORDERID
INNER JOIN CUSTOMER C ON C. CUSTOMERID=O.CUSTOMERID
WHERE DATEOFEVENT> SYSDATE
ORDER BY ORDERID;
END SHOWORDERCUSTOMER;
```

Call the Stored Procedure in PHP

When the stored procedure is created in the database there is specific coding to call the procedure in the PHP language.

```
<?php
$conn = oci_connect('syafiqah', 'syafiqah26', '127.0.0.1/orcl');
```

```
$sql="begin showOrderCustomer(:data);end;";

$myData=oci_parse($conn,$sql);
$curs=oci_new_cursor($conn);
oci_bind_by_name($myData,':data',$curs,-1,OCI_B_CURSOR);
echo "<h1 align=center> Rekod Order</h1>";
echo "<br/>";
echo "<table align=center width=1000 height=auto border=2 bgcolor=oldlace>
<tr>
<th>Order Id </th>
<th>Tarikh Order</th>
<th>Nama Pelanggan</th>
<th>Jenis Pakej</th>
<th>Tarikh Majlis</th>
<th>Masa Majlis</th>
<th>Tempat Majlis</th>
</tr>";
If (oci_execute($myData)){
oci_execute($curs);
}
while($record = oci_fetch_array($curs,OCI_BOTH)){
echo "<form action=orderRecord.php method=post>";
echo "<tr>";
echo "<td align=center>" . $record['ORDERID'] . " </td>";
echo "<td align=center>" . $record['ORDERDATE'] . " </td>";
echo "<td align=center>" . $record['CUSTOMERNAME'] . " </td>";
echo "<td align=center>" . $record['PACKAGENAME']. " </td>";
echo "<td align=center>" . $record['QUANTITY']. " </td>";
echo "<td align=center>" . $record['DATEOFEVENT']. " </td>";
echo "<td align=center>" . $record['TIMEOFEVENT']. " </td>";
echo "<td align=center>" . $record['LOCATIONEVENT']. " </td>";
echo "</tr>";
```

```
echo "</form>";
}
echo "</table>";
echo "</table>";
?>
```

Trigger in Oracle

```
CREATE OR REPLACE TRIGGER UPDATECURRENTSTOCK
BEFORE UPDATE ON ITEM
FOR EACH ROW

BEGIN

IF :NEW.STOCKINQUANTITY != :OLD.STOCKINQUANTITY THEN
:NEW.CURRENTQUANTITY:=
:NEW.CURRENTQUANTITY +:NEW.STOCKINQUANTITY;
:NEW.STOCKOUTQUANTITY:=:NEW.STOCKOUTQUANTITY;
:NEW.STOCKINDATE:=SYSDATE;
:NEW.STOCKOUTDATE:=:OLD.STOCKOUTDATE;
ELSIF :NEW.STOCKOUTQUANTITY != :OLD.STOCKOUTQUANTITY THEN
:NEW.CURRENTQUANTITY:=
:NEW.CURRENTQUANTITY- :NEW.STOCKOUTQUANTITY;
:NEW.STOCKOUTDATE:=SYSDATE;
:NEW.STOCKINDATE:=:OLD.STOCKINDATE;
END IF;
END;
```

5.3.3 Data Loading Process.

In this project, data will be loaded by using Data Manipulation Language (DML). The data will be inserted by customer and staff of the RMR Mobile Café using the system that has been developed.

Example of DML for Inserting Orderdetail Table

Insert into SYAFIQAH.ORDERDETAIL (ORDERDETAILID, PACKAGEID, QUANTITY, TOTALPRICE, DATEOFEVENT, TIMEOFEVENT, ORDERID, LOCATIONEVENT) values ('OD011','PM002','100',750, to_date('27/07/2017','DD/MM/RRRR'),'21:00','O201','No 48, Bukit Gantang,Changkat Jering, Taiping, Perak');

Insert into SYAFIQAH.ORDERDETAIL (ORDERDETAILID, PACKAGEID, QUANTITY, TOTALPRICE, DATEOFEVENT, TIMEOFEVENT, ORDERID, LOCATIONEVENT) values ('OD013','PM005','50',625, to_date('19/07/2017','DD/MM/RRRR'),'18:00','O203','SMK Taman Tasik, Taiping, Perak');

Insert into SYAFIQAH.ORDERDETAIL (ORDERDETAILID, PACKAGEID, QUANTITY, TOTALPRICE, DATEOFEVENT, TIMEOFEVENT, ORDERID, LOCATIONEVENT) values ('OD062','PM004','70',126, to_date('27/07/2017','DD/MM/RRRR'),'09:00','O242','Hotel Flamitton, Taiping, Perak');

5.4 Conclusion

In conclusion, this chapter is about the actual coding that should be implement by the developer to develop the system. In this phase, it is important for developers to be open-minded and flexible to any changes that may face during the development. Normally, implementation is the longest phase of the SDLC. After the implementation, different type of testing will be performed including integration and system testing. User acceptance testing is the last part of testing and will be test by the end user to ensure that this system fulfill their requirement or not. This testing phase will be explained more detail in the next chapter.

CHAPTER VI

TESTING

6.1. Introduction

Testing is the phase of software development lifecycle (SDLC) where developer focuses on the investigation and discovery the system. During this phase, developers will find out whether their code and programming are run smoothly according to the customer requirement that has been collected during the analysis phase. Testing is an important thing in system development. This is because without testing it is not possible to implement an effective system. If the system is ineffective, it will affect the quality of the system (Jindal, 2016). Therefore, testing is essential to improve the quality of the system as well as to the success of the overall effort. Testing is performed by the developers and end user of this system but it can ensure the system performance by predicting the system behavior. According to Jindal (2016), verification and validation are basic purpose of testing to find various errors and problems to get them fixed before delivering it to the customer.

6.2 Testing Plan

Testing plan is a document of the strategy that will be used to verify and validate that system meets their correct specification and the requirement needed. Testing plan should be design by the developer before starting the testing on the system.

6.2.1 Test Organization

To perform this testing, individuals who will test this system should be identified in advance.to ensure that the test is carried out right on time and systematically. In this project, the individual that involved the testing is:

1. Customer of RMR Mobile Café.

We ask the local people as the customer of RMR Mobile Cafe to test the system on the ordering section.

2. Staff of RMR Mobile Café.

They will test the administration part which is managing the order that have been made by the customer. They also test for the inventory part.

3. Developer of the RMR Mobile Café Ordering and Inventory System.

Developer will test overall of the system.

6.2.2 Test Environment

Before the testing begins, an explanation about the system will be given to the tester for their understanding. The location of the testing was held in around Taiping, Perak and Melaka.

Hardware that involve in this testing are:

1. Computer.
2. Mouse.

Type of the operating system that will be used in this testing:

1. Windows 10.

Setup of Test Server

1. Apache

Apache is web server that will run the PHP language.

Setup of Database Management System

1. Oracle 11g

Oracle 11g has been successfully installed for store the data.

Software that need to be test:

1. RMR Mobile Café Ordering and Inventory System.

This system is already being installed in the computer that involves in this testing.

6.2.3 Test Schedule

A test schedule is very important in the test planning and need to schedule the activities very carefully. This is because in the test schedule it contains a date for the completion

and delivery of software items to testing. The test schedule need to show the testing activities with estimated date and revise as necessary during iteration and stage level planning. So that the testing will be carried out systematically and well organized. There are four stages in the testing, that is unit testing, integration testing, system testing and acceptance testing.

Table 6.2 shows the test schedule for RMRMCOAIS that includes the task, description and the duration of the task.

Table 6.1 Test Schedule for RMRMCOAIS

Module / Component	Test / Strategy	Duration / Cycle	Start Date	End Date.
Registration	Unit, Integration, System, Acceptance	2 days	24/07/2017	25/07/2017
Login	Unit, Integration, System, Acceptance	2 days	24/07/2017	25/07/2017
Ordering	Unit, Integration, System, Acceptance	3 days	26/07/2017	28/07/2017
Update quantity order	Unit, Integration, System, Acceptance	2 days	27/07/2017	28/07/2017
Payment	Unit, Integration, System, Acceptance	2 days	29/07/2017	29/07/2017
Update Inventory form	Unit, Integration, System, Acceptance	3 days	30/07/2017	01/08/2017
Monthly Report	Unit, Integration, System, Acceptance	3 days	02/08/2017	04/08/2017

6.3 Test Strategy

In this project top-down testing approach will be used. Top-down testing is conducted from the main module to the sub module. This mean, high levels of a system are tested before testing the detailed of the components. By using this strategy, errors may be detected at an early stage in this testing phase. When the errors are detected earlier, its means that extensive re-design and re-implementation may be avoided.

For the classes of the test, this project will use black box testing. This is because the tester just only test of the functionality of the system without looking at the internal code structure, implementation details and knowledge of the internal paths of the software.

6.3.1 Classes of Test.

Software testing is the process of evaluation a software to detect the differences between given input and expected result. There three classes of test in this project which is functionality test, security test and stress test.

1. Functionality test.

Functionality test is a class of test which verifies each function of the software application operates in conformance with the requirement that has been collected in analysis phase. Usually this classes are involved in black box testing. Every functionality of the system will be tested by providing appropriate input, verify the output and the actual result will be compared with the expected result.

2. Security test.

Security test is a software testing which ensures that system and applications in an organization are easily lost the data or not. This testing is about finding all the possible data loss and weaknesses of the system which might the information are loss to other hands.

3. Stress test.

Stress test is used to test the stability and reliability of the system. The robustness and error handling under extremely heavy load condition will be determined. This testing is done to make sure that the system would not crash under crunch situation.

6.4 Test Design

Test design is the first step to perform a testing toward system. It is involve creating and writing test suites for software testing. Test design also is a set of inputs for given software that will provide a set of expected result. The purpose of test design is to ensure that all requirements are met through a series of test procedures, increasing the probability of the system that has developed. There is two major of test design which is test description and test data.

6.4.1 Test Description

Test description is a document which consist of test case identification, test requirement precondition, step procedure, test data and expected result for each module. The software tester will do the testing according to the test case that has been provided. The test case of this system is shown in Table 6.1.

6.4.2 Test Data

Test data is an input that has been inserted by the software tester in order to test the system. The test data is used to confirm the expected result. Table 6.1 will show the test data.

Table 6.2 Test Case for Ordering Section.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Registration	TC01-1	Validate that the customer can register to the system.	Access the RMR Mobile Café Ordering and Inventory System	1.Insert data in the registration form. 2.Press button 'Cipta Akaun'	Fill in the registration form	The data customer has been stored and alert message of the successfully will be pop out
	TC01-2	Validate the system cannot stored null value in the database.	Access the RMR Mobile Café Ordering and Inventory System	1.Insert data in the registration form. 2.Press button 'Cipta Akaun'	Null Values	The form was not stored in the database and pop out of the failure will be show.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Registration	TC02-1	Validate that IC number of the customer must be correct which is key in 12 number.	Access the RMR Mobile Café Ordering and Inventory System	1.Insert complete IC number	Ic Number: 951026085642 (complete 12 number)	Data registered in table customer.
	TC02-2	Validate that system cannot been registered if the number of field is less than 12	Access the RMR Mobile Café Ordering and Inventory System	1.Insert incomplete IC number.	IC number: 95102608	Data not registered in table customer and pop out will show "Sila Masukkan No kad pengenalan yang betul"
	TC02-3	Validate that system cannot been registered	Access the RMR Mobile Café Ordering and Inventory System	1.Insert IC number that contain symbol.	IC number: 951026-08-5642	The data will not be registered in table customer.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
		if the IC number has symbol.				
Login	TC03-1	Validate that user can login with registered IC and password.	Registered before login.	1.Insert registered IC and correct password. 2. Click 'Sign In'	IC number: 951026085664 Password: syahirah	Customer can access the order page and pop out will show "Anda telah Berjaya Log Masuk!"
	TC03-2	Validate that user cannot login if IC and password is not registered and incorrect.	Access the RMR Mobile Café Ordering and Inventory System	1.Insert unregistered IC and password. 2. Click 'Sign In'	IC number: 850225086646 Password: najibah	Customer cannot access the order page and pop out will show "Nama atau kata laluan anda salah!Sila masukkan nama atau kata laluan yang sah!"

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Login	TC03-3	Validate that user cannot login if the IC is incorrect but password is correct.	Registered before login.	1.Insert incorrect IC and correct password. 2. Click 'Sign In'	IC number: 951026085662 Password: syahirah	Customer cannot access the order page and pop out will show "Nama atau kata laluan anda salah!Sila masukkan nama atau kata laluan yang sah!"
	TC03-4	Validate that user cannot login if the IC is correct but password is incorrect.	Registered before login.	1.Insert correct IC and incorrect password. 2. Click 'Sign In'	IC number: 951026085664 Password: syahirahhh	Customer cannot access the order page and pop out will show "Nama atau kata laluan anda salah!Sila masukkan nama

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
						atau kata laluan yang sah!"
Login	TC03-5	Validate that user cannot login if the IC and password is Null	Registered before login.	1.Insert Null data. 2. Click 'Sign In'	IC number: NULL Password: NULL	Customer cannot access the order page.
	TC03-6	Validate that user cannot login if the password is Null	Registered before login.	1.Insert Null data for password. 2. Click 'Sign In'	IC number: 951026085664 Password: NULL	Customer cannot access the order page.
	TC03-7	Validate that user cannot login if the IC Null	Registered before login.	1.Insert Null data for IC. 2. Click 'Sign In'	IC number: NULL Password: syahirah	Customer cannot access the order page.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Order	TC04-1	Validate that customer can order more than 50 quantities per set.	Login	1.Insert quantity of set. 2.Click 'Order'.	Quantity: >50	Order will submit to the database.
	TC04-2	Validate that customer cannot order less than 50 quantities per set.	Login	1.Insert quantity of set. 2.Click 'Order'.	Quantity: <50	Order not submit to database and pop out will show 'Minimum kuantiti adalah 50 '
	TC04-3	Validate that customer cannot order less than zero quantities per set.	Login	1.Insert quantity of set. 2.Click 'Order'.	Quantity: < 0	Order not submit to database and pop out will show 'Minimum kuantiti adalah 50 '

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Order	TC04-3	Validate that customer cannot insert null value in quantity.	Login	1.Insert null value. 2.Click 'Order'.	Quantity: NULL	Order not submits to database.
	TC05-1	Validate that the total price for the set is correct base on quantity inserted.	Key in quantity for the set.	1.Insert quantity	Quantity: 50 for Set A	Total price will show RM 250
	TC06-1	Validate that customer can order more than 1 set.	Order one set of the package.	1.Order for another set 2.Click 'Checkout'	Choose other set: Set C	Checkout page will show all the set that have been choose.
	TC07-1	Validate that customer can update the	Click 'Order' button on order page.	1.Key in the quantity of the set that want to update.	Quantity: from 50 to 52	Data in table orderdetail will be updated.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
		quantity of the set.		2.Click 'Kemaskini'		
Detail Order	TC08-1	Validate that customer can delete set that has been ordered.	Click 'Checkout' button on order page.	1.Click 'Checkout' button on order page 2.Click 'Buang' at the set that want to delete.	Delete Set C	Data will be deleted in table orderdetail.
	TC09-1	Validate that customer can select available date which is white color for their date of event.	Click 'Checkout' button on order page.	1.Click the white color in the date picker. 2.Fill time of event. 3.Address of event. 4.Click 'Checkout' button	Select available date.	Data will be stored in table orderdetail.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Detail Order	TC09-2	Validate that customer cannot select unavailable date which is red color for their date of event.	Click 'Checkout' button on order page.	1.Click the red color in the date picker. 2.Fill time of event. 3.Address of event. 4.Click 'Checkout' button	Select unavailable date.	Date will not show up in the field of date of event and data is not inserted in database.
	TC10-1	Validate customer can fill in the order detail form.	Click 'Order' button on order page.	1.Fill in the order detail form. 2.Click 'Checkout' button	Date of event: 22/10/2017 Time of event: 9:00:PM Location: Kuala Kangsar.	Data will be inserted in table orderdetail.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Detail Order	TC10-2	Validate customer cannot insert NULL value in the order detail form	Click 'Checkout' button on order page.	1.Fill null value in the order detail form. 2.Click 'Checkout' button	Date of event: NULL Time of event: NULL Location: NULL	Data will not insert in table orderdetail and pop out will show.
	TC10-3	Validate customer cannot insert NULL value in date of event.	Click 'Checkout' button on order page.	1.Fill null value in the order date of event. 2.Click 'Checkout' button	Date of event: NULL Time of event: 10:00AM Location: Kuala Kangsar	Data will not insert in table orderdetail and pop out will show.
	TC10-4	Validate customer cannot insert NULL value in time of event.	Click 'Checkout' button on order page.	1.Fill null value in the time of event. 2.Click 'Checkout' button	Date of event: 22/10/2017 Time of event: NULL Location: Kuala Kangsar	Data will not insert in table orderdetail and pop out will show.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Detail Order	TC10-5	Validate customer cannot insert NULL value in location of event.	Click 'Checkout' button on order page.	1.Fill null value in the location of event. 2.Click 'Checkout' button	Date of event: 22/10/2017 Time of event: 10:00AM Location: NULL	Data will not insert in table orderdetail and pop out will show.
Payment	TC11-1	Validate that customer can choose credit card as type of payment method.	Make order	1.Click 'Bayar' button in Invoice page. 2.Choose type of payment. 3.Click 'Bayar' button.	Type of payment: Kad Kredit (default)	Data will be inserted in table payment and will go to credit card detail.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Payment	TC12-2	Validate that customer can choose online banking as type of payment method.	Make order	1.Click 'Bayar' button in Invoice page. 2.Choose type of payment. 3.Click 'Bayar' button.	Type of payment: Online Banking	Data will be inserted in table payment and will go to online banking card.
	TC13-1	Validate that customer can insert the credit card detail	Choose type of payment.	1.Key in cardholder name 2.Key in card number 3.Select type of bank 4.Select expired card 5.Clik 'Kemaskini'	Cardholder name: Baharim Mat Noor Card number: 4567 8922 5361 7486 Name of bank: Bank Islam Expired date: October 2028	Data will be insert in tabe payment and pop out will show "Data Telah Berjaya Disimpan! Terima kasih kerana Memilih RMR Mobile

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
						Cafe sebagai pilihan anda." Customer will be link to the finish page.
Payment	TC13-2	Validate that customer cannot insert null value in credit card detail	Choose type of payment.	1.Key in cardholder name 2.Key in card number 3.Select type of bank 4.Select expired card 5.Clik 'Kemaskini'	Cardholder name: NULL Card number: NULL Name of bank: NULL Expired date:	Data will not insert in table payment.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Payment	TC13-3	Validate that customer cannot insert null value in cardholder name	Choose type of payment.	1.Key in cardholder name 2.Key in card number 3.Select type of bank 4.Select expired card 5.Clik 'Kemaskini'	Cardholder name: NULL Card number: 4567 8922 5361 7486 Name of bank: Bank Islam Expired date: October 2028	Data will not insert in table payment.
	TC13-4	Validate that customer cannot insert null value in card number	Choose type of payment.	1.Key in cardholder name 2.Key in card number 3.Select type of bank 4.Select expired card	Cardholder name: Baharim Mat Noor Card number: NULL Name of bank: Bank Islam Expired date: October 2028	Data will not insert in table payment.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
				5.Clik 'Kemaskini'		
Payment	TC13-5	Validate that customer cannot insert null value in name of bank.	Choose type of payment.	1.Key in cardholder name 2.Key in card number 3.Select type of bank 4.Select expired card 5.Clik 'Kemaskini'	Cardholder name: Baharim Mat Noor Card number: 4567 8922 5361 7486 Name of bank: NULL Expired date: October 2028	Data will not insert in table payment.
	TC13-6	Validate that customer cannot insert null value in expired date	Choose type of payment.	1.Key in cardholder name 2.Key in card number 3.Select type of bank	Cardholder name: Baharim Mat Noor Card number: 4567 8922 5361 7486 Name of bank: Bank Islam	Data will not insert in table payment.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
				4.Select expired card 5.Clik 'Kemaskini'	Expired date: NULL	
Payment	TC14-1	Validate that customer ca choose type of online banking.	Choose type of payment.	1.Choose type of online banking 2.Click 'Kemaskini'	Type of online banking: Maybank2u.com	Data will insert in table payment and will link to the online banking platform.
	TC14-2	Validate that Bank Islam is default value if the customer not choose type of online banking.	Choose type of payment.	1.Choose type of online banking	Type of online banking: Bank Islam	Data will insert in table payment and will link to the online banking platform.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Payment	TC15-1	Validate that customer must insert 16 digit of card number.	Choose type of payment.	1.Insert cardholder name. 2.Inset card number. 3.Insert name of bank. 4.Insert expired card. 5.Click 'Kemaskini' button	Card number: 456789225361 7486	Data will insert into payment table.
	TC15-2	Validate that customer cannot insert less than 16 digit of card number.	Choose type of payment.	1.Insert cardholder name. 2.Inset card number. 3.Insert name of bank. 4.Insert expired card.	Card number: 456789225361	Data will not insert into payment table and pop out will show "Sila Masukkan No kad kredit yang betul".

				5.Click 'Kemaskini' button		
Module	**Test Case Id**	**Test Requirement**	**Pre-Condition**	**Step/test procedure**	**Test Data**	**Expected Result**
Payment	TC15-3	Validate that customer cannot insert more than 16 digit of card number.	Choose type of payment.	1.Insert cardholder name. 2.Inset card number. 3.Insert name of bank. 4.Insert expired card. 5.Click 'Kemaskini' button	Card number: 456789225361 7486 45	System does not allow customer to insert more than 16 digits and data will not insert into payment table.
Log out	TC16-1	Validate that when user click 'Keluar' it will link to login page.	Make payment	1.Click 'Keluar' button.		Customer will log out and link to login page.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Log Out	TC16-2	Validate that when user click 'Order Lagi' it will link to home page.	Make payment.	1.Click 'Order Lagi' button.		Customer will link to home page to make another order.

Table 6.3 Test Case for Administration Section

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Registration	TC16-1	Validate that the staff can register to the system.	Access the RMR Mobile Café Ordering and Inventory System	1.Insert data in the registration form. 2.Press button 'Daftar'	Staff name: Aqilah Ic No: 990307048942 Phone Number: 0125647835 Email: aqilah@yahoo.com	The data of staff has been stored and alert message of the successfully will be pop out

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
					Password: Aqilah	
Registration	TC16-2	Validate the system cannot stored null value in the database.	Access the RMR Mobile Café Ordering and Inventory System	1.Insert data in the registration form. 2.Press button 'Cipta Akaun'	Staff name: NULL Ic No: NULL Phone Number: NULL Email: NULL Password: NULL	The form was not stored in the database and pop out of the failure will be show.
Login	TC17-1	Validate that staff can login with registered name and password.	Registered before login.	1.Insert registered name and correct password.	Username: Aqilah Password: aqilah	Staff can access the administration page and pop out will show "Anda

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
						telah Berjaya Log Masuk!"
Login	TC17-2	Validate that staff cannot login with unregister name and password.	Registered before login.	1.Insert unregister name and correct password.	Username: Mawar Password: Mawar123	Staff cannot access the administration page and pop out will show "Nama atau kata laluan anda salah!Sila masukkan nama atau kata laluan yang sah!"
	TC17-3	Validate that staff cannot login with Null name and password.	Registered before login.	1.Insert null value for name and password.	Username: NULL Password: NULL	Staff cannot access the administration page.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Login	TC17-4	Validate that staff cannot login with Null name	Registered before login.	1.Insert null value for name and password.	Username: NULL Password: Mawar123	Staff cannot access the administration page.
	TC17-5	Validate that staff cannot login with Null name.	Registered before login.	1.Insert null value for name and password.	Username: Mawar Password: NULL	Staff cannot access the administration page.
View Staff Record	TC18-1	Validate that staff record can be view by the staff.	Login to the system.	1.Click 'Rekod Staff' button		Table of staff data will display.
Update Staff Record	TC19-1	Validate that staff can update the staff information	Login to the system.	1.Insert new value that want to update.	Staff name: Aqilah Ic No: 990307048941 Phone Number: 013467589562	Data in table staff will be updated and the pop out will show "Rekod anda telah dikemaskini"

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
					Email: Aqilah99@yahoo.com	
Update Staff Record	TC20-1	Validate that data of the staff can be delete.	Login to the system.	1.Click 'Padam'	Delete staff name Mirwarna	Data in table staff will be deleted and pop out will show "Rekod telah dipadam"
Food Record	TC21-1	Validate that staff can insert the food data.	Login to the system.	1.Fill in register food form.	Food Name: Roti John Price per unit: 3.00 Food Image: roti john .jpeg	Data will be inserted in table food.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Food Record	TC21-2	Validate that staff cannot insert null value of food data.	Login to the system.	1.Fill in registration food form with null value	Food Name: NULL Price per unit: NULL Food Image: NULL	Data will not insert in table food.
	TC22-1	Validate that staff can insert the package data.	Login to the system.	1.Fill in package data	Package Name: Set A Package Price: 5.00 Image: Set A.png	Data will insert in table packagemenu
	TC22-2	Validate that staff cannot insert null value of package data.	Login to the system.	1.Fill in package data	Package Name: NULL Package Price: NULL Image: NULL	Data will not insert in table packagemenu.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Food Record	TC23-1	Validate that staff can insert the detail of package data.	Login to the system.	1.Fill in package detail form.	Package Name: Set A Food: Chicken Nugget Quantity: 5	Data will insert in table packagemenu.
	TC24-2	Validate that staff cannot insert null value for package detail	Login to the system.	1.Fill in package detail form.	Package Name: NULL Food: NULL Quantity: NULL	Data will not insert in table packagemenu.
	TC25-1	Validate that system display package record	Login to the system.	1.Click 'Rekod Pakej'		Table of package record will display.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Update Food Record	TC26-1	Validate that staff can update package record.	Login to the system.	1.Update the package record. 2.Click 'Kemaskini'	Quantity: 4 Price: 6.00	Record of table packagemenu will be updated
Order Record	TC27-1	Validate that staff can update order.	Login to the system.	1.Update the staff incharge. 2.Click 'Kemaskini'	Staff Incharge: Didi	Record in table order will be updated.
	TC27-1	Validate that staff can delete the order.	Login to the system.	1.Click 'Delete'	Delete ordered: O219	Record in table order will be deleted

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Supplier Record	TC28-1	Validate that staff can register supplier data.	Login to the system.	1.Fill the supplier registration form.	Supplier name: Syarikat Ayam Mahza Address: Bukit Gantang,Taiping Perak Phone number: 05-8551311 Email: ayammahza@gmail.com Staff Incharge: Didi	Record will be inserted in table supplier.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Supplier Record	TC28-2	Validate that staff cannot insert null value for register supplier data.	Login to the system.	1.Fill the supplier registration form.	Supplier name: NULL Address: NULL Phone number: NULL Email: NULL Staff Incharge: NULL	Record will not be inserted in table supplier.
Inventory	TC29-1	Validate that staff can insert item.	Login to the system.	1.Fill the item stock form.	Name of Item: Ayam Quantity stock in: 100 Date of Stock in: 24-JUL-17 Food: Fried Chicken	Data inserted in table item.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
					Supplier: Syarikat Ayam Mahza	
Inventory	TC30-2	Validate that staff cannot insert null value of item.	Login to the system.	1.Fill the item stock form.	Name of Item: NULL Quantity stock in: NULL Date of Stock in: NULL Food: NULL Supplier: NULL	Data not inserted in table item.
	TC30-1	Validate that staff can update the quantity of stock in	Login to the system.	Update the quantity of stock in	Stock in quantity: 30	1.Data will update in table item. 2.Stock in date will change to the current date.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
						3.Current quantity will change.
Inventory	TC31-1	Validate that staff can update the quantity of stock out.	Login to the system.	Update the quantity of stock out	Stock out quantity: 50	1.Data will update in table item. 2.Stock out date will change to the current date. 3.Current quantity will change.
	TC32-1	Validate that staff can delete the stock in and stock out data	Login to the system.	Delete the stock data.	Delete item: Ayam kecil	Data in table item will be deleted.
	TC33-1	Validate that staff can update the payment status.	Login to the system.	Update the payment status	Payment: Complete.	Data in table payment will be update.

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
						Status payment will change to Complete.
Report	TC34-1	Validate that staff can view report.	Login to the system.			Report will be show.

Table 6.4 Test Case for GUI and Usability Section

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Home Menu	TC35-1	Validate that when user click menu 'Home' will link to dashboard.	Staff login to administration page.	1.Click 'Home' menu	Menu: Home button	User will be linked to homeAdmin.php page
Staff Menu	TC36-1	Validate that when user click menu 'Staff' will link to staff page	Staff login to administration page.	1.Click 'Staff' menu	Menu: Home button	User will be linked to staff.php page
	TC37-1	Validate that when user click 'Daftar Staff' button it will link to staff registration page	Staff choose 'Staff' menu.	1.Click 'Staff' menu. 2.Click 'Daftar Staff' button.	Button: Daftar Staff	User will be linked to staffRegister.php page

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Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Staff Menu	TC37-2	Validate that when user click 'Rekod Staff' button it will link to staff record page	Staff choose 'Staff' menu.	1.Click 'Staff' menu. 2.Click 'Rekod Staff' button.	Button: Rekod Staff	User will be linked to staffrecord.php page
	TC37-3	Validate that when user click 'Kemaskini Staff' button it will link to update page	Staff choose 'Staff' menu.	1.Click 'Staff' menu. 2.Click 'Kemaskini Staff' button.	Button: Kemaskini Staff	User will be linked to staffupdate.php page
Menu food Menu	TC38-1	Validate that when user click menu 'Menu' will link to menu page	Staff login to administration page.	1.Click 'Menu' menu.	Menu: Menu button	User will be linked to menu.php page

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Menu food Menu	TC39-1	Validate that when user click 'Data Makanan' button it will link to food insert page	Staff choose 'Menu' menu	1.Click 'Menu' menu. 2.Click 'Data Makanan' button.	Button: Data Makanan button	User will be linked to foodInsert.php
	TC39-2	Validate that when user click 'Menu Pakej' button it will link to package insert page	Staff choose 'Menu' menu	1.Click 'Menu' menu. 2.Click 'Menu Pakej' button.	Button: Menu Pakej button	User will be linked to packageInsert.php
	TC39-3	Validate that when user click 'Rekod Pakej' button it will link to package record page	Staff choose 'Menu' menu	1.Click 'Menu' menu. 2.Click 'Data Makanan' button.	Button: Rekod Pakej button	User will be linked to packageRecord.php

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Menu food Menu	TC39-4	Validate that when user click 'Update Pakej button it will link to update package page	Staff choose 'Menu' menu	1.Click 'Menu' menu. 2.Click 'Update Package' button.	Button: Update Pakej button	User will be linked to packageUpdate.php p
Order Menu	TC40-1	Validate that when user click menu 'Order' will link to order page	Staff login to administration page.	1.Click 'Order' menu.	Menu: Order button	User will be linked to order.php page
	TC41-1	Validate that when user click 'Rekod Order' button it will	Staff choose 'Order' menu	1.Click 'Order' menu. 2.Click 'Rekod Order' button.	Button: Rekod Order button	User will be linked to orderRecord.php

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
		link to record order page				
Order Menu	TC41-2	Validate that when user click 'Kemaskini Order' button it will link to update order page	Staff choose 'Order' menu	1.Click 'Order' menu. 2.Click 'Kemaskini Order' button.	Button: Kemaskini Order button	User will be linked to orderUpdate.php
	TC41-3	Validate that when user click 'Carian Order' button it will link to search order page	Staff choose 'Order' menu	1.Click 'Order' menu. 2.Click 'Carian Order' button.	Button: Carian Order button	User will be linked to orderSearch.php

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Customer Menu	TC42-1	Validate that when user click menu 'Customer' will link to customer page	Staff login to administration page.	1.Click 'Customer' menu.	Menu: Customer button	User will be linked to customer.php page
	TC43-1	Validate that when user click 'Rekod Pelanggan' button it will link to search order page	Staff choose 'Customer' menu	1.Click 'Customer' menu. 2.Click 'Rekod Pelanggan' button.	Button: Rekod Pelanggan button	User will be linked to customerRecord.php

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Supplier Menu	TC44-1	Validate that when user click menu 'Supplier' will link to supplier page	Staff login to administration page.	1.Click 'Supplier' menu.	Menu: Supplier button	User will be linked to supplier.php page
	TC45-1	Validate that when user click 'Tambah Data Pembekal' button it will link to supplier registration page	Staff choose 'Supplier' menu	1.Click 'Supplier' menu. 2.Click 'Tambah Data Pembekal' button.	Button: Tambah Data Pembekal button	User will be linked to supplierRegister.php

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Supplier Menu	TC45-2	Validate that when user click Data Pembekal' button it will link to supplier record page	Staff choose 'Supplier' menu	1.Click 'Supplier' menu. 2.Click 'Data Pembekal' button.	Button: Data Pembekal button	User will be linked to supplierRecord.php p
Stock Menu	TC46-1	Validate that when user click menu 'Stock' will link to stock page	Staff login to administration page.	1.Click 'Stock' menu.	Menu: Stock button	User will be linked to stock.php page
	TC47-1	Validate that when user click 'Tambah Stock' button it will link to stock insert page	Staff choose 'Stock' menu	1.Click 'Stock' menu. 2.Click 'Tambah Stock' button.	Button: Tambah Stock button	User will be linked to stockInsert.php

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Stock Menu	TC47-2	Validate that when user click 'Kemaskini Stock' button it will link to update stock page	Staff choose 'Stock' menu	1.Click 'Stock' menu. 2.Click 'Kemaskini Stock' button.	Button: Kemaskini Stock button	User will be linked to stockUpdate.php
	TC47-3	Validate that when user click 'Rekod Stock' button it will link to stock history page.	Staff choose 'Stock' menu	1.Click 'Stock' menu. 2.Click 'Rekod Stock' button.	Button: Rekod Stock button	User will be linked to stockHistory.php
Sales Menu	TC48-1	Validate that when user click menu 'Sales' will link to sales page	Staff login to administration page.	1.Click 'Sales' menu.	Menu: Sales button	User will be linked to report3.php page

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Sales Menu	TC49-1	Validate that when user click 'Report Keseluruhan' button it will link to report sales.	Staff choose 'Sales' menu	1.Click 'Sales' menu. 2.Click 'Report Keseluruhan' button.	Button: Report Keseluruhan button	User will be linked to mainreport.php
	TC49-2	Validate that when user click 'Report Bulanan' button it will link to monthly report sales.	Staff choose 'Sales' menu	1.Click 'Sales' menu. 2.Click 'Report Bulanan' button.	Button: Report Bulanan button	User will be linked to monthlyreport.php

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Search Sales	TC50-1	Validate that when user click 'Cari' button it will show the report that has been search.	Staff choose 'Sales' menu	1.Click 'Sales' menu. 2.Click 'Report Bulanan' button. 3.Choose month. 4.Click 'Cari' button.	Bulan: December Button: Cari	Report for November will show.
	TC51-1	Validate that total sale for selected month is correct.	Staff search monthly report.	1.Click 'Sales' menu. 2.Click 'Report Bulanan' button. 3.Choose month. 4.Click 'Cari' button.	Bulan: December Button: Cari	Total quantity that sale for December is 55

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Payment Menu	TC52-1	Validate that when user click menu 'Payment' will link to sales page	Staff login to administration page.	1.Click 'Payment' menu.	Menu: Payment button	User will be linked to payment.php page
	TC53-1	Validate that when user click 'Rekod Pembayaran' button it will link to payment record page.	Staff choose 'Payment' menu	1.Click 'Payment' menu. 2.Click 'Rekod Pembayaran' button.	Button: Report Pembayaran button	User will be linked to paymentRecord.php p

Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
Payment Menu	TC53-2	Validate that when user click 'Kemaskini Rekod Pembayaran' button it will link to payment record page.	Staff choose 'Payment' menu	1.Click 'Payment' menu. 2.Click 'Kemaskini Rekod Pembayaran' button.	Button: Kemaskini Rekod Pembayaran button	User will be linked to paymentUpdate.php p
Report Menu	TC54-1	Validate that when user click menu 'Report' will link to report page	Staff login to administration page.	1.Click 'Report' menu.	Menu: Report button	User will be linked to report.php page

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Module	Test Case Id	Test Requirement	Pre-Condition	Step/test procedure	Test Data	Expected Result
HomePage Menu	TC55-2	Validate that when user click menu 'Online Order RMR Mobile Cafe' will link to RMR Mobile Café online order page	Staff login to administration page.	1.Click 'Online Order RMR Mobile Cafe' menu.	Menu: Online Order RMR Mobile Cafe button	User will be linked to home.php page

6.5 Test Results and Analysis

Table 6.5 Test Result for Ordering Section

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC01-1	Validate that the customer can register to the system.	Fill in the registration form	The data customer has been stored and alert message of the successfully will be pop out	Pass
TC01-2	Validate the system cannot stored null value in the database.	Null Values	The form was not stored in the database and pop out of the failure will be show.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC02-1	Validate that IC number of the customer must be correct which is key in 12 number.	Ic Number: 951026085642 (complete 12 number)	Data registered in table customer.	Pass
TC02-2	Validate that system cannot been registered if the number of field is less than 12	IC number: 95102608	Data not registered in table customer and pop out will show "Sila Masukkan No kad pengenalan yang betul"	Pass
TC02-3	Validate that system cannot been registered if the IC number has symbol.	IC number: 951026-08-5642	The data will not be registered in table customer.	Pass
TC03-1	Validate that user can login with registered IC and password.	IC number: 951026085664 Password: syahirah	Customer can access the order page and pop out will show "Anda telah Berjaya Log Masuk!"	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC03-2	Validate that user cannot login if IC and password is not registered and incorrect.	IC number: 850225086646 Password: najibah	Customer cannot access the order page and pop out will show "Nama atau kata laluan anda salah!Sila masukkan nama atau kata laluan yang sah!"	Pass
TC03-3	Validate that user cannot login if the IC is incorrect but password is correct.	IC number: 951026085662 Password: syahirah	Customer cannot access the order page and pop out will show "Nama atau kata laluan anda salah!Sila masukkan nama atau kata laluan yang sah!"	Pass
TC03-4	Validate that user cannot login if the IC is correct but password is incorrect.	IC number: 951026085664 Password: syahirahhh	Customer cannot access the order page and pop out will show "Nama atau kata laluan anda	Pass

			salah!Sila masukkan nama atau kata laluan yang sah!"	
Test Case Id	**Test Requirement**	**Test Data**	**Expected Result**	**Result**
TC03-5	Validate that user cannot login if the IC and password is Null	IC number: NULL Password: NULL	Customer cannot access the order page.	Pass
TC03-6	Validate that user cannot login if the password is Null	IC number: 951026085664 Password: NULL	Customer cannot access the order page.	Pass
TC03-7	Validate that user cannot login if the IC Null	IC number: NULL Password: syahirah	Customer cannot access the order page.	Pass
TC04-1	Validate that customer can order more than 50 quantities per set.	Quantity: >50	Order will submit to the database.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC04-2	Validate that customer cannot order less than 50 quantities per set.	Quantity: <50	Order not submit to database and pop out will show 'Minimum kuantiti adalah 50 '	Pass
TC04-3	Validate that customer cannot order less than zero quantities per set.	Quantity: < 0	Order not submit to database and pop out will show 'Minimum kuantiti adalah 50 '	Pass
TC04-3	Validate that customer cannot insert null value in quantity.	Quantity: NULL	Order not submits to database.	Pass
TC05-1	Validate that the total price for the set is correct base on quantity inserted.	Quantity: 50 for Set A	Total price will show RM 250	Pass
TC06-1	Validate that customer can order more than 1 set.	Choose other set: Set C	Checkout page will show all the set that have been choose.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC07-1	Validate that customer can update the quantity of the set.	Quantity: from 50 to 52	Data in table orderdetail will be updated.	Pass
TC08-1	Validate that customer can delete set that has been ordered.	Delete Set C	Data will be deleted in table orderdetail.	Pass
TC09-1	Validate that customer can select available date which is white color for their date of event.	Select available date.	Data will be stored in table orderdetail.	Pass
TC09-2	Validate that customer cannot select unavailable date which is red color for their date of event.	Select unavailable date.	Date will not show up in the field of date of event and data is not inserted in database.	Pass
TC10-1	Validate customer can fill in the order detail form.	Date of event: 22/10/2017 Time of event: 9:00:PM Location: Kuala Kangsar.	Data will be inserted in table orderdetail.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC10-2	Validate customer cannot insert NULL value in the order detail form	Date of event: NULL Time of event: NULL Location: NULL	Data will not insert in table orderdetail and pop out will show.	Pass
TC10-3	Validate customer cannot insert NULL value in date of event.	Date of event: NULL Time of event: 10:00AM Location: Kuala Kangsar	Data will not insert in table orderdetail and pop out will show.	Pass
TC10-4	Validate customer cannot insert NULL value in time of event.	Date of event: 22/10/2017 Time of event: NULL Location: Kuala Kangsar	Data will not insert in table orderdetail and pop out will show.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	
TC10-5	Validate customer cannot insert NULL value in location of event.	Date of event: 22/10/2017 Time of event: 10:00AM Location: NULL	Data will not insert in table orderdetail and pop out will show.	Pass
TC11-1	Validate that customer can choose credit card as type of payment method.	Type of payment: Kad Kredit (default)	Data will be inserted in table payment and will go to credit card detail.	Pass
TC12-2	Validate that customer can choose online banking as type of payment method.	Type of payment: Online Banking	Data will be inserted in table payment and will go to online banking card.	Pass
TC13-1	Validate that customer can insert the credit card detail	Cardholder name: Baharim Mat Noor Card number: 4567 8922 5361 7486 Name of bank: Bank Islam	Data will be insert in table payment and pop out will show "Data Telah Berjaya Disimpan! Terima kasih kerana Memilih RMR Mobile	Pass

		Expired date: October 2028	Cafe sebagai pilihan anda." Customer will be link to the finish page.	
Test Case Id	**Test Requirement**	**Test Data**	**Expected Result**	**Result**
TC13-2	Validate that customer cannot insert null value in credit card detail	Cardholder name: NULL Card number: NULL Name of bank: NULL Expired date:	Data will not insert in table payment.	Pass
TC13-3	Validate that customer cannot insert null value in cardholder name	Cardholder name: NULL Card number: 4567 8922 5361 7486 Name of bank: Bank Islam Expired date: October 2028	Data will not insert in table payment.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC13-4	Validate that customer cannot insert null value in card number	Cardholder name: Baharim Mat Noor Card number: NULL Name of bank: Bank Islam Expired date: October 2028	Data will not insert in table payment.	Pass
TC13-5	Validate that customer cannot insert null value in name of bank.	Cardholder name: Baharim Mat Noor Card number: 4567 8922 5361 7486 Name of bank: NULL Expired date: October 2028	Data will not insert in table payment.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC13-6	Validate that customer cannot insert null value in expired date	Cardholder name: Baharim Mat Noor Card number: 4567 8922 5361 7486 Name of bank: Bank Islam Expired date: NULL	Data will not insert in table payment.	Pass
TC14-1	Validate that customer ca choose type of online banking.	Type of online banking: Maybank2u.com	Data will insert in table payment and will link to the online banking platform.	Pass
TC14-2	Validate that Bank Islam is default value if the customer not choose type of online banking.	Type of online banking: Bank Islam	Data will insert in table payment and will link to the online banking platform.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC15-1	Validate that customer must insert 16 digit of card number.	Card number: 456789225361 7486	Data will insert into payment table.	Pass
TC15-2	Validate that customer cannot insert less than 16 digit of card number.	Card number: 456789225361	Data will not insert into payment table and pop out will show "Sila Masukkan No kad kredit yang betul".	Pass
TC15-3	Validate that customer cannot insert more than 16 digit of card number.	Card number: 456789225361 7486 45	System does not allow customer to insert more than 16 digits and data will not insert into payment table.	Pass
TC16-1	Validate that when user click 'Keluar' it will link to login page.		Customer will log out and link to login page.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC16-2	Validate that when user click 'Order Lagi' it will link to home page.		Customer will link to home page to make another order.	Pass

Table 6.6 Test Result for Administration Section

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC16-1	Validate that the staff can register to the system.	Staff name: Aqilah Ic No: 990307048942 Phone Number: 0125647835 Email: aqilah@yahoo.com Password: Aqilah	The data of staff has been stored and alert message of the successfully will be pop out	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC16-2	Validate the system cannot stored null value in the database.	Staff name: NULL Ic No: NULL Phone Number: NULL Email: NULL Password: NULL	The form was not stored in the database and pop out of the failure will be show.	Pass
TC17-1	Validate that staff can login with registered name and password.	Username: Aqilah Password: aqilah	Staff can access the administration page and pop out will show "Anda telah Berjaya Log Masuk!"	Pass
TC17-2	Validate that staff cannot login with unregister name and password.	Username: Mawar Password: Mawar123	Staff cannot access the administration page and pop out will show "Nama atau kata laluan anda	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
			salah!Sila masukkan nama atau kata laluan yang sah!"	
TC17-3	Validate that staff cannot login with Null name and password.	Username: NULL Password: NULL	Staff cannot access the administration page.	Pass
TC17-4	Validate that staff cannot login with Null name	Username: NULL Password: Mawar123	Staff cannot access the administration page.	Pass
TC17-5	Validate that staff cannot login with Null name.	Username: Mawar Password: NULL	Staff cannot access the administration page.	Pass
TC18-1	Validate that staff record can be view by the staff.		Table of staff data will display.	Pass

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Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC19-1	Validate that staff can update the staff information	Staff name: Aqilah Ic No: 990307048941 Phone Number: 013467589562 Email: Aqilah99@yahoo.com	Data in table staff will be updated and the pop out will show "Rekod anda telah dikemaskini"	Pass
TC20-1	Validate that data of the staff can be delete.	Delete staff name Mirwarna	Data in table staff will be deleted and pop out will show "Rekod telah dipadam"	Pass
TC21-1	Validate that staff can insert the food data.	Food Name: Roti John Price per unit: 3.00 Food Image: roti john .jpeg	Data will be inserted in table food.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC21-2	Validate that staff cannot insert null value of food data.	Food Name: NULL Price per unit: NULL Food Image: NULL	Data will not insert in table food.	Pass
TC22-1	Validate that staff can insert the package data.	Package Name: Set A Package Price: 5.00 Image: Set A.png	Data will insert in table packagemenu	Pass
TC22-2	Validate that staff cannot insert null value of package data.	Package Name: NULL Package Price: NULL Image: NULL	Data will not insert in table packagemenu.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC23-1	Validate that staff can insert the detail of package data.	Package Name: Set A Food: Chicken Nugget Quantity: 5	Data will insert in table packagemenu.	Pass
TC24-2	Validate that staff cannot insert null value for package detail	Package Name: NULL Food: NULL Quantity: NULL	Data will not insert in table packagemenu.	Pass
TC25-1	Validate that system display package record		Table of package record will display.	Pass
TC26-1	Validate that staff can update package record.	Quantity: 4 Price: 6.00	Record of table packagemenu will be updated	Pass
TC27-1	Validate that staff can update order.	Staff Incharge: Didi	Record in table order will be updated.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC27-1	Validate that staff can delete the order.	Delete ordered: O219	Record in table order will be deleted	Pass
TC28-1	Validate that staff can register supplier data.	Supplier name: Syarikat Ayam Mahza Address: Bukit Gantang,Taiping Perak Phone number: 05-8551311 Email: ayammahza@gmail.com Staff Incharge: Didi	Record will be inserted in table supplier.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC28-2	Validate that staff cannot insert null value for register supplier data.	Supplier name: NULL Address: NULL Phone number: NULL Email: NULL Staff Incharge: NULL	Record will not be inserted in table supplier.	Pass
TC29-1	Validate that staff can insert item.	Name of Item: Ayam Quantity stock in: 100 Date of Stock in: 24-JUL-17 Food: Fried Chicken Supplier:	Data inserted in table item.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
		Syarikat Ayam Mahza		
TC30-2	Validate that staff cannot insert null value of item.	Name of Item: NULL Quantity stock in: NULL Date of Stock in: NULL Food: NULL Supplier: NULL	Data not inserted in table item.	Pass
TC30-1	Validate that staff can update the quantity of stock in	Stock in quantity: 30	1.Data will update in table item. 2.Stock in date will change to the current date. 3.Current quantity will change.	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC31-1	Validate that staff can update the quantity of stock out.	Stock out quantity: 50	1.Data will update in table item. 2.Stock out date will change to the current date. 3.Current quantity will change.	Pass
TC32-1	Validate that staff can delete the stock in and stock out data	Delete item: Ayam kecil	Data in table item will be deleted.	Pass
TC33-1	Validate that staff can update the payment status.	Payment: Complete.	Data in table payment will be update. Status payment will change to Complete.	Pass
TC34-1	Validate that staff can view report.		Report will be show.	Pass

Table 6.7 Test Result for GUI and Usability Section

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC35-1	Validate that when user click menu 'Home' will link to dashboard.	Menu: Home button	User will be linked to homeAdmin.php page	Pass
TC36-1	Validate that when user click menu 'Staff' will link to staff page	Menu: Home button	User will be linked to staff.php page	Pass
TC37-1	Validate that when user click 'Daftar Staff' button it will link to staff registration page	Button: Daftar Staff	User will be linked to staffRegister.php page	Pass
TC37-2	Validate that when user click 'Rekod Staff' button it will link to staff record page	Button: Rekod Staff	User will be linked to staffrecord.php page	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC37-3	Validate that when user click 'Kemaskini Staff' button it will link to update page	Button: Kemaskini Staff	User will be linked to staffupdate.php page	Pass
TC38-1	Validate that when user click menu 'Menu' will link to menu page	Menu: Menu button	User will be linked to menu.php page	Pass
TC39-1	Validate that when user click 'Data Makanan' button it will link to food insert page	Button: Data Makanan button	User will be linked to foodInsert.php	Pass
TC39-2	Validate that when user click 'Menu Pakej' button it will link to package insert page	Button: Menu Pakej button	User will be linked to packageInsert.php	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC39-3	Validate that when user click 'Rekod Pakej' button it will link to package record page	Button: Rekod Pakej button	User will be linked to packageRecord.php	Pass
TC39-4	Validate that when user click 'Update Pakej' button it will link to update package page	Button: Update Pakej button	User will be linked to packageUpdate.php	Pass
TC40-1	Validate that when user click menu 'Order' will link to order page	Menu: Order button	User will be linked to order.php page	Pass
TC41-1	Validate that when user click 'Rekod Order' button it will link to record order page	Button: Rekod Order button	User will be linked to orderRecord.php	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC41-2	Validate that when user click 'Kemaskini Order' button it will link to update order page	Button: Kemaskini Order button	User will be linked to orderUpdate.php	Pass
TC41-3	Validate that when user click 'Carian Order' button it will link to search order page	Button: Carian Order button	User will be linked to orderSearch.php	Pass
TC42-1	Validate that when user click menu 'Customer' will link to customer page	Menu: Customer button	User will be linked to customer.php page	Pass
TC43-1	Validate that when user click 'Rekod Pelanggan' button it will link to search order page	Button: Rekod Pelanggan button	User will be linked to customerRecord.php	Pass
TC44-1	Validate that when user click menu 'Supplier' will link to supplier page.	Menu: Supplier button	User will be linked to supplier.php page	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC45-1	Validate that when user click 'Tambah Data Pembekal' button it will link to supplier registration page	Button: Tambah Data Pembekal button	User will be linked to supplierRegister.php	Pass
TC45-2	Validate that when user click Data Pembekal' button it will link to supplier record page	Button: Data Pembekal button	User will be linked to supplierRecord.php	Pass
TC46-1	Validate that when user click menu 'Stock' will link to stock page	Menu: Stock button	User will be linked to stock.php page	Pass
TC47-1	Validate that when user click 'Tambah Stock' button it will link to stock insert page	Button: Tambah Stock button	User will be linked to stockInsert.php	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC47-2	Validate that when user click 'Kemaskini Stock' button it will link to update stock page	Button: Kemaskini Stock button	User will be linked to stockUpdate.php	Pass
TC47-3	Validate that when user click 'Rekod Stock' button it will link to stock history page.	Button: Rekod Stock button	User will be linked to stockHistory.php	Pass
TC48-1	Validate that when user click menu 'Sales' will link to sales page	Menu: Sales button	User will be linked to report3.php page	Pass
TC49-1	Validate that when user click 'Report Keseluruhan' button it will link to report sales.	Button: Report Keseluruhan button	User will be linked to mainreport.php	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC49-2	Validate that when user click 'Report Bulanan' button it will link to monthly report sales.	Button: Report Bulanan button	User will be linked to monthlyreport.php	Pass
TC50-1	Validate that when user click 'Cari' button it will show the report that has been search.	Bulan: December Button: Cari	Report for November will show.	Pass
TC51-1	Validate that total sale for selected month is correct.	Bulan: December Button: Cari	Total quantity that sale for December is 55	Pass
TC52-1	Validate that when user click menu 'Payment' will link to sales page	Menu: Payment button	User will be linked to payment.php page	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC53-1	Validate that when user click 'Rekod Pembayaran' button it will link to payment record page.	Button: Report Pembayaran button	User will be linked to paymentRecord.php	Pass
TC53-2	Validate that when user click 'Kemaskini Rekod Pembayaran' button it will link to payment record page.	Button: Kemaskini Rekod Pembayaran button	User will be linked to paymentUpdate.php	Pass
TC54-1	Validate that when user click menu 'Report' will link to report page	Menu: Report button	User will be linked to report.php page	Pass

Test Case Id	Test Requirement	Test Data	Expected Result	Result
TC55-2	Validate that when user click menu 'Online Order RMR Mobile Cafe' will link to RMR Mobile Café online order page	Menu: Online Order RMR Mobile Cafe button	User will be linked to home.php page	Pass

Based on the test that has done, the overall system is giving a positive result that satisfies the developer and the end user to use this system with the less defect that may occur.

6.6 Conclusion
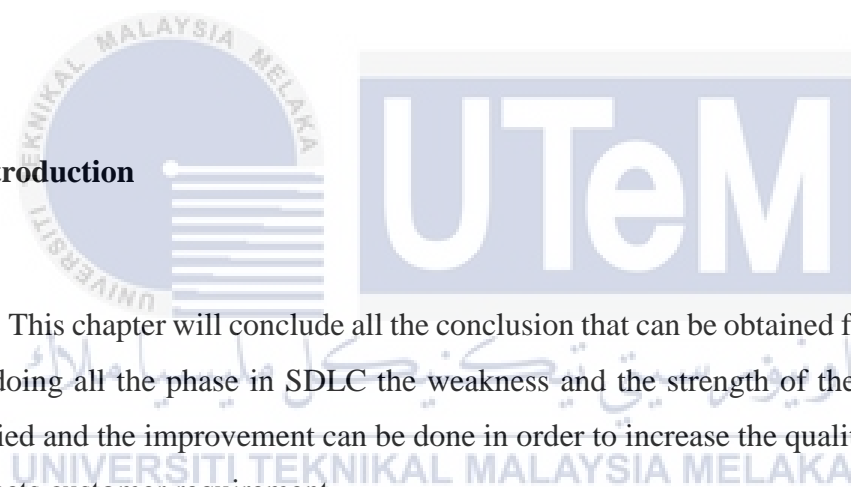
In conclusion, this chapter has explained about the tests that has been performed on the developed system. After testing the system, the developer can evaluate the quality of the system by looking at the results obtained either pass or fail. In this project, the overall result is pass. In the next chapter, it will explain about the conclusion of the project.

CHAPTER VII

CONCLUSION

7.1 Introduction

This chapter will conclude all the conclusion that can be obtained from the system. After doing all the phase in SDLC the weakness and the strength of the system can be identified and the improvement can be done in order to increase the quality of the system and meets customer requirement.

7.2 Observation on Weakness and Strengths.

After the system development was completed, some weakness of the system was identified which is this system only allow customer to booking in the large quantity which is for the catering only. It is not allowed customer to order for small quantity.

Hence, the strength of this system is customer can order the package of food more than one set. Moreover, this system does not allow the customer to choose date of the event if the date has been booked by other customer. It will show the sign of unavailable date which is red color on the date picker. So, the redundancy of the booking date can be avoided. By using this system, staff can manage the inventory of the food.

This system can store the inventory data securely. Only registered staff can access the inventory system by login to the administration page. This system can generate report based on data stored in database in the form of graph. This can make it easier for the staff to make conclusion on their sales.

7.3 Proposition for Improvement

This system could be better if this system can be developed in the form of mobile applications. With the rapid adoption of smartphones and tablets business are faced with more opportunities for the entrepreneur to increase their sales every day. According to webopedia.com, mobile applications help users by connecting them to internet services more commonly accessed on desktop or computer. By using mobile apps, users can make order by using their smartphone at anytime and anywhere they are in without using a computer. This can save the user time.

7.4 Project Contribution

Hopefully this project will help the entrepreneur of RMR Mobile Cafe to commercialize their product via using RMR Mobile Cafe Ordering and Inventory System according to current business trends which is industry 4. This project also can help entrepreneurs to manage their inventory because they have lack of expertise on stock management.

7.5 Conclusion

In conclusion, the use of information technology in small and medium industries can help entrepreneurs expand their businesses and manage their inventory. Technological advancements in recent decades have greatly improved the competitiveness of businesses and economies around the world. Nowadays food truck business has become a trend in this country. So, by using RMRMCOAIS, it helps entrepreneur to integrate all parts of the company with a business transaction to improve service quality and productivity.

Furthermore, we have now entered the era industry 4.0 which computers and automation will come together in an entirely new way that is currently happening globally. If entrepreneurs do not use information technology in managing their business it can make the Malaysia economy suffer from difficulties as the industry is not ready to deal with this revolution.

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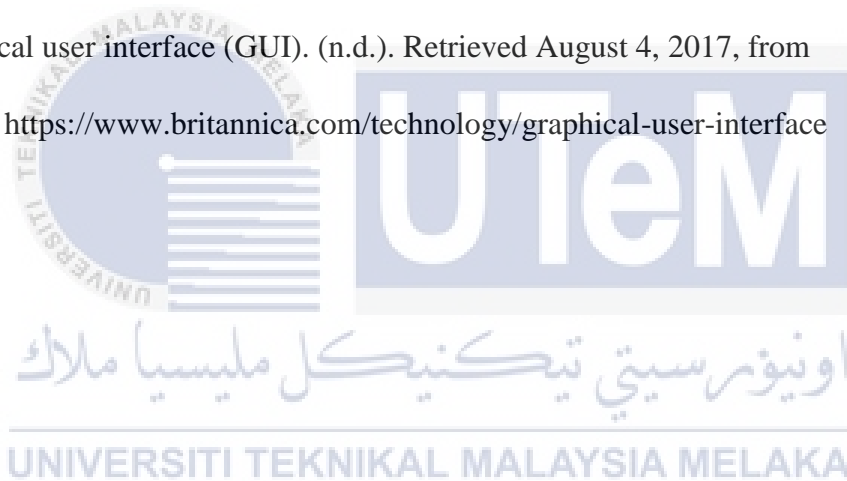
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APPENDICES

ID	Task Name	Duration	Start
1	Planning	15 days	Mon 13/02/17
2	Discussion with supervisor	5 days	Mon 13/02/17
3	Make proposal of the project	10 days	Mon 13/02/17
4	Proposal presentation & submission via PSM Online System	1 day	Fri 3/02/17
5	Analysis	12 day	Sat 4/03/17
6	Study current system	2 days	Sat 4/03/17
7	Determine user requirement	3 days	Mon 6/03/17
8	Gather the bussiness requirements for the system	8 days	Thu 9/03/17
9	Design	7 days	Tue 28/02/17

Timeline header: 17 | 30 Jan '17 | 13 Feb '17 | 27 Feb '17 | 13 Mar '17 | 27 Mar '17 | 10 Apr '17 | 24 Apr '17 | 8 May '17 | 22 May '

Project: gantt chart psm
Date: Sat 18/02/17

Legend:
Task	External Milestone	Manual Summary Rollup
Split	Inactive Task	Manual Summary
Milestone	Inactive Milestone	Start-only
Summary	Inactive Summary	Finish-only
Project Summary	Manual Task	Deadline
External Tasks	Duration-only	Progress

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ID	Task Name	Duration	Start	Timeline
10	Design the technical architecture required to support the system	7 days	Tue 28/02/17	
11	Design the system models	7 days	Tue 28/02/17	
12	Implementation	30 days	Mon 27/02/17	
13	Develop Program	30 days	Mon 27/02/17	
14	Build the technical architetectu	30 days	Mon 27/02/17	
15	Build the database and programs	30 days	Mon 27/02/17	
16	Testing	26 days	Fri 3/03/17	
17	Write the test condition	2 days	Fri 3/03/17	

Timeline headers: 17 | 30 Jan '17 | 13 Feb '17 | 27 Feb '17 | 13 Mar '17 | 27 Mar '17 | 10 Apr '17 | 24 Apr '17 | 8 May '17 | 22 May

Project: gantt chart psm	Task ▬▬▬	External Milestone ◆	Manual Summary Rollup ▬▬▬
Date: Sat 18/02/17	Split ··········	Inactive Task ▭	Manual Summary ▬▬▬
	Milestone ◆	Inactive Milestone ◇	Start-only ⊏
	Summary ▬▬▬	Inactive Summary ▽	Finish-only ⊐
	Project Summary ▽▽	Manual Task ▬▬▬	Deadline ↓
	External Tasks ▬▬▬	Duration-only ▬▬▬	Progress ▬▬▬

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ID	Task Name	Duration	Start
18	Perform the testing of the system	24 days	Tue 7/03/17
19	Write the documentation	30 days	Mon 27/02/17
20	Maintenance	36 days	Fri 7/04/17

Project: gantt chart psm
Date: Sat 18/02/17

Task		External Milestone	◆
Split		Inactive Task	
Milestone	◆	Inactive Milestone	◇
Summary		Inactive Summary	
Project Summary		Manual Task	
External Tasks		Duration-only	
Manual Summary Rollup			
Manual Summary			
Start-only	⊏		
Finish-only	⊐		
Deadline	↓		
Progress			