UNICORN STYLE FASHION SYSTEM

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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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

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2015

DECLARATION

I hereby declare that this project report entitled

UNICORN STYLE FASHION SYSTEM

Is written by my own effort and that no part has been plagiarised without citations.

STUDENT : _____ Date: 18/8/2016 .

(MOHAMAD SHAHRUL NIZAM BIN AZMAN)

SUPERVISOR : _____ Date: 18/8/16.

(PUAN NOOR AZILAH BINTI DRAMAN@MUDA)

DEDICATION

To my beloved parents,

my supervisor and lectures

and also to all my friends.

ACKNOWLEDGEMENT

First of all, I would like to thank Puan Noor Azilah Binti Draman@Muda for being my supervisor that guide me throughout this project. She was very helpful for assisting me to complete this project successfully.

I would also like to thank my beloved parents, Azman Bin Sam and Mariam Binti Abdullah, and all my sisters who have been giving me support and motivation throughout my project either mentally or physically.

Not forgotten, to all my fellow friends who has contributed in my project. All that contribution and encouragement from them throughout this project from start to the end will always be remembered and appreciated.

ABSTRACT

Unicorn Style Fashion System (USFS) are developed to replace the current system that are used manually by staff in Unicorn Style Fashion Company. In other words, it is aim to computerize the manual system of the current system which is now using the receipt. This system is built for admin and customer. For admin, it help them to manage ordering record systematically and effectively. While for customer, it is easier for them to make an ordering and check the ordering status. USFS is developed following the system development life cycle (SDLC). The waterfall model is choose as the project methodology for development. The overall system is using the Hypertext Processor (PHP), Wamp Server and Oracle 10g Express Edition. Entity relational diagram (ERD) and data flow diagram (DFD) are used to the design

the system and make the flow of the system more understandable. The purpose of the system is to reduce the response time for searching product, easier for customer to make order and to check their ordering status, keeping the records secure and decrease the use of papers (paperless).While completing the system, some strength and weaknesses are identified and the suggestion on how to enhance this system in future are given at the end of the project report.

ABSTRAK

Unicorn Style Fashion System (USFS) ini dibangunkan bagi menggantikan sistem sedia ada yang digunakan secara manual oleh pekerja di syarikat Unicorn Style Fashion. Dalam erti kata lain, ia adalah bertujuan untuk mengkomputerkan sistem manual iaitu sistem semasa yang kini menggunakan resit. Sistem ini dibina untuk kakitangan Unicorn Style Fashion dan pelanggan. Untuk kakitangan Unicorn Style Fashion, ia membantu mereka untuk menguruskan rekod tempahan pelanggan secara sistematik dan berkesan. Manakala bagi pelanggan, ia adalah lebih mudah bagi mereka untuk membuat tempahan dan meyemak status tempahan mereka. USFS dibina dengan menggunakan kitaran hayat pembangunan sistem (SDLC). Model air terjun dipilih sebagai metodologi projek. Sistem keseluruhan adalah menggunakan Pemproses Hiperteks (PHP), Wamp Server dan Oracle 10g Express Edition. Entiti hubungan rajah (ERD) dan rajah aliran data (DFD) adalah reka bentuk yang direka agar aliran sistem lebih mudah difahami. Tujuan sistem ini adalah untuk mengurangkan tindak balas masa untuk mencari produk, memudahkan pelanggan menyemak status tempahan mereka, menyimpan rekod lebih selamat dan mengurangkan penggunaan kertas (paperless). Semasa menyiapkan sistem ini, beberapa kekuatan dan kelemahan dikenal pasti dan beberapa cadangan untuk menambahbaik sistem ini pada masa akan datang diberi pada akhir laporan projek.

BORANG PENGESAHAN STATUS TESIS

JUDUL: UNICORN STYLE FASHION SYSTEM (USFS)

SESI PENGAJIAN: 2015/2016

Saya MOHAMAD SHAHRUL NIZAM BIN AZMAN

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LIST OF ABBREVIATIONS

USFS	-	Unicorn Style Fashion System
ERD	-	Entity Relationship Diagram
DFD	-	Data Flow Diagram
DBMS	-	Database Management System
SDLC	-	System Development Life Cycle
DLC	-	Data Control Language
DDL	-	Data Definition Language
DML	-	Data Manipulation Language
GUI	-	Graphical User Interface
PHP	-	Hypertext Pre-processor
RAM	-	Random Access Memory
CPU	-	Control Processor Unit
UTP	-	Unshielded Twisted Pair

LIST OF ATTACHMENT

ATTACHMENT	TITLE	PAGE
Appendix A	Data Dictionary	
Appendix B	Normalization	
Appendix C	Installation Step	

CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

Unicorn Style Fashion System (USFS) is a web based system. It is developed to help the clothes seller to manage their business using a system and manage the clothes systematically. While the customer can purchase any clothes that are listed for them. This system is focusing more on selling the clothes and managing the stock of the clothes.

This system will include the functions of customer registration, login, search clothes information, take customer's order, produce invoice, delivery and view customer order. All the functions are built in customer's menu for purchase clothes.. All the functions are built in administration's menu.

1.1 PROBLEM STATEMENTS

i) Difficult to search data

All information is more difficult to search using the current system. The seller needs to search data from one file to another because it is recorded manually. It will waste their time.

ii) The probability data will lost is high

From the current system, the probability data will lost is high because the data is only saved into the manual file system. The data will be lost from the file or taken by other people.

iii) The security of the purchase information is not secure

Everybody can access the purchase information because all the information was only saved into the manual file system.

1.2 OBJECTIVES

i) Managing Info

- This system will help to reduce the time for searching. Customers can search clothes easily and quickly. Besides, the admin will search the record more easily for update and delete process.

ii) Keep the purchase information more secure and proper

- The data are secure because only the administrator will access the data regarding of what customer purchase. So, the probability of losing data will be decreased.

iii) Decrease use of papers

- Through this system, all the stock information will be saved into the database and the use of papers will decrease.

iv) Report generation

- This system will also be develop to provide a better report for administrator such as report for view clothes' information in database.

1.3 PROJECT SCOPE

The scopes of the USFS will be focusing on two major points of view which are firstly focused on users and secondly focused on the system itself. Focus on the user is based on the wide range of users that will use this system internally and externally. Meanwhile, the focused on systems are divided into several modules that are related the system that will be developed. The scopes are:

1.3.1 Scope of user

Two main type of users will use this system internally and externally. The internal users are customers who browse the website for purchase clothes. The external users are clothes' seller itself who act as administrator for this system. The administrator will use this system to manage the stock of clothes and generate report.

1.3.2 Scope of system

i) Registration Module

The objective of this module is to manage the customer registration. The customer registration is important because the customer need to register before using the system. When the customers make registration, they will state their own username and password. Then, the username

and password will be used by them for self-login into the system whenever they want to buy or browse clothes.

ii) Order Processing Module

The objective of this module is to manage the ordering process. This module will be used to record all information orders. The tasks that are included in this module are browse clothes and add clothes in the order list. Customers will choose the clothes and state the quantity of the clothes.

iv) Delivery Module

The objective is to help the admin to deliver order to the customers. The process included in this module is filling up the delivery form. After that, the data from the form will be saved into delivery table and this will ease the administrator to manage delivery.

1.4 Survey of existing multimedia database system Zalora.com

The problems are:

i) Difficult to search data

All the information's are more difficult to search using the current system. The seller needs to search data from one file to another. It will waste a time.

ii) The probability data will lost is high

From the current system, the probability data will lost is high because the data only saved into the manual file system. The data will be lost from the file or taking by other people.

iii) The security of the purchase information is not secure

Everybody can access the purchase information because all the information was only saved into the manual file system.

iv) Image Manipulation.

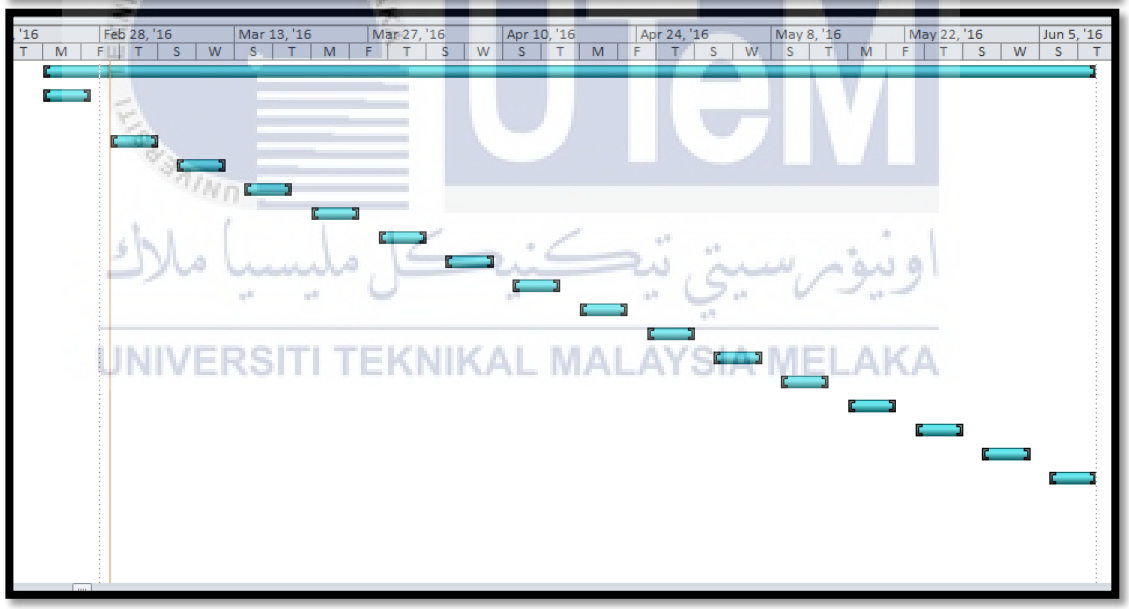
Shopping online is often hindered by the inability to touch and feel the product. A high quality image can portray the product more accurately than a text description and improve the buyer's sense of what they are purchasing. High quality images also improve the aesthetic quality of the site and can highlight features that would otherwise be hard to describe.

1.5 Project significance

The main purpose if developing this system is to help the clothes seller to have a better management for their system. Using this system, the data or information is secured because all the information will be save into the database system. Moreover, this system will help the administrator to decrease the use of papers and files to keep the data. All the data inserted will automatically be saved into the database and it is easier for admin to manage it.

1.6 Gantt Chart

	Task Name	Duration	Start	Finish
1	usfs Boutique System	80 days	Mon 2/22/16	Fri 6/10/16
2	Proposal PSM : Submission & Presentation (Proposal assessment and verification)	5 days	Mon 2/22/16	Fri 2/26/16
3	Proposal Correction/Improvement (List of supervisor/title)	5 days	Mon 2/29/16	Fri 3/4/16
4	Chapter 1 (system Develoment Begins)	5 days	Mon 3/7/16	Fri 3/11/16
5	Chapter 1 & chapter 2	5 days	Mon 3/14/16	Fri 3/18/16
6	Chapter 2	5 days	Mon 3/21/16	Fri 3/25/16
7	Chapter 2 & Chapter 3 (Student Status)	5 days	Mon 3/28/16	Fri 4/1/16
8	Project Demo & Chapter 3, Chapter 4	5 days	Mon 4/4/16	Fri 4/8/16
9	MID SEMESTER BREAK	5 days	Mon 4/11/16	Fri 4/15/16
10	Project Demo & Chapter 4	5 days	Mon 4/18/16	Fri 4/22/16
11	project Demo & Chapter 4 (Student Status)	5 days	Mon 4/25/16	Fri 4/29/16
12	Project Demo (Determination of student status(Continue/Withdraw)	5 days	Mon 5/2/16	Fri 5/6/16
13	Project Demo & PSM Report	5 days	Mon 5/9/16	Fri 5/13/16
14	Project Demo & PSM Report (Presentation Schedule)	5 days	Mon 5/16/16	Fri 5/20/16
15	Project Demo & PSM Report	5 days	Mon 5/23/16	Fri 5/27/16
16	FINAL PRESENTATION (PA)	5 days	Mon 5/30/16	Fri 6/3/16
17	REVISION WEEK (Correction draft report based on supervisor's and evaluator's comments during the final presentation session) Submission overall marks to PSM/PD committee	5 days	Mon 6/6/16	Fri 6/10/16
18	FINALEXAMINATION SEMESTER			



1.7 Conclusion

As a conclusion, to complete the overall process to develop this system, the cooperation from supervisor and client are needed in order to achieve all the objective listed and solve the problem that are faced by the current system. Function for searching information is also included in the project scopes. It will help the customers to search any information. Moreover, it will help the customers to quickly order without need go to the clothes shop. Finally, the objective of this project is to give solutions to the problems faced by customers and management in the current system.

CHAPTER 2

METHODOLOGY

2.0 INTRODUCTION

Methods that are used during developing this system is to estimate the time of the system to be delivered on the stage are important. For this Unicorn Style Fashion System (USFS) project, waterfall model are used because by using this model, if there is any problems in any stages, it can be detect and refer to stages before and make an error correction for it. Besides, it is easy rather than a correction with same error on the further next stages. In advance, waterfall is simple approach and argue, easily understandable and explainable phases. There are stages in waterfall model, which are Analysis, Design, Implementation, Testing, and Maintenance. Every stage will only start if the stage before have been finished or nearly finish. Thus, Waterfall model are chosen based on System Development Life Cycle (SDLC) as methodology to develop this system.

2.1 METHODOLOGY IN DEVELOPING DATABASE

The current system that are used now does not efficient and effective during the operation. So that the Unicorn Style Fashion System (USFS) is as the system that will be used to replaces the current system. There three main module to be made better which are Registration Module, Order Processing Module and Delivery Module. The Waterfall Model in DBLC starts from Analysis, Design, Implementation, Testing and Maintenance.

The Database Lifecycle (DBLC) contains six phases: database initial study, database design, and implementation and loading, testing and evaluation, operation and maintenance and evaluation.

I. Database Initial Study

The purpose of the database initial study is to analyze the situation faced. Next is define problems and constraints where information can be divided into two categories which are formal and informal. Most of the information are difficult to search. This is because, the current system record the information of data manually that need to be search from one file to another file. Not just that, the information are not secure because anyone can read the file. Other than that is define the objectives where the database system that wants to be developed must be designed in order to solve at least the major problems that identified during the problem discovery process. The initial study phase where contribute to the problem solution. After that is define scope and boundaries. The system's scope will define the extent of the design related to the operational requirement. By knowing the scope, it will help to define the required data structures, the type and numbers of entities, the physical size of the database and so on. The boundaries are known as external to the system. Boundaries also required by existing hardware and software to accomplish system goals. Finally, the to-be database system is analyzed using the Entity Relationship Diagram. Then, the project work plan and Gantt chart will build to develop this system.

II. Database Design

The second phase focuses on the design of the database model that will support the objectives. The conceptual design of the Unicorn Style Fashion System is made using Entity Relationship Diagram (ERD). This data modeling will be used to create the abstract database structure to be easier to understand. Moreover, it represent a clear view of the business and its' functional parts. The selection of the DBMS software is important to the information's system for a smooth operation. The end users also must be always aware of both DBMS and the database. After that, the logical design is develop by using Data Dictionary and Data Normalization. The physical design is then develop when Data Schema is produced. It can be define as a process of select the data storage and data access characteristics of the chosen database.

III. Implementation and Loading

During this phase, the database for Unicorn Style Fashion System is actually built by using the Data Definition Language (DDL), Data Manipulation Language (DML) and Data Control Language (DCL). In modern relational DBMS, a new database implementation requires the creation of special storage-related constructs to address the end-user tables. After the database has been created, the data must be stored in to the database tables. During the implementation and loading phase, other performances, security, backup and recovery must be address in the system.

IV. Testing and Evaluation

Once the data have been loaded into the database, the DBA will test and fine tunes the database for performance, integrity, and concurrent access and security constraints. The testing and the evaluation phase using the database tools. If the database implementation is fails to meet the system's evaluation criteria or requirement, several options will be considered to enhance the system such as follows:-

For performances related issues, the designer must consider fine tuning specific system and DBMS configuration parameters. The best sources of information are the hardware and software technical reference manuals.

- Modify the physical design
- Modify the logical design
- Upgrade or change the DBMS software or the hardware platform.

V. **Operation**

Once the database has been passed the evolution stage, it will consider being operational. At this point the database, management and users will compose a complete information system. The beginning of the operational phase consistently starts the process of the system evolution. When all the targeted end-users entered the operation phase, the problems that could not predict during the testing phase can be detected.

VI. **Maintenance and Evolution**

The database administrator must be prepared to perform routine maintenance activities within the database. Some of the required periodic maintenance activities included such as follows:-

- Preventive maintenance (backup)
- Corrective maintenance (recovery)
- Adaptive maintenance (enhancing performance, adding entities and attributes and so on)
- Assignment of access permission and their maintenance for new and old users
- Improve the efficiency and usefulness of system audits and to monitor system performance
- System security using access level.

2.2 PROJECT SCHEDULE AND MILESTONES

The task planning is shown below:

Table 2.1: Task Planning

Week	Date	Phase	Result
1-2	**23 Feb – 7 March**	**Planning** - Submit the proposal to PSM committee. - Collect and research information - Analysis the information - Choose the project methodology - Build the GANTT Chart .	- Unicorn Style Fashion System proposal - Report of Chapter 1: INTRODUCTION - Report of Chapter 2: PROJECT METHODOLOGY AND PLANNING
3-4	**9 March – 21 March**	**Analysis** - Investigate current system problem. - List down the business requirement	- Appropriate diagram such as flow chart and DFD

		- Analyse the requirement of the system. - Create flow chart and DFD.	
5 – 6	**23 March – 4 April**	**Design** - Design the system Architecture using diagram. - Create user interface design such as navigation design and Input/output design.	- Appropriate diagram such as ERD and the design form
7 – 11	**6 April – 9 May**	**Implementation** - Implement the database -Implement system modules -Implement user Interface	-Appropriate interface such as user login, search page, record, etc.
12 – 14	**11 May – 30 May**	**Testing** - Data testing such as define the hardware and software that been used. - Case testing - Prepare testing report.	- Appropriate testing such as user testing to test the result either Ok or failed

2.3 REQUIREMENT OF DATABASE SYSTEM DEVELOPMENT

The requirement of Database System Development oversees two smaller requirements. The two elements are software requirement and hardware requirement will be used to fulfil the system requirements.

2.3.1 Software Requirement

There have listed the requirement and specification of software components, which have been used in Unicorn Style Fashion System (USFS). There are:

Name	Function
a) Oracle 11g	Database system. Use to develop our system.
b) Windows 7	Used in developing system.
c) Microsoft Visio 2013	Uses vector graphics to create diagrams such as data flow diagram (DFD), context diagram, and entity relationship diagram (ERD).
d) Microsoft Project 2010	Tasks schedule and chart.
e) Microsoft Word 2010	Documentations

Table 3.1: Software Requirement and Function

2.3.2 Hardware Requirement

There have listed the requirement and specification of hardware components, which have been used in Unicorn Style Fashion System (USFS). There are:

a) Personal computer specification.

- Intel Core 2 Duo Processor and above
- 2GB RAM and above

b) Other accessories.

- Printer – print documentation
- USB Drive – temporary storage
- External Hard Disk – backup all the file and source code

2.4 CONCLUSION

As a conclusion, by using System Development Life Cycle (SDLC) the project schedule will be run as plan. It describes the history of the database within the information system. The DBLC is composed of six major phases; Database Initial Study, Database Design, Implementation and Loading, Testing and evaluation, Operation, Maintenance and Evaluation. This chapter is covered on introduction of the chapter, domain for the system, project methodology and project schedule and milestone.

CHAPTER 3

ANALYSIS

3.0 INTRODUCTION

Analysis is one of the important phase in methodology. Analysis defines the requirements of the system depends on how the requirements will be accomplished. It is an activity that are focused on the problem domain that needs to be solved. The purpose of the analysis phase is to understand the user's requirements and the problem domain. Besides that, analysis is also to show and describe the actions of the system. The problems that occur should be documented and prioritized first to be solved during development phase of the system. In this chapter, the information for each activity in current system will be the guidance for the developer in developing this project. There are few analysis techniques that are used to capture the system requirements and understanding the problem domain. This is including a reading or research, knowledge acquisition and logical model of the new system which will be develop to illustrate the main activities or business flow. The first step is requirements modeling such as functional requirement, non-functional requirements and other requirements such as hardware and software requirements that will be discuss in more detail in this chapter.

3. 1 CURRENT SYSTEM ANALYSIS

For Unicorn Style Fashion System, has its current system now which means the company are using manual system for the saving data but the owner tend to buy a more efficient and effective system during the operation. For the current system, admin needs to write down each of success sales. For the customer, they can view the shirts just through blog that they are created. Moreover, the organization of the shirts on the blog did not organized neatly because they did not make search through the category. So, through this new system, the new shirt can be searched based on the category. Customer can add, update, edit, delete, view and makes confirmation on the new system. The current system (manual) doesn't have the delivery information steps of the customer of how they collect data. For example, through the mobile or website. Based on the new system, admin can print the invoice after customer makes a confirmation and payment.

The data required from the current system is identified which are:

- Customer information
- Ordering information
- Payment information
- Delivery information

Problem Analysis:

Before this, the clothes seller only used the current system to manage their business. The current system is a manual system where the owner's shop needs to record all information on papers. After that, the papers will be saved into the manual file system. That can cause a lot of problems in managing it. The problems are:

i) Difficult to search data

All the information's are more difficult to search using the current system. The seller needs to search data from one file to another. It will waste a time.

ii) The probability data will lost is high

From the current system, the probability data will lost is high because the data only saved into the manual file system. The data will be lost from the file or taking by other people.

iii) The security of the purchase information is not secure

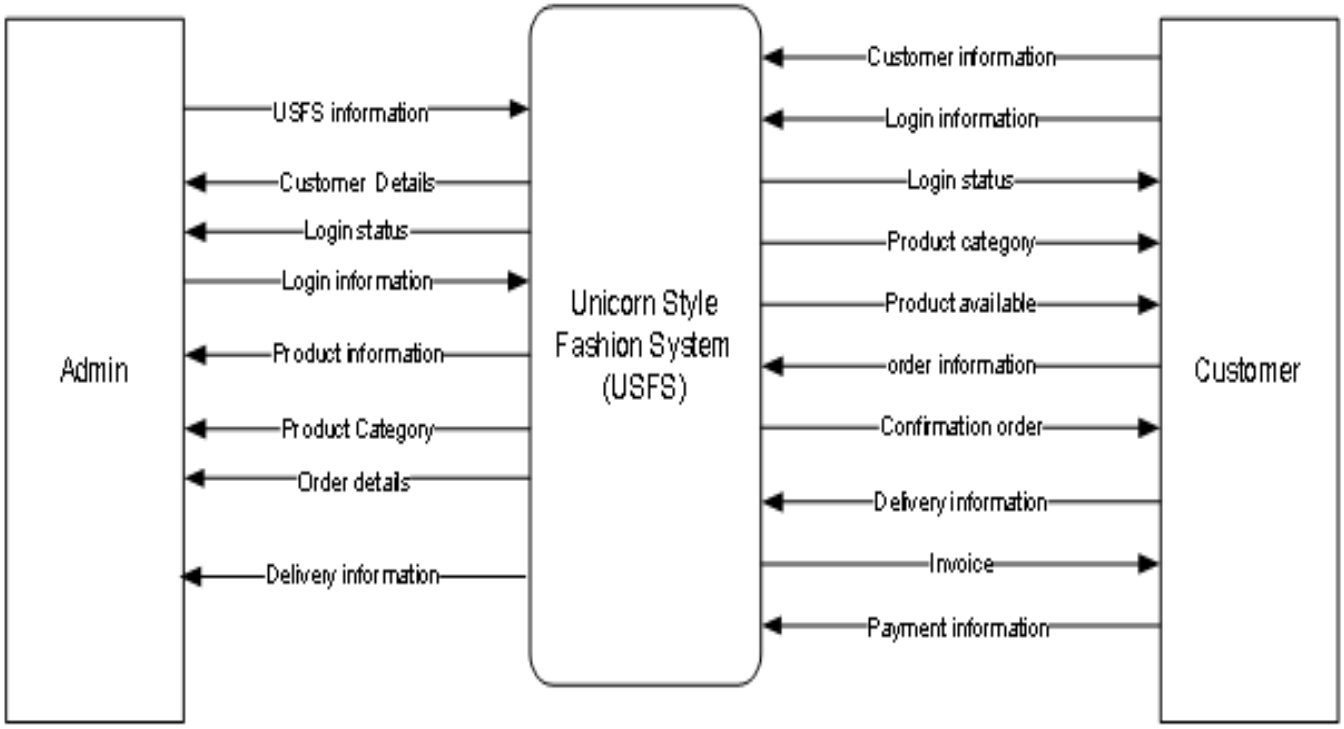
Everybody can access the purchase information because all the information was only saved into the manual file system.

iv) Customers need to come at clothes shop for choose clothes

The current system needs customers to come at clothes shop for purchase variety of clothes. When the clothes are need by the customers is not there, customers will back to their home with frustrated.

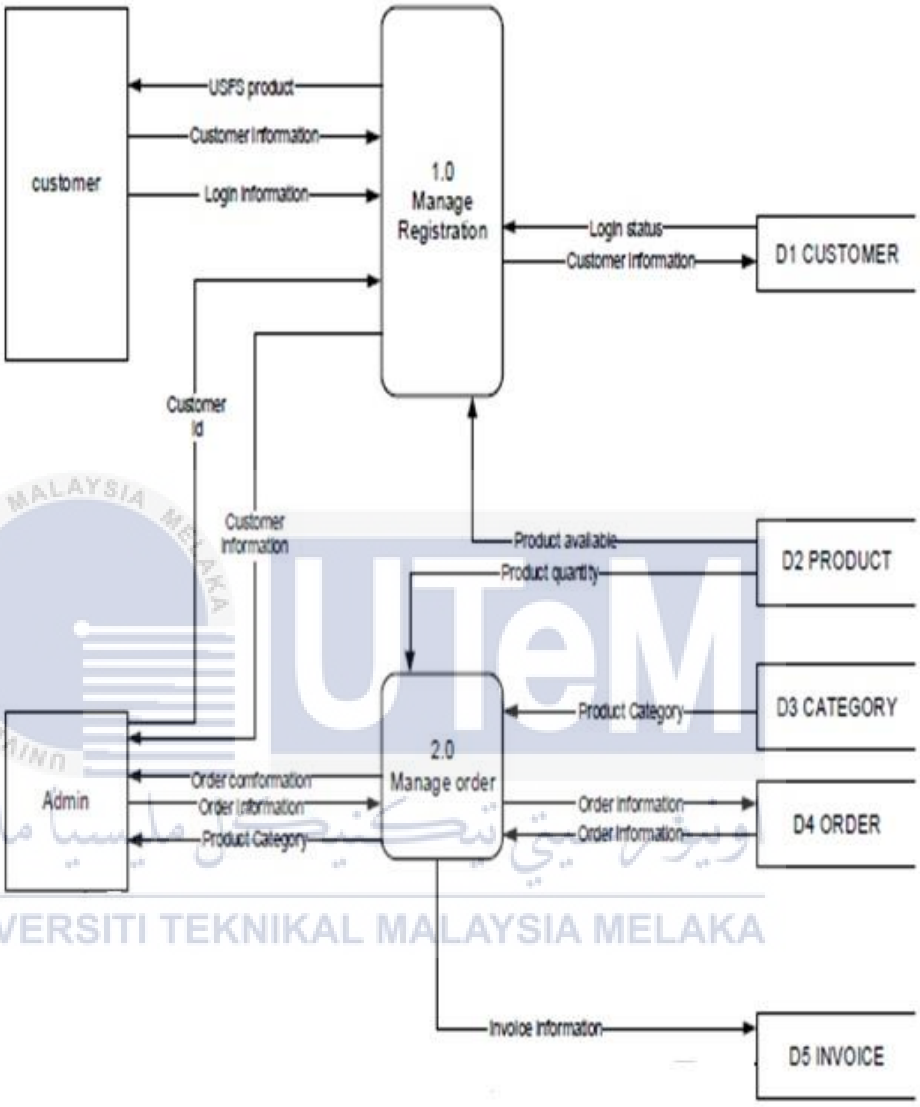
3.2 DEVELOPING DATABASE SYSTEM ANALYSIS

3.2.1 Context Diagram



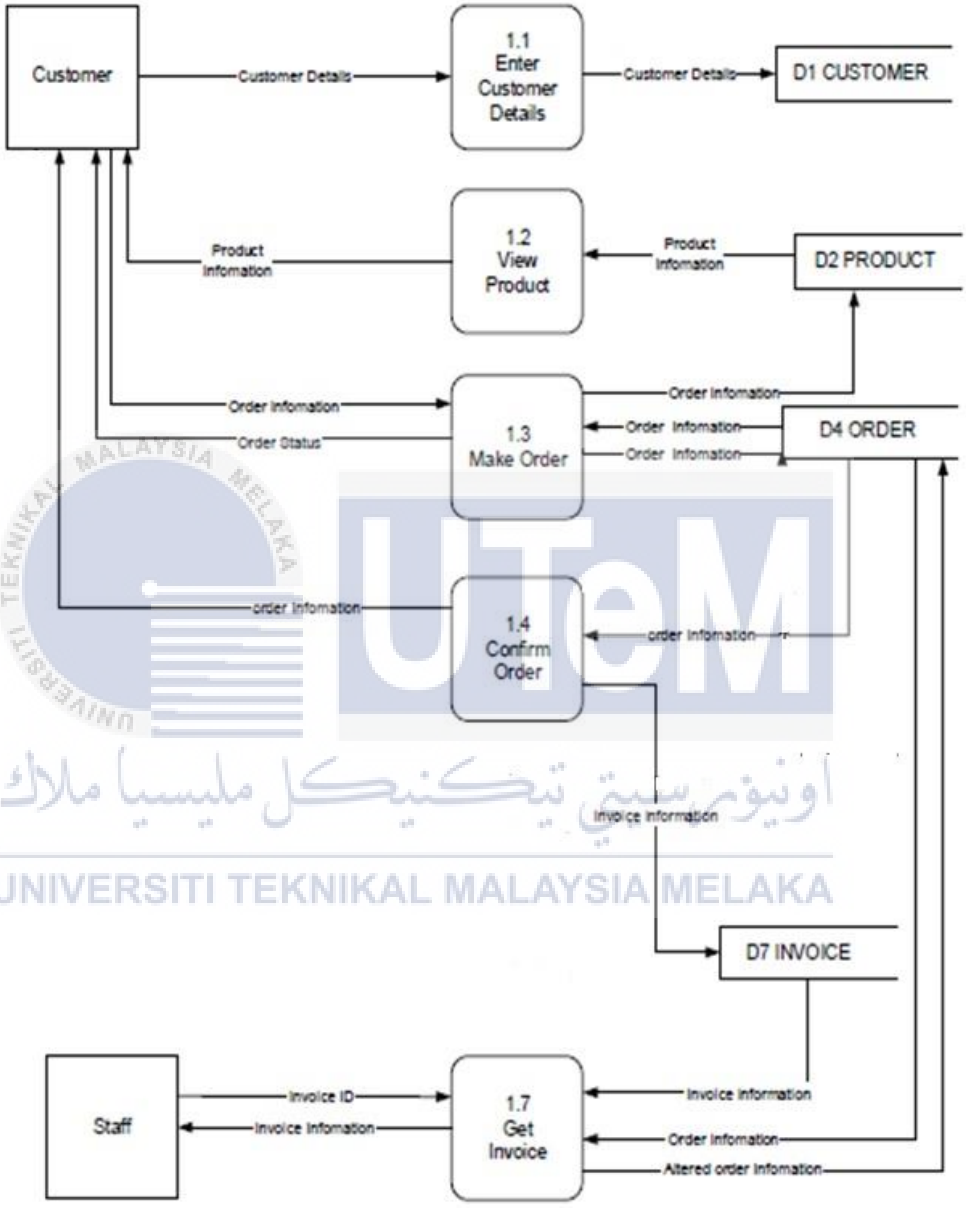
3.2.2 Data Flow Diagram

DFD Level 0

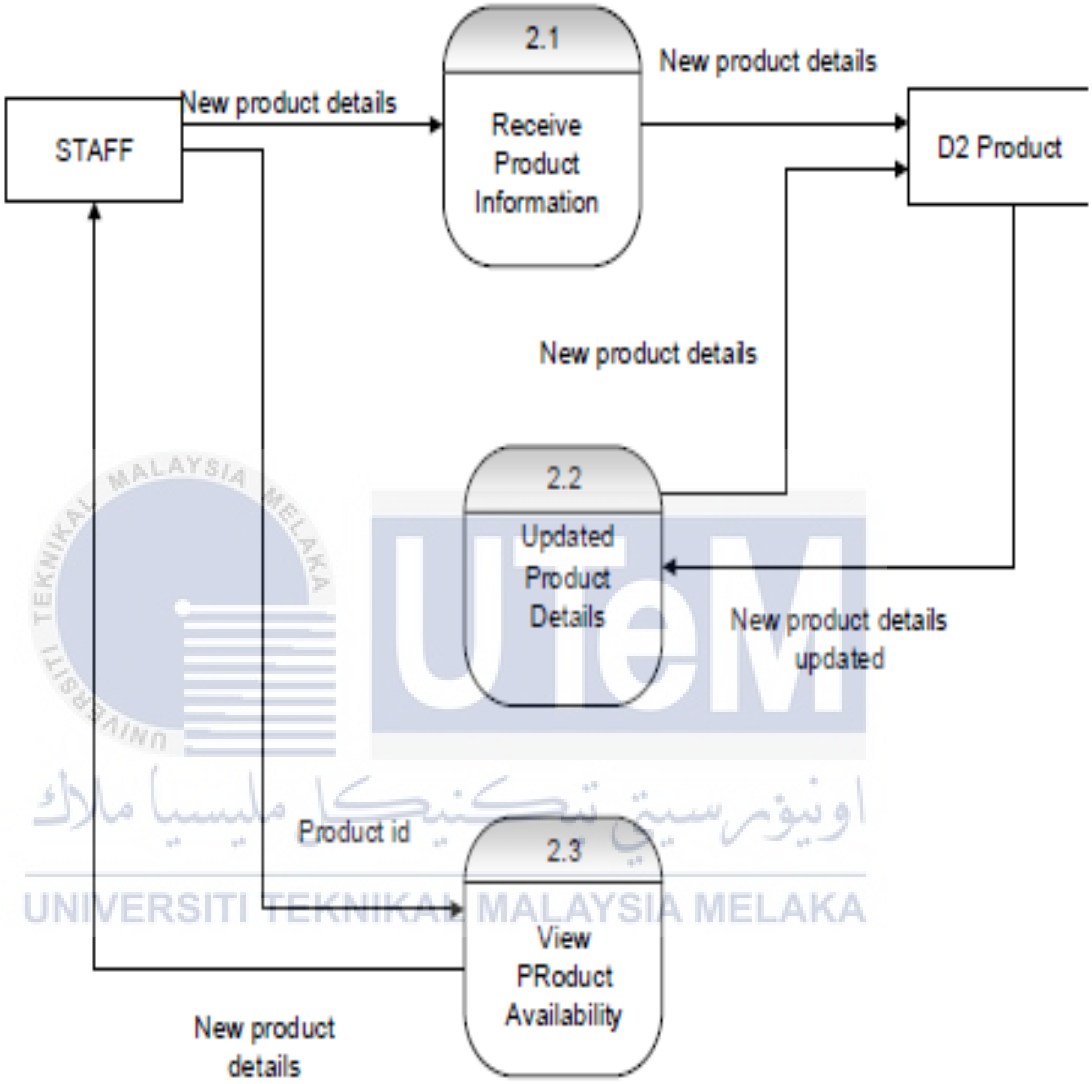


DFD Level 1

i. Manage Order



ii. Manage product



3.2.3 Business Rules

1. One customer can make many order.
2. One invoice has many orders.
3. One customer can get one invoice only.
4. One product can have many order.
5. One product has many image

The data required in the developing database system is identified as below:

No	Data Required	Description
1	Customer information	The customer information is recorded because the admin needs to refer to the customer information based on the order that customer made.
2	Admin information	Admin handled the system. Admin can add, update, view and delete based on the products available.
3	Searching information	Customer can search based on the category available.
4	Ordering information	Customer can makes order based on the category available. Customer can add, delete, update, view and confirm the order.

3.3 CONCLUSION

This chapter discusses the problem of the current system and requirement analysis for the system to be develop in more details. Current system is mostly done manually. So that, USFS is developed to replace the manual system and easier to use than existing systems in addition to save time for both parties. The requirement analysis is also determined for the system to be developed in terms of functional, non-functional and others requirements such as software and hardware requirements. It was defined in details to make the work become easier. Next chapter will discuss the design of the USFS.

CHAPTER 4

DESIGN

5.0 INTRODUCTION

A system is a design that are created base on the requirement of an analysis that has been elicited in the previous chapter. To develop a good system, firstly must develop a system architecture. This is because it will help in terms of defining the web server, application server and database that will be used to build this Unicorn Style Fashion System. Besides that, in the database design, it will explain in detail on the conceptual design, logical design and physical design. All the design that are created will show on how the system works. This can be review on the Graphical User Interface (GUI) of the system. It shows how the system will work. All the information in the current system will be the guidance for the developer to design this project. The design is developed in the simple way in order to ease the user either staff (admin) use the system.

4.1 SYSTEM ARCHITECTURE DESIGN

Application architecture is characterized by the *functional decomposition* of applications, service components, and their distributed deployment. By breaking this system down in such a manner, it could provide an improved scalability, availability, manageability, and good resource utilization. Scalability refers to a system's ability to handle increasingly heavier loads from users (activity). In other words, this system will be able to easily handle the increase without slowing down, or worse, breaking down completely. A "tier" itself is nothing more than a functionally separated hardware and software component that performs a *specific function*. A Unicorn Style

Fashion System has been broken up into various levels of functionality, each capable of some degree of horizontal scaling.

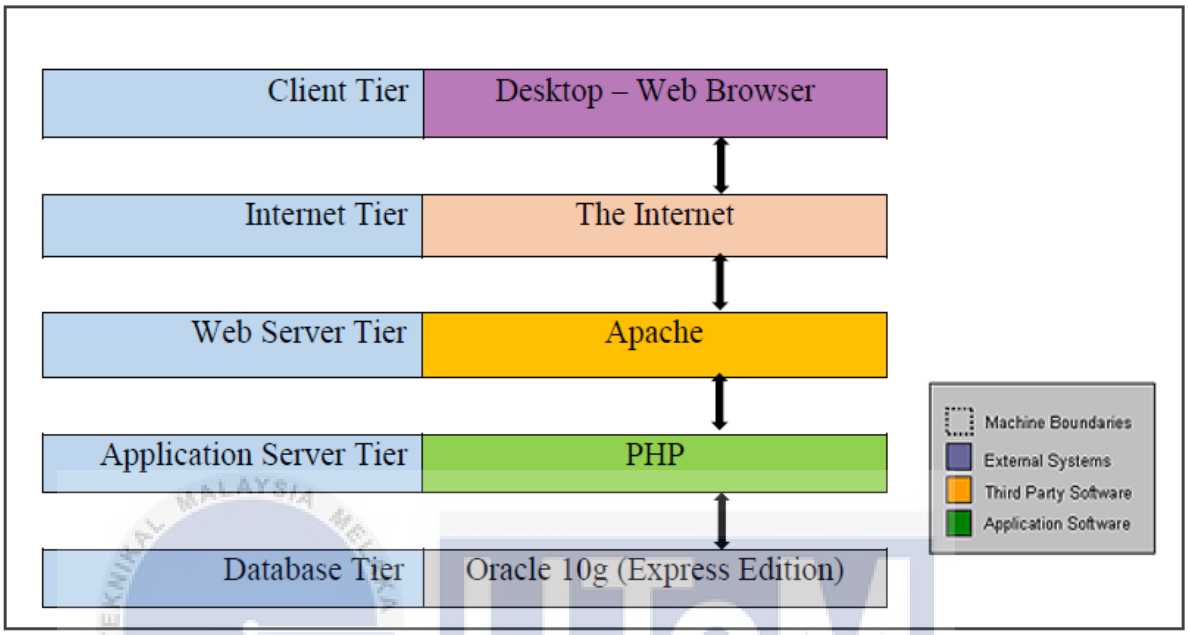


Figure 4.1: Unicorn Style Fashion System

Typical "tiers" include:

- Web server tier: provides HTTP protocol support (i.e. handles web requests)
- Application server tier: provides support for web services, business logic, etc.
- Database tier: provides data storage and retrieval support.

4.2 DATABASE DESIGN

4.2.1 Conceptual Design

Conceptual design is the process of constructing a data model which is entity relationship (ER) model. It help to check the redundancy and validate the model. ER contains of entities (class of object), relations (association between entities) and attribute (properties of entities).

4.2.1.1 Entity Relationship Diagram (ERD)

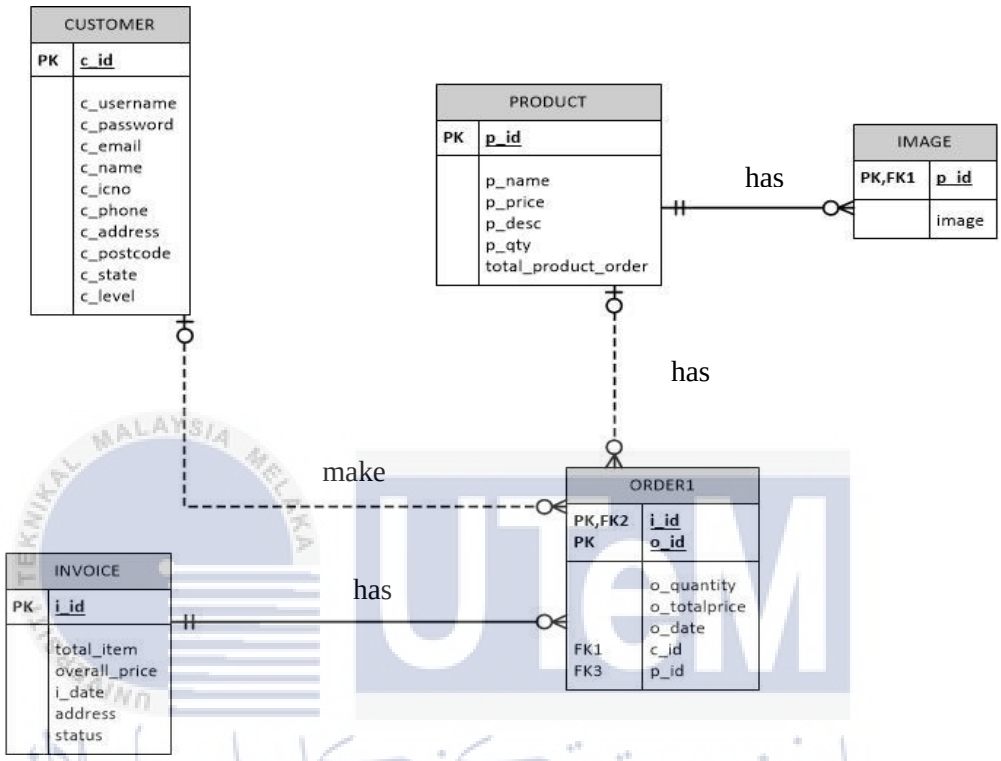


Figure 4.2: Entity Relationship Diagram Unicorn Style Fashion System.

4.2.2 LOGICAL DESIGN

4.2.2.1 Data Dictionary

Data dictionary are the transformation of ERD into the table design. It is the basic things to organize the database. It consist of table name, table column, data type, primary key, foreign key and other requirement that are needed. Please refer to **APPENDIX A**.

4.2.2.2 Normalization

Database normalization are used in USFS in order to organize the field and tables of relational database to minimize the redundancy. It involves dividing the large tables into smaller tables. The main focus is to enable other function like add, update and delete can be used in one table. The normalization are made until the Third Normal Form. Please refer to **APPENDIX B**.

i. **First Normal Form (1NF)**

- Eliminate the duplicate column in the same table.
- Create separate tables for each group of related data.
- Identify a unique column for each row (primary key).

ii. **Second Normal Form (2NF)**

- Meet all requirement in 1NF
- Remove the subsets of data that apply to multiple row and place in the separate table.
- Create the relationship between new table and the predecessor using foreign key

iii. Third Normal Form (3NF)

- `Remove columns that not depend on primary.

4.2.3 QUERY DESIGN

In this logical design, USFS will query the data about order by using join queries and sub queries in the form of SQL statements. This type of queries are used to show an only selected data to be show to user. The queries are implemented in the procedure statement. In order to select more than one column to be execute, cursor are used. So that, data from different table can be view by user. Following are example of query statement that can get through the database.

```
----------------------------------------------PROCEDURE VIEW ORDER-----------------------------------------
--------
create or replace procedure view_order(i_id1 IN varchar2, myrc out sys_refcursor) as
begin
open myrc for
select o_id,o_quantity,o_totalprice,o_date,c_name, p_name from invoice i, customer c,product p, order1 o
where c.c_id=o.c_id
AND p.p_id=o.p_id
AND i.i_id = o.i_id
AND o.i_id = i_id1;
end;
```

Figure 4.3: Customer Order

4.2.4 Physical Design

4.2.4.1 Selection of DBMS

To develop this system, Oracle 10g are chose as the DBMS. This is because, oracle can store large data compare to other database like MySQL and Maria BD. Next, the oracle will take only a few minute and it is easy to install. Other than that, this oracle doesn't need an internet connection to do any operation. So that without internet, this database can be used all the time and it is easy to configure. The function in the oracle make the process become easier. This oracle can query the data faster than other database even for complex query. However other database cannot do the complex query. This is because, when it reach the limit of complex query, it may destroy the database or in other words it may corrupt the database.

For this system, some trigger are used in order to manage the data more easily and logically. For example, when there are some data change, the other table that contain the same data will also changed. There are also some trigger that have

functions like to restrict any changes or as a security to the database and copy the data directly into another table when inserted. Not just that, to smooth the database management, some store procedures are used in terms of function and procedure.

For the security mechanism, there are two user in this system that is student and admin. Each user that use this system have their own privileges. For instant, student may check their demerit record only. While for admin, they can manage all the record in terms of insert, update, delete or view the record. User student doesn't need to login to use this system. However, admin must login before manage the system. This system only have one user-level security that is admin.

4.2.4.2 The usage of store procedure and trigger

Table 4.1: The usage of store procedure and trigger

Stored Procedure	Trigger
LOGINCUSTOMER - To verify the user id and username that are entered match in the database	**INVOICE_TRIG** -Auto increment for invoice id before insert the record.
UPDATE_PRODUCT **UPDATE_STATUS** - This store procedure used to edit or update the data in the database.	**PRODUCT_QTY** -After the customer has buy the product the quantity of the product in database will be decreased.
DELETE_INVOICE **DELETE_PRODUCT** - This store procedure used to delete the data in the database.	**PROD_TRIG_DATE** -After admin add new product the date for add new product will follow the system data.
INSERT_CUSTOMER **INSERT_INVOICE** **INSERT_PRODUCT** **INSERT_STATUS**	**ORDER1_TRIG** -After customer has make the order, total quantity of the product they bought will be multiply with unit price**.**

-This store procedure used to insert the data in the database	

4.2.4.3 Security Mechanism

TABLE 4.2: Security Mechanism

Login	Need to refill both column for user id and password. If not, admin cannot enter the system.
	If the user id or username not match, pop-up massage will be prompt out.

4.2.5 Graphical User Interface (GUI) Design.

This system is developed with user friendly user interface to easier user to understand the system flow. The purpose of the user interface design is to make sure that the user easy to use the system without facing the coding environment. The interface designs arranged properly in order the user use the system easily. The input design of the USFS can be refer to the following **Figure.**

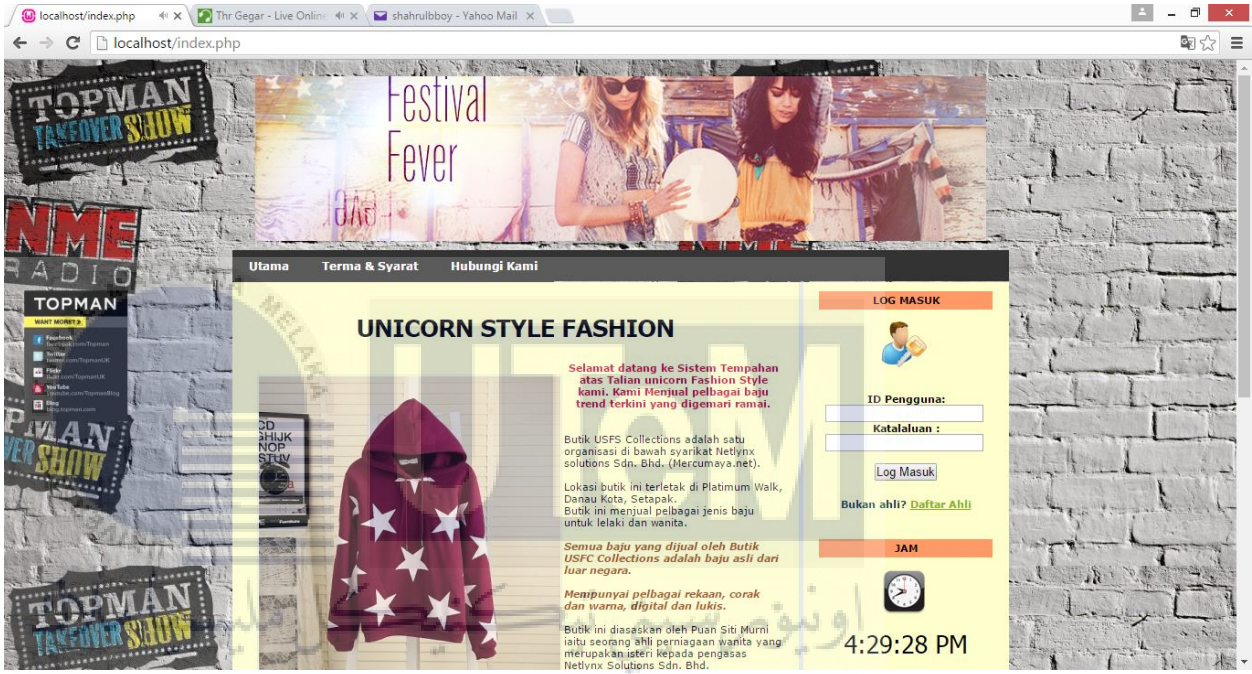


Figure 4.4: User Interface – Application Home page

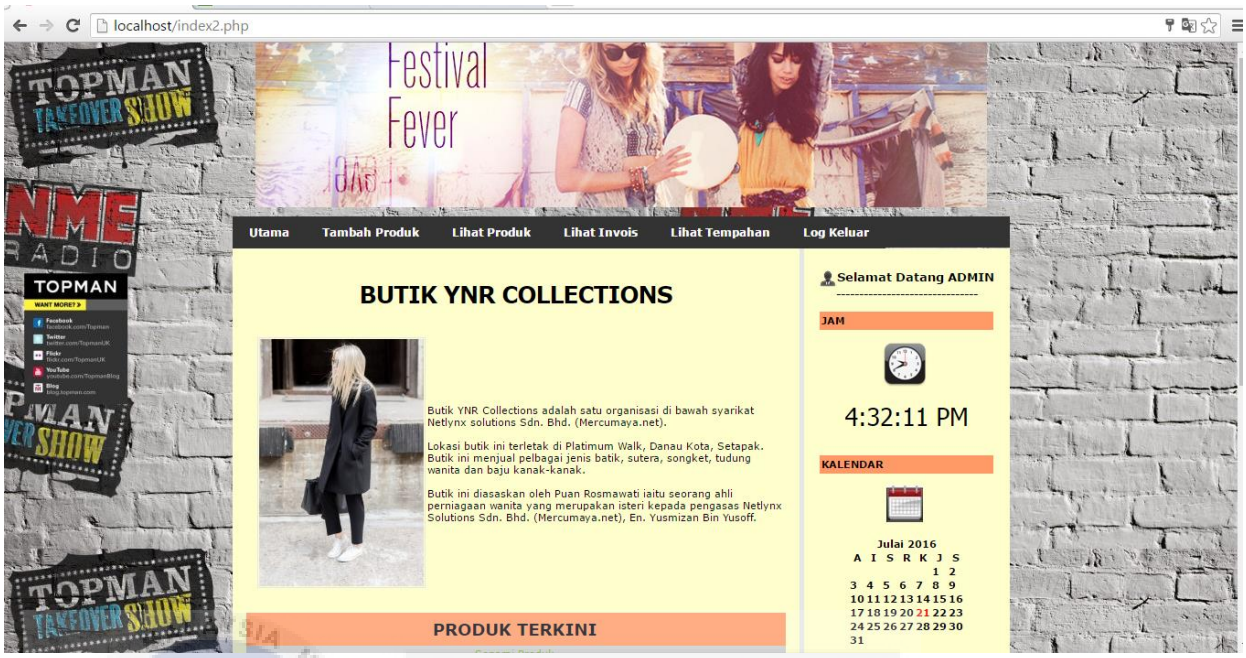


Figure 4.5: User Interface – Admin Home page

Figure 4.6: User Interface – Customer Home page

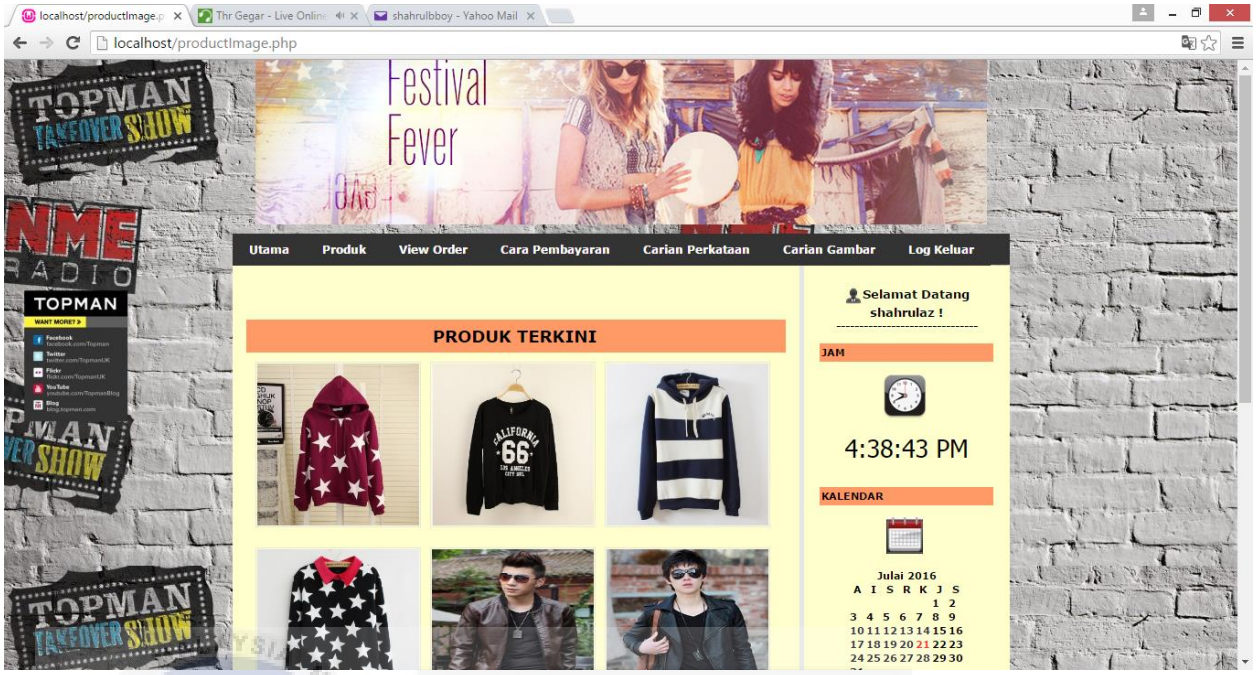


Figure 4.7: User Interface – List of product

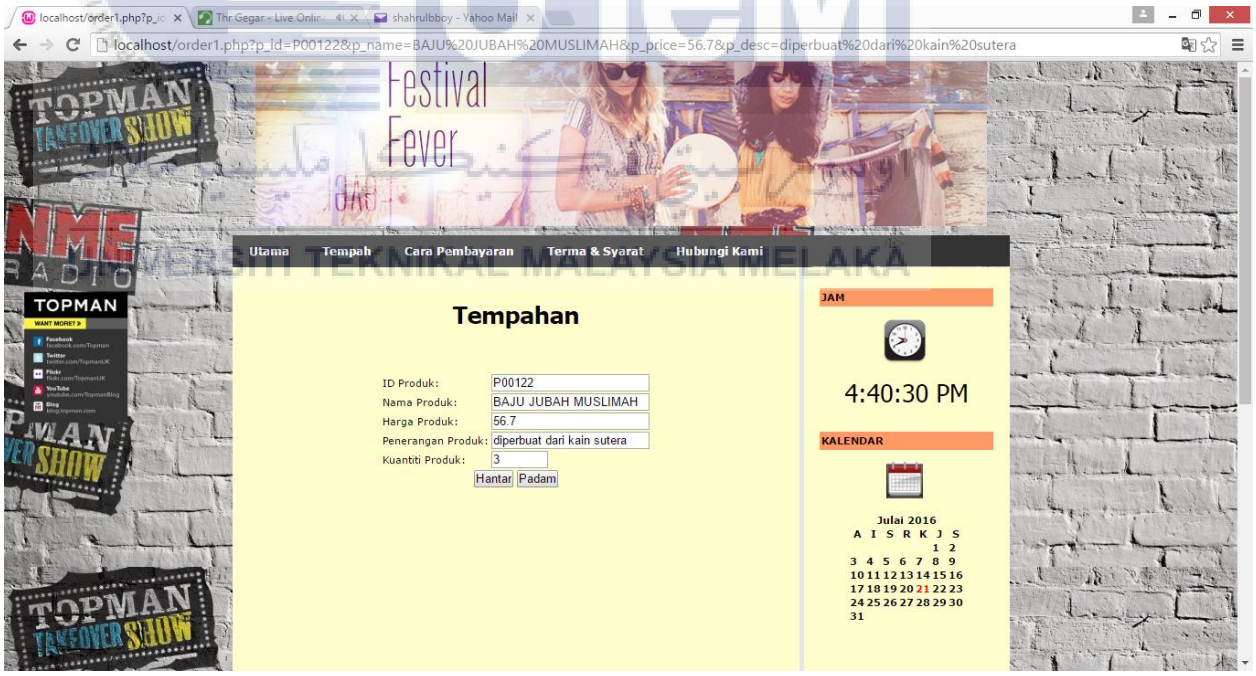


Figure 4.8: User Interface (User) – For customer make order

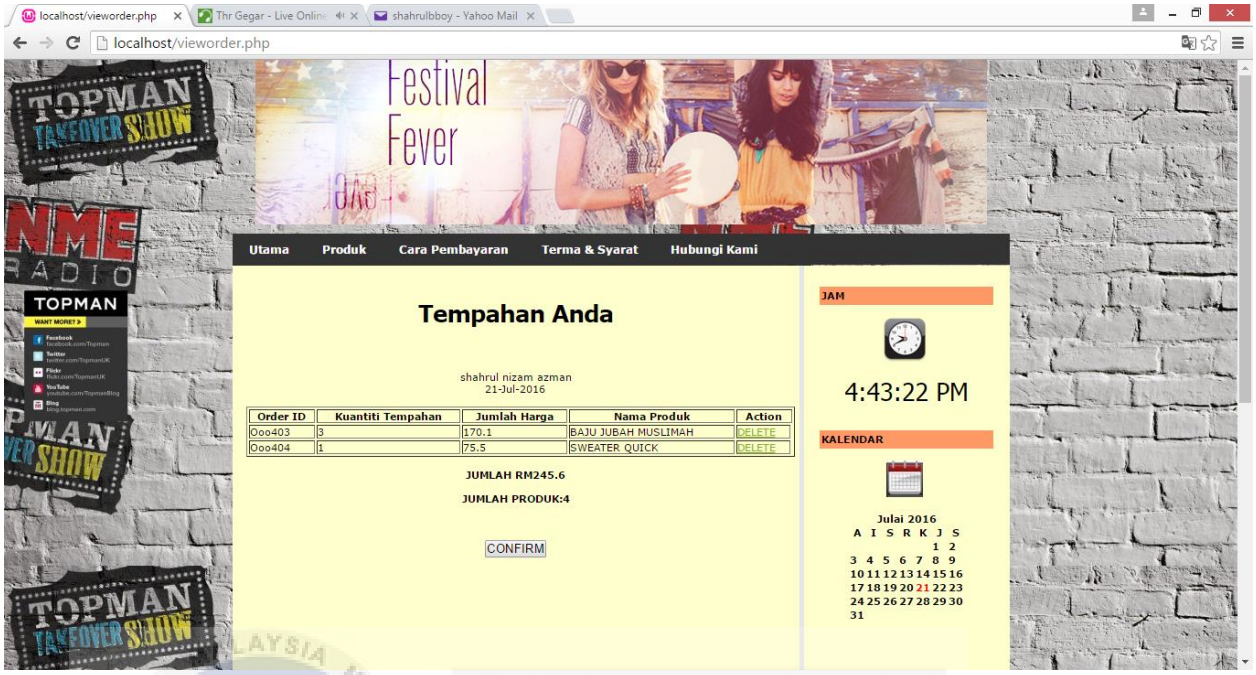


Figure 4.9: User Interface – List of order

Figure 4.10: User Interface – Customer invoice

4.2.6 Navigation Design

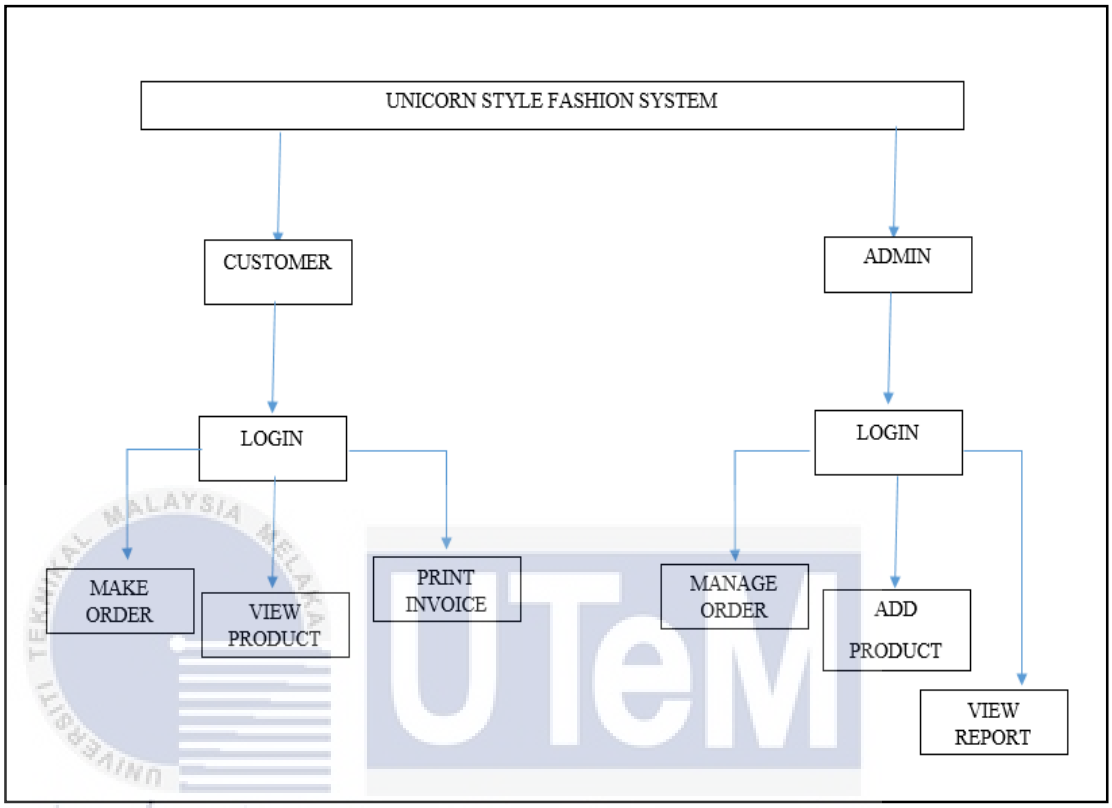


Figure 4.11: Navigation Design Unicorn Style Fashion System

4.2.7 Input Design

In USFS, input design capture only necessary data. Unnecessary data are avoided in order to get the constant and useful data. This input design contains of the design of user interface.

Table 4.3: Input Design for Registration

Form	Input Component	Type	Validation Rules
Registration	c_username	Text box	20 character
	c_password	Text box	10 character
	c_email	Text box	20 character
	c_name	Text box	50 character
	c_icno	Text box	12 character
	c_phone	Text box	12 character
	c_address	Text box	50 character
	c_postcode	Text box	5 character
	c_state	Text box	20 character
	c_level	Text box	20 character

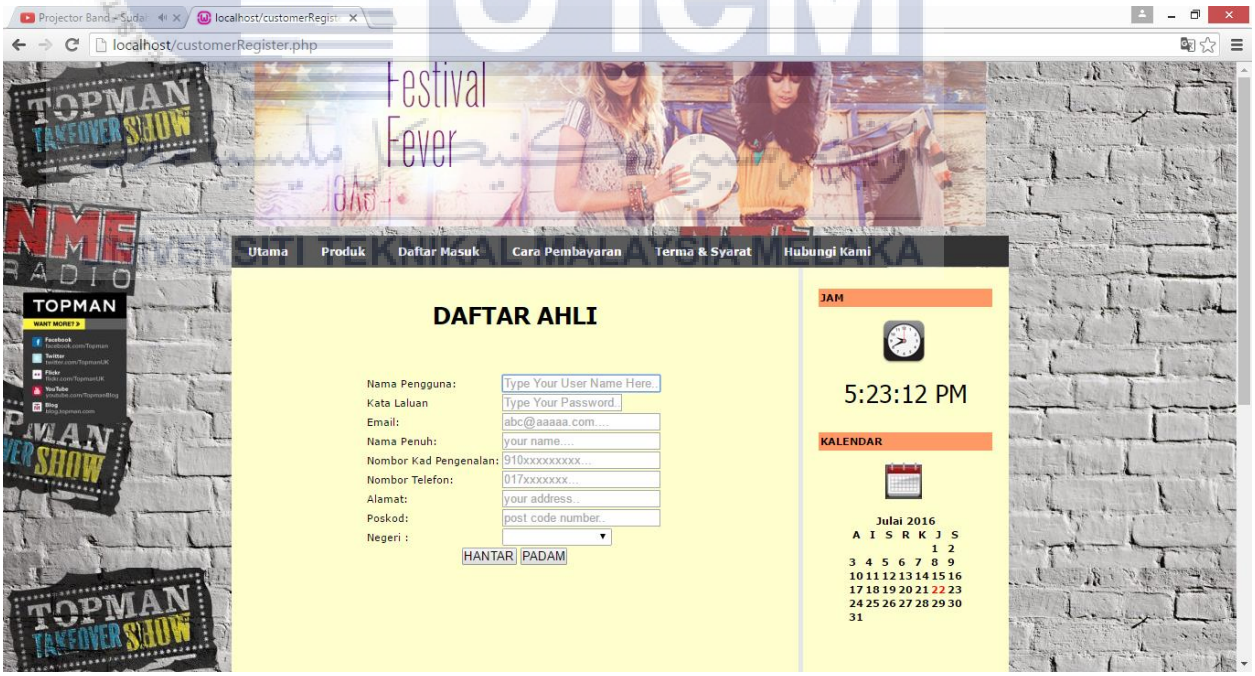


Figure 4.12: Input Design for Registration

Table 4.4: Input Design for Searching

Form	Input Component	Type	Validation Rules
Searching	P_name	Text box	50 character

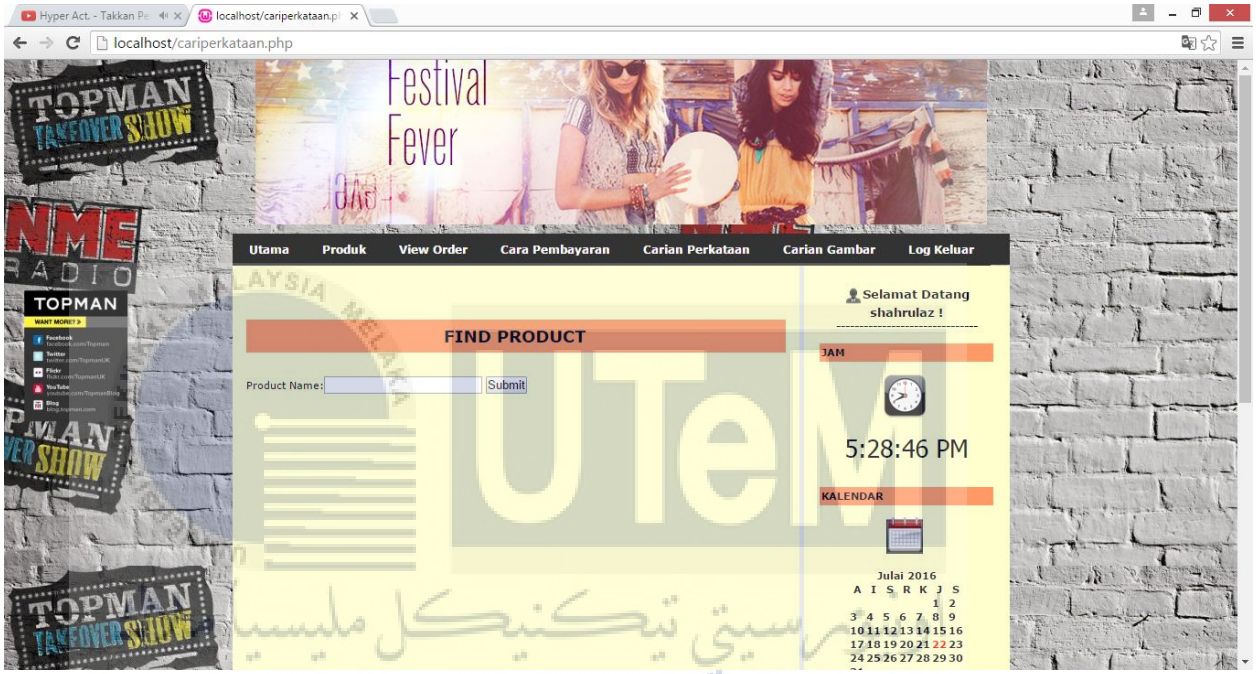


Figure 4.13: Input Design for Searching

Table 4.5: Input Design for Order

Form	Input Component	Type	Validation Rules
Order	O_quantity	Text box	Number

Figure 4.14: Input Design for Order

4.2.8 Output Design

As we know, output is a term that shows an information either displayed or printed by the information system. To get an output, there are some methods required to be selected for presenting the information. These method are used to identify the specific output required to meet the information requirements.

Table 4.6: Output Design for Searching Product

Form	Description
Searching product	**Input - Key in product name**
	Output – List of product with that name

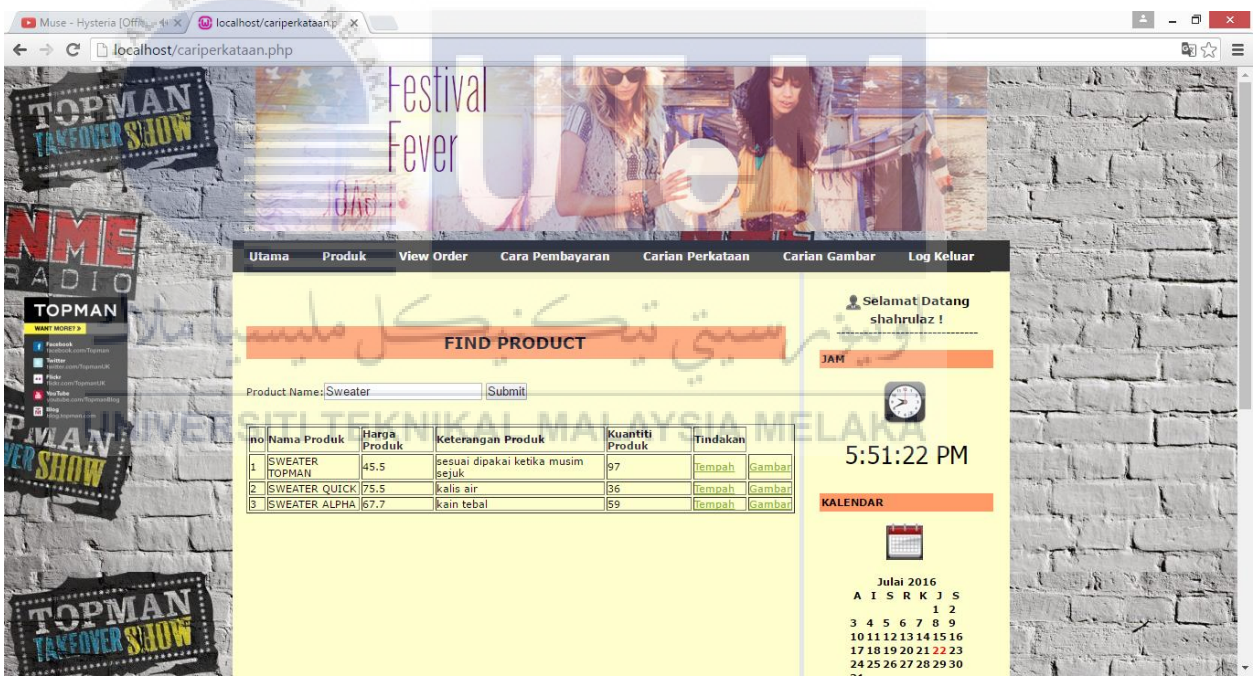


Figure 4.15: Output Design for Searching

4.3 CONCLUSION

In this chapter, it discusses the design that are involved to complete this Unicorn Style Fashion System. System architecture design for this system is about the structure that facilitates the database to complete a transaction. While in the database design, it was divided into three parts that are conceptual design that consist of ERD and business rule. Next is the logical design that explains about the data dictionary of the USFS and query involved. Lastly is the physical design describing the detail about the DMBS, database objects that has been used, security mechanism and database contingency. Moreover, there is also the Graphical User Interface (GUI) design that explain and shows the flow of the system. Next chapter will be the implementation for the USFS. It will be the system development environment setup and the database implementation that will be discuss in more detail.

CHAPTER V

IMPLEMENTATION

5.0 INTRODUCTION

A complete system must be implemented correctly with the useful functionality. This chapter will be discuss on how this project are implement from the beginning to the end. All this will be explain in the system development environment setup which is the beginning phase of implementation. Meanwhile, the middle and end processes will be explained in the database implementation. In order to produce a good system, all the implementation phase are completed in the best way. As long as the system is a user friendly system and easier to use.

5.2 SYSTEM DEVELOPMENT ENVIRONMENT SETUP

Unicorn Style Fashion System (USFS) is using Php application and it runs under wamp. Wamp is a server that act as the local host. Oracle 10g Express Edition is also used as the database server. All the data entered by user is stored in this database. The user interface is designed using the Adobe Dreamweaver CS6.

5.2.1 Installation step

In this installation, it will explain step by step on how the oracle 10g and Wampserver are installed. Please refer to **APPENDIX C.**

5.2.2 Database and database objects creation

Database for USFS is created in the **test** database. All the entities in the ERD are created in the database as the single table. All the tables are assigned with primary key (PK) as their

unique key. Not just that, any PK that contains in other table are assigned as foreign key (FK). All the table are created and using SQL statement.

5.3 DATABASE IMPLEMENTATION

Database implementation will cover about DDL/DCL statement and how the implementation process on the main process base on stored procedure and trigger by using the selected programming language.

A. DDL/DCL statement (schema level)

Data definition language (DDL) is a syntax that is similar to a computer programming language in order to define the data structure especially data schema. While data control language (DCL) is used to create and delete databases and database objects. These command are usually use by administration during setup and removal phase of database project.

CREATE STATEMENT

Oracle 10g Express Edition is easily installed. It is recommended to install this DBMS. So that, user can easily manage their own database independently.

i. Create an empty database name “test” on DBMS.

Command: **CREATE DATABASE TEST**

ii. Create table based on the entity in the ERD.

Example command:

```
create table customer
(
c_id varchar2(5) not null,
c_username varchar2(20),
c_password varchar2(10),
c_email varchar2(20),
c_name varchar2(50),
c_icno number(12),
c_phone number(10),
c_address varchar2(50),
c_postcode number(5),
c_state varchar(20),
c_level number,
primary key (c_id)
);
```

Figure 5.1 Create table Customer


```
create table product
(
p_id varchar2(5) not null,
p_name varchar2(50),
p_price number(5,2),
p_desc varchar2(50),
p_date date,
p_qty number,
primary key (p_id)
);
```

Figure 5.2 Create table Product

```
create table order1 (
o_id varchar2(5) not null,
o_quantity number,
o_Totalprice number(5,2),
o_date date,
c_id varchar2(5),
p_id varchar2(5),
i_id varchar2(5),
primary key (o_id),
foreign key (c_id) references customer (c_id),
foreign key (p_id) references product (p_id),
foreign key (i_id) references invoice (i_id)
);
```

Figure 5.3 Create table Order1


```
create table invoice (
i_id varchar2(5) not null,
total_item number,
overall_price number(5,2),
i_date date,
status varchar2(20),
primary key(i_id)
);
```

Figure 5.4 Create table Invoice

INSERT statements

Insert statement is refered to insert new row in a table or easily known as insert data in the existing table.

Example command:

```
insert into
customer(c_username,c_password,c_email,c_name,c_icno,c_phone,c_address,c_postcode,c_state,
c_level) values ('shahrul','123456','shahrul@yahoo.com','shahrul
nizam','910504016181','0173853316','taman kajang raya','43000','selangor','1');
```

Figure 5.5: Example insert data for table Customer

```
insert into product (p_name,p_price,p_desc,p_qty) values ('kurung','68.50','sutera','50');
```

Figure 5.6: Example insert data for table Product

UPDATE statement

Update statements is used to modify the values or the data of a row in the table.

```
update product set p_qty=p_qty-:new.o_quantity where p_id =:new.p_id;
```

Figure 5.7: Example update data for table Product

DELETE statement

Delete statement is use to delete a row or all data in the table. To delete the data, it must meet the 'where' condition then it will be deleted.

```
delete from product where p_id='P001';
```

Figure 5.8: Example delete data for table Product

ALTER statement

Alter statement is used to modify the existing database object in the database. It change the properties of an object in the DBMS. However, it depends on the type of the DBMS used in developing the system.

```
alter table customer modify c_icno varchar2(12);
```

Figure 5.9: Example alter data for table Customer

DROP statement

Drop statement is used to delete the existing database objects like table, index or view. In other words, it removes an object from the relational database management system (RDBMS). Most RDBMS support the dropping of tables, users and the database.

```
DROP TABLE CUSTOMER;
```

Figure 5.10: Example drop table Customer

B. Implementation main process

The main process of the system are using store procedure either for insert, add, update, view or delete. The used of store procedure is to secure the source code from being known by other user. Meanwhile, trigger are also use but only in the database either trigger before or after. It is created in the database. The trigger created and functioning when it meet the trigger condition. There are several triggers used in this system. For example, trigger before update, after update, security and auto increment.

Stored procedure

```
create or replace procedure view_order(i_id1 IN varchar2, myrc out sys_refcursor) as
begin
open myrc for
select o_id,o_quantity,o_totalprice,o_date,c_name, p_name from invoice i, customer c,product p,
order1 o
 where c.c_id=o.c_id
 AND p.p_id=o.p_id
 AND i.i_id = o.i_id
 AND o.i_id = i_id1;
 end;
```

Figure 5.11: Store procedure for view order.

```
create or replace procedure insert_invoice
(
total_item in invoice.total_item%TYPE,
overall_price in invoice.overall_price%TYPE
)
is
begin
insert into invoice (total_item,overall_price) values (total_item,overall_price);
end;
```

Figure 5.12: Store procedure for insert invoice.

```
create or replace PROCEDURE loginCustomer(
 c_user IN   customer.c_username%TYPE,
 c_pass IN  customer.c_password%TYPE ,
 c_id OUT customer.c_id%TYPE ,
 p_count OUT number,
 c_level OUT varchar2,
 c_name OUT varchar2
          )
IS BEGIN
            SELECT count(*), c_id, c_level, c_name
            into p_count , c_id , c_level, c_name
            FROM  customer
            WHERE c_username = c_user and c_password = c_pass
   GROUP BY c_id, c_level, c_name;
END;
```

Figure 5.13: Store procedure for login.

```
create or replace PROCEDURE order_procedure(
cc_id IN   customer.c_id%TYPE,
 pp_id IN  product.p_id%TYPE ,
cc_name out customer.c_name%TYPE,
pp_name out product.p_name%TYPE
          )
IS BEGIN
select c_name, p_name into cc_name, pp_name from customer c,product p, order1 o where c.c_id=cc_id AND p.p_id=pp_id;
COMMIT;
END;
```

Figure 5.14: Store procedure for select


```
create or replace procedure update_product
(
p_id in product.p_id%TYPE,
p_name in product.p_name%TYPE,
p_price in product.p_price%TYPE,
p_desc in product.p_desc%TYPE,
p_qty in product.p_qty%TYPE
)
is
begin
update product set p_name=p_name,p_price=p_price,p_desc=p_desc,p_qty=p_qty where p_id=p_id;
end;
```

Figure 5.15: Store procedure for update

```
create or replace procedure delete_product
(
p_id1 in product.p_id%TYPE
)
is
begin
delete from product where p_id=p_id1;
end;
```

Figure 5.16: Store procedure for delete

Trigger

```
create or replace trigger prod_trig_date
before insert on product
for each row
begin
:new.p_date:=sysdate;
end;
```


Figure 5.17: Trigger to use system date

```
create or replace trigger after_insert_product
after insert on order1
for each row
declare
total_product_order number;
begin
update product set total_product_order = nvl(total_product_order,0) + :new.o_quantity
where p_id = :new.p_id;
end;
```

Figure 5.18: Trigger after insert

5.4 CONCLUSION

This chapter discusses on the activities involved in the implementation phase that are used to start creating the system. It include the installation software that are used and how to create the database and database objects. For installation step, it was discussed in system development environment setup. While DDL/DCL statement in the database implementation. The next chapter will be discussing on how to carry out the testing plan. In that phase, the overall system will be tested base on the modules that are developed.

CHAPTER VI

TESTING

6.0 INTRODUCTION

This chapter will be discussing about testing phase for Unicorn Style Fashion System (USFS). The purpose of testing the system is to determine the capability of the system either it meet all the requirements and how effective this system to be used by user. It is important as any fault or failures in the system can be detected earlier. This phase is covered with the test plans on how the testing will be carry out. In test plan it included test organization, test environment and test schedule. While test strategy will include the classes of test. For the test design, it will explain more on test description and test data for the system. At the end, based on the test result and analysis, it will determine either the system is failed or success and either it meets the user satisfaction when using this system.

6.1 TEST PLAN

Test plan is used in the beginning of testing phase. It will test on organization, environment and schedule. This is an approach that is taken to test the system that is going to be used by user.

6.2.1 Test Organization

Test organization is a group of people that is given a responsibility to test the system during the testing process. This group of people are coming from different backgrounds. They are System Developer, Project Supervisor and student. System Developer is the person who designs and develop the Unicorn Style Fashion System (USFS). Project Supervisor is the individual who is responsible to supervise the project of system developer works. While student act as the end user of the system. After testing the system is done, all of them must give feedbacks. All these feedbacks can be used as a guide to enhance the system.

Table 6.1: Test Organization for USFS

Tester ID	Title/Post	Responsibility
Tester 1	System Developer	• Responsible to develop, manage, test and documenting the system. • Make sure that the system follows the requirement stated and successfull completed
Tester 2	Project Supervisor	• Responsible to test the system and give the feedback to the system developer.
Tester 3	Student	• Responsible to test the system and give the feedback to the system developer.

6.2.2 Test Environment

Test environment is the environment that the system developer use to develop and maintain the programs. To facilitate the testing process, an optimal environment needs to be setup based on the following specification.

Table 6.2: Test Environment

Variables	**Requirements**
Hardware	Processor : Intel Pentium RAM : 2GB Hard Disk space : 300 MB and above
Software	Adobe Dreamweaver CS6
Workstation	Microsoft Windows Network
Database	Oracle Database 10g Express Edition
Training/Preparation	Assigned tester with provided with user manual.

6.2.3 TEST SCHEDULE

Table 6.3: Test Schedule

Module Component	Activity	Duration	Start	End
System Login	• System testing • User acceptance	2 days / 3 times	25/05/2016	26/05/2016
Calculation	• System testing • User acceptance	4 days / 3 times	25/05/2016	28/05/2016
Searching	• System testing • User acceptance	4 days / 3 times	25/05/2016	28/05/2016
Order	• System testing • User acceptance	5 days / 3 times	25/05/2016	29/05/2016

6.2.4 Test Strategy

Test strategy is an outline that describes the testing approach of the software development cycles. It is created usually to inform the project manager, system developer and tester about some key issues regarding the testing process. To test Unicorn Style Fashion System (USFS), black-box and white-box tests have been chosen in this test strategy.

Black-box testing is the testing that is conducted based on the testing requirement and functionality in SDS. It's consist of positive testing, negative testing and error guessing. Positive testing is to determine either the system can produce the expected result or not consisted with the requirements stated. While negative testing is to determine the invaliding or unexpected action that might happen in the system. For error guessing, it is used to notify if the user enters the valid input by displaying the error message.

White-box testing or usually know as clear-box testing, glass-box testing or transparent testing. It is the method of testing the software for the internal structure or working in the application, as opposed to its functionality. Normally, it examines the source codes that are used

to develop the test cases. Through this method, it can uncover errors or the problems because this system might have the potential to miss the unimplemented parts of the specification or missing some requirements stated.

6.2 Classes of tests

There are several classes of test that have been carried out. It is divided into security test, unit testing, system testing and user acceptance testing.

- Security Testing

Security testing is a process intended to reveal flaws in the security mechanism of an information system that protect data and maintain the functionality as intended. Actual security required the requirements tested depending on the security requirements that has been implemented by the system. In USFS, the quality, reliability and the security are combined together. This testing is using the white box testing that is tested by the system developer.

- System Testing

System testing is used to make sure that the USFS only accept the right input from user. If the user enter the invalid input, the system will notify the user with display the error message regarding the error. This test is using the black box to identify the result for the positive testing, negative testing and error guessing. It is also tested using the white box testing to uncover the problem that identified in the black box testing by examining through the source code. This system testing is tested by the system developer.

- Unit Testing

Unit testing is carried out to test the overall of the system to make sure it can functioned well. This testing is using the black box testing and consists of three testers that are the system developer, the project supervisor and the student as the end user.

- User Acceptance Test

The user acceptance test is to identify either user can accept this system and attract user interest to use the system. This test is using the black box test strategy and tested by project supervisor and student.

6.3 TEST DESIGN

Test design explain on the test description and test data. In test description, it consist of test case identification, test cases, and expected result for each module. While in test data, real life or synthetic data will be selected.

6.3.1 Test Description

Unicorn Style Fashion System (USFS) is the system that is developed to customer can make online order. All the data is stored in the database. Test cases are developed to carry out the test process. Following table shows the result of unit testing.

Table 6.4: Login Module

Test Case ID	Description	Testing Type	Expected Result
TC_01-1	Invalid user ID and invalid password	Unit testing	• Back to login page
TC_01-2	User ID and blank password	Unit testing	• Back to login page
TC_01-3	Valid user ID and password	Unit testing	• Successfully logon

Table 6.5: Order Module

Test Case ID	Description	Testing Type	Expected Result
TC_02-1	All field blank	Unit testing	The record are not save in the database.
TC_02-2	Enter the invalid data or format in the demerit field	Unit testing	The record are not save in the database.
TC_02-3	Enter valid data and format in each field	Unit testing	Record are saved in the database. Customer can make order.

6.3.2 Test Data

Testing phase for USFS required real data for add new record and log in. Following table shows the test data that is used for this system.

Table 6.6: Test Data for Login

Column Name	TD_01-1	TD_01-2	TD_01-3
Test Case ID	TC_01-1	TC_01-2	TC_01-3
User ID	shahrula	shahrula	shahrulaz
Password	6543211		654321
Result Test Data	• Popup message • Back to login page	• Popup message • Back to login page	• Success login

Table 6.7: Test Data for Order

Column Name	TD_02-1	TD_02-2	TD_02-3
Test Case ID	TC_02-1	TC_02-2	TC_02-3
Product ID		P001	P001
Product Name		Baju Melayu	Baju Melayu
Product Description		Diperbuat dari kain sutera	Diperbuat dari kain sutera
Product Price		RM67.80	RM67.80
Order Quantity		A11	11
Result test data	Inserted fail. Data not save in the database	Inserted fail. Data not save in the database	Data successfully inserted into database.

6.4 TEST RESULT AND ANALYSIS

All the test results documented describe in the following table. Test case is the input to test the system. After the test has been done, the test result can be review to see which tests successes and which test are failure. The success or failure when using the actual data for testing process can be the factor to measure the system either it can worked efficiently or need to be fixed. Please refer in the following table to see the test result and analysis.

Table 6.8: Test result and analysis for login

Module Component: Login		**Result**		
Test Case ID	**Test Data ID**	**Description**	**PASS**	**FAIL**
TC_01-1	TD_01-1	User ID and password didn't exist	✓	
TC_01-2	TD_01-2	User ID or password field blank	✓	
TC_01-3	TD_01-3	Valid user ID and password	✓	

Table 6.9: Test result and analysis for Order

Module Component: Order		**Result**		
Test Case ID	**Test Data ID**	**Description**	**PASS**	**FAIL**
TC_02-1	TD_02-1	All field blank.	✓	
TC_02-2	TD_02-2	Invalid data or format in demerit fields.	✓	
TC_02-3	TD_02-3	Valid data for each field.	✓	

6.5 CONCLUSION

As a conclusion, this chapter that conduct the testing process are the most crucial part to be completed and developed for this system. This is because, developer need to test every single part of the system to know how the system will perform from several aspects. Many aspect need to be consider such as reliability, security of the system and the user efficiency to make sure that the system meets all the requirements. From the testing process that have been done, developer can fixed any fault and problems that come up. Next chapter will cover on the conclusion of the overall system. These chapter will explain about the strength and weaknesses of the system, proposition to improve the system and what is the contribution for the future.

CHAPTER VII

CONCLUSION

7.0 INTRODUCTION

This chapter will discuss about the strengths and weaknesses of this project based on the observation and some test that have been made. Other than that is proposition to improve this system to be high level system in order can be used for the long period and effective. The outsider suggestion also take into consideration. This is because, all that suggestion are taken as the user view through the system and what user want when they use the system. Finally is the contribution of this project to the university or individual that will be used this system either it bring a lot of goodness or badness.

7.2 OBSERVATION ON WEAKNESSES AND STRENGTHS

After done completing the Unicorn Style Fashion System (USFS), based on the testing and observation that had been made, there are some weaknesses and strengths for this project. Table below show the strength and weaknesses for the system.

Table 7.1 Weaknesses and Strength USFS system

Weaknesses	Strengths
1. Can only cumulate limited amount of data, as it is built for small-scale companies.	1. The system are user friendly and simple as it can attract people to use the system.
2. Enhance the user interface to a more corporate design.	2. Admin can view and print report with this system.
3. Focused only on the given requirements.	3. Customer can choose many type product based on picture.

Besides that, there are others responses regarding this project that is make a login interface for customer in order to increase the level of security of the system. So that the others customer didn't see other records.

7.3 PROPOSITION FOR IMPROVEMENT

Unicorn Style Fashion System can be improved in order to make it usable for long period of time. Not just that, all these improvement can reduce the problem that faced by admin.

Secondly, add backup or restore data option such as data for customer who had make an order. This will ease admin to manage the record. The database can be backup using database logical backup. The data must be backup every day and only backup the new data by using differential backup (backup all changes since last full backup). Other than that, full and incremental backup also can be used because full back up all the data and incremental backup all changes since last full or incremental backup.

The last improvement that can be made are make the system more efficiency and user friendly implementing as application on the smartphone. The reason why the system need to be efficiency and become an application is to reduce time taken for customer make an order and make a payment. This is because nowadays everyone are using smartphone. So its more easy for them to use the smartphone rather than using the computer.

7.4 Contribution

This project contribute a lot to this company in terms of reducing the use of paper, easier manage the customer record and transform the manual system to the computerized system. This system are built to ease the management manage the ordering. In addition, it also easier for customer to check their order record. The step or user manual to use this system for user and admin side are included on **APPENDIX C**.

7.5 CONCLUSION

As a conclusion, this project are completed according to the objective and project scope. The development process for this system are based on the project schedule and milestone that have been planned earlier. This system developed is a user friendly system and easier for user either customer or admin even though there some weaknesses need to be repair.

REFERENCES

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How to create report generation using php codes http://www.webdeveloper.com/forum/showthread.php?237984-How-to-create-report-generation-using-php-codes

How To Fix Php4ts.dll is Missing / Not Found Error Messages http://www.solvusoft.com/en/files/missing-not-found-error/dll/windows/nusphere-corporation/mysql/php4ts-dll/

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APPENDICES

APPENDIX A

DATA DICTIONARY

Table 4.0: Table Student

COLUMN	DATA TYPE	LENGTH	PRECISION	SCALE	PK/ FK	NULLABLE	REFERENCE TABLE (FK)
C_ID	Varchar2	5			PK		
C_USERNAME	Varchar2	20				✓	
C_PASSWORD	Varchar2	10				✓	
C_EMAIL	Varchar2	20				✓	
C_NAME	Varchar2	50				✓	
C_ICNO	Number	12,0				✓	
C_PHONE	Number	10,0				✓	
C_ADDRESS	Varchar2	50				✓	
C_POSTCODE	Number	5,0				✓	
C_STATE	Varchar2	20				✓	
C_LEVEL	Varchar2	20				✓	

Table 4.1: Table Invoice

COLUMN	DATA TYPE	LENGTH	PRECISION	SCALE	PK/ FK	NULLABLE	REFERENCE TABLE (FK)
I_ID	Varchar2	10			PK		
TOTAL_ITEM	Number					✓	
OVERALL_PRICE	Number	5,2				✓	
I_DATE	Date					✓	
ADDRESS	Varchar2	50				✓	
STATUS	Varchar2	20				✓	

Table 4.2: Table Product

COLUMN	DATA TYPE	LENGTH	PRECISION	SCALE	PK/ FK	NULLABLE	REFERENCE TABLE (FK)
P_ID	Varchar2	10			PK		
P_NAME	Varchar2r	50				✓	
P_PRICE	Number	5,2				✓	
P_DESC	Varchar2	50				✓	
P_DATE	Date					✓	
P_QTY	Number					✓	
TOTAL_PRODUCT _ORDER	Number					✓	

Table 4.3: Table Order1

COLUMN	DATA TYPE	LENGTH	PRECISION	SCALE	PK/ FK	NULLABLE	REFERENCE TABLE (FK)
O_ID	Varchar2	10			PK		
O_QUANTITY	Number					✓	
O_TOTALPRICE	Number	5,2				✓	
O_DATE	Date					✓	
C_ID	Varchar2	10				✓	Customer
P_ID	Varchar2	10				✓	Product
I_ID	Varchar2	10				✓	Invoice
TOTAL_ORDER	Number					✓	

Table 4.4: Table Image

COLUMN	DATA TYPE	LENGTH	PRECISION	SCALE	PK/ FK	NULLABLE	REFERENCE TABLE (FK)
IMAGE	BLOB					✓	
P_ID	Varchar2	10				✓	Product

APPENDIX B

Normalization

Third Normal Form (3NF)

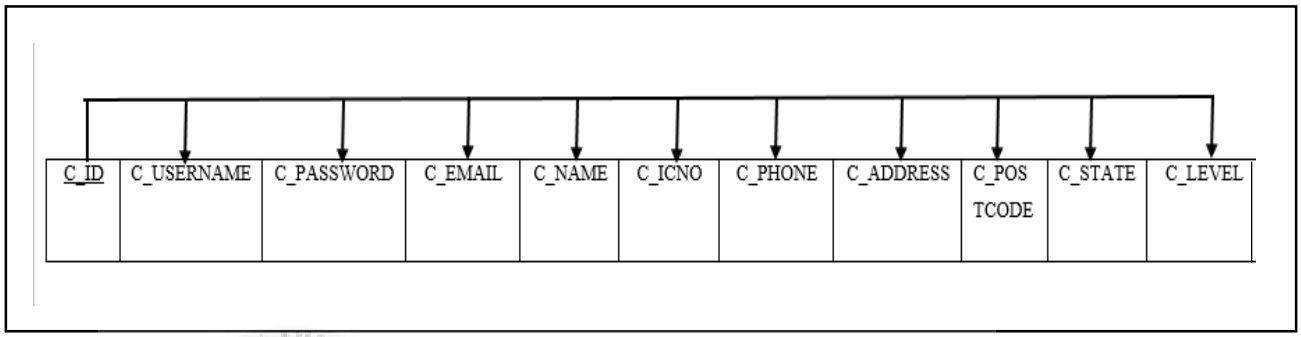


Figure 4.1: Third Normal Form for table Customer

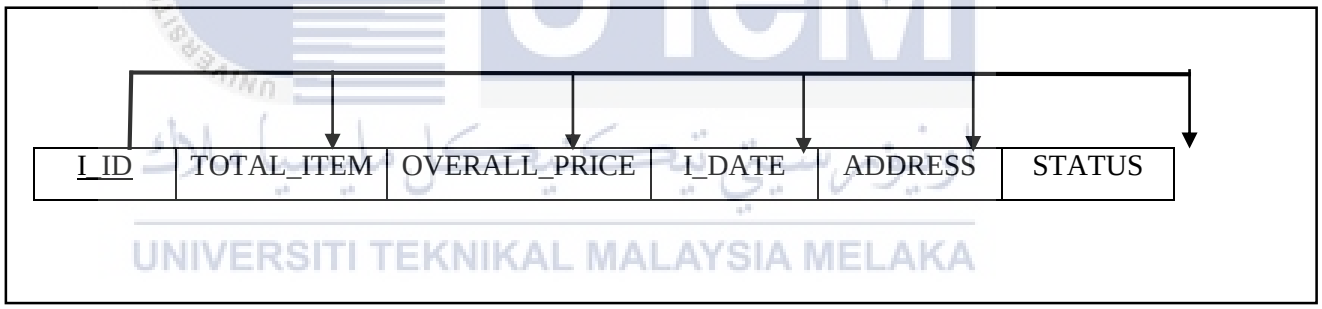


Figure 4.2: Third Normal Form for table Invoice

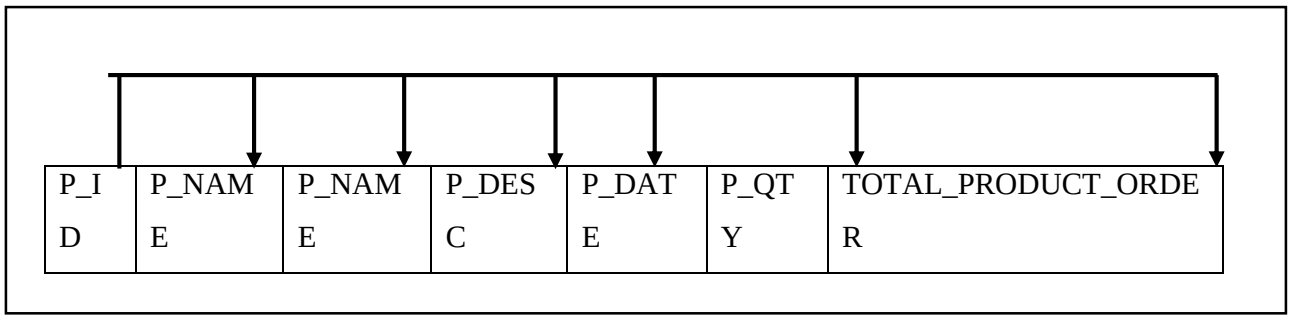


Figure 4.3: Third Normal Form for table Product

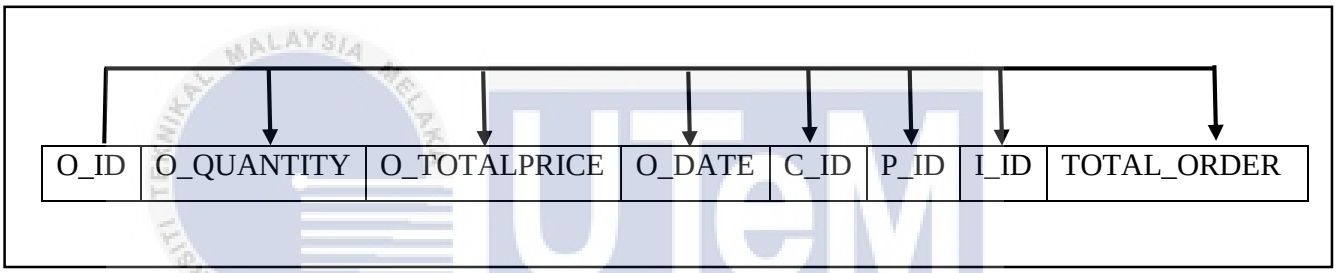


Figure 4.4: Third Normal Form for table Order1

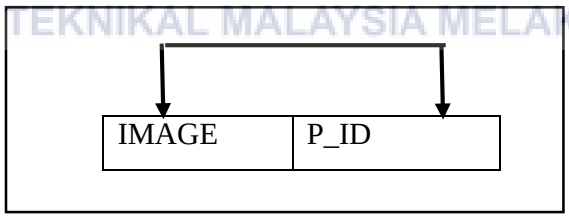


Figure 4.5: Third Normal Form for table Image

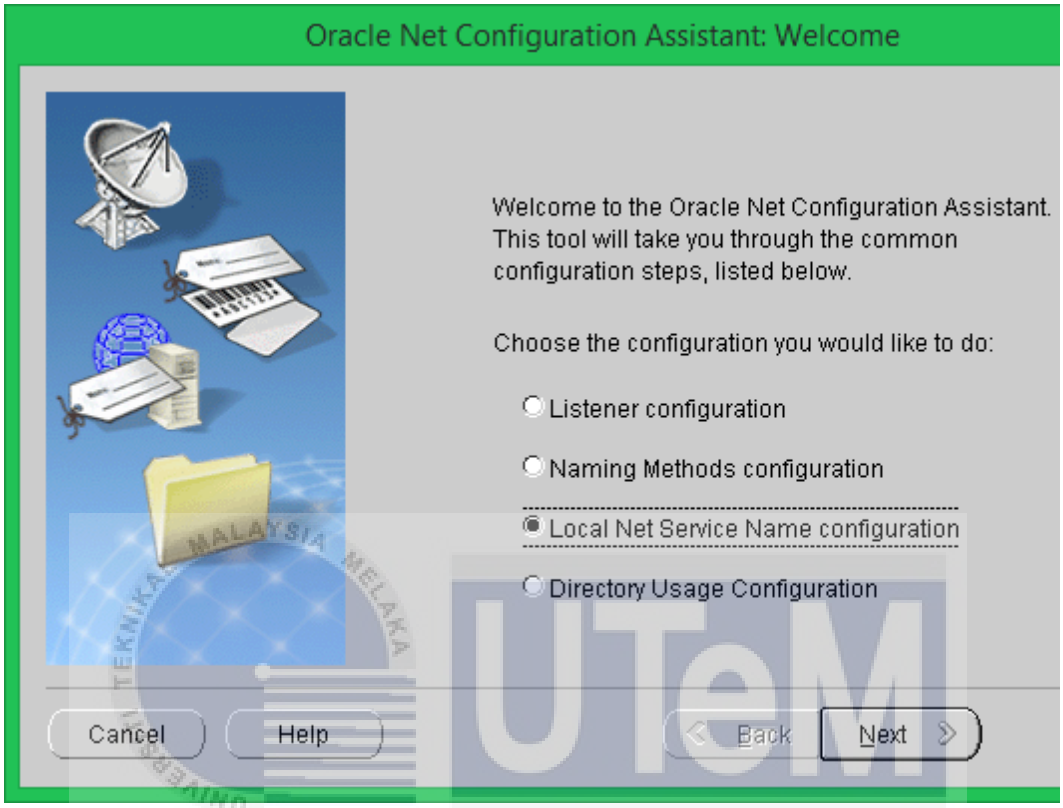
APPENDIX C

1.0 Installation step

1.1 Oracle 10g

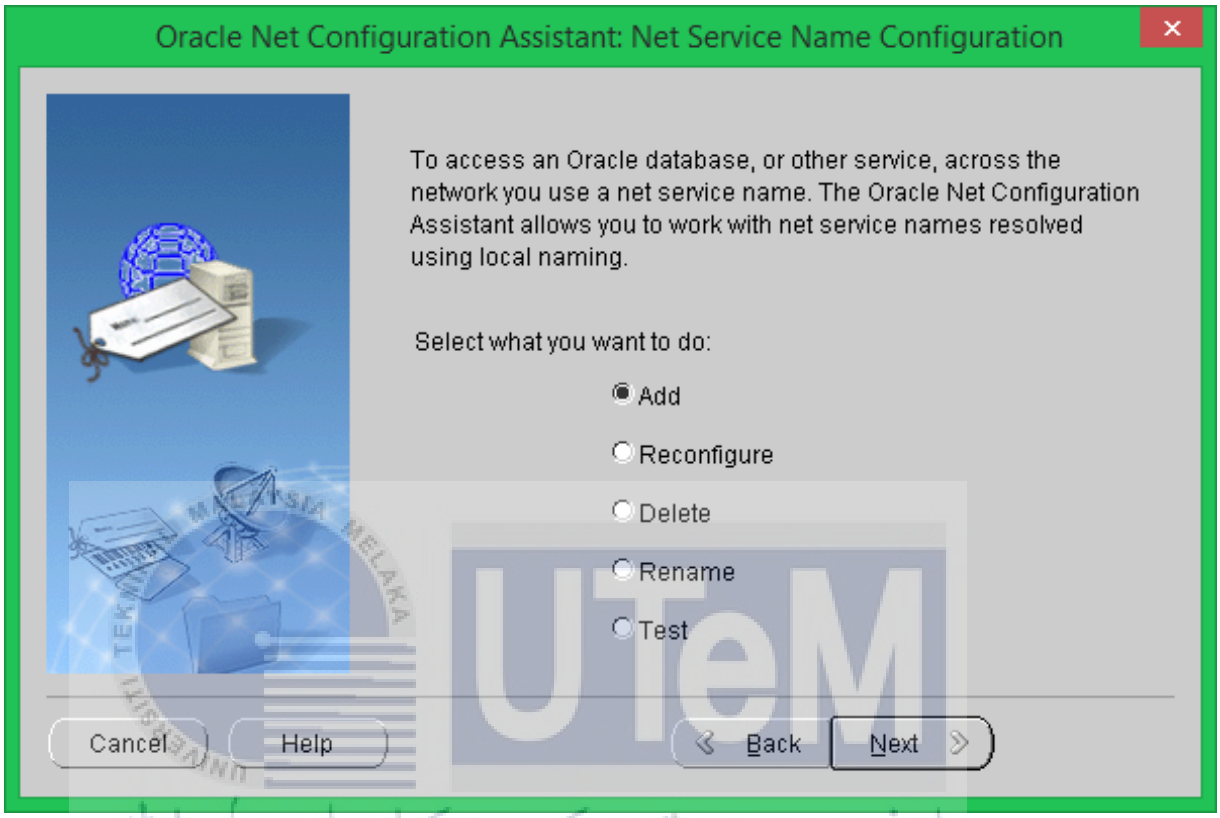
STEP 1: Invoke Net Configuration Assistant.

STEP 2: Choose, Local Net Service Name Configuration

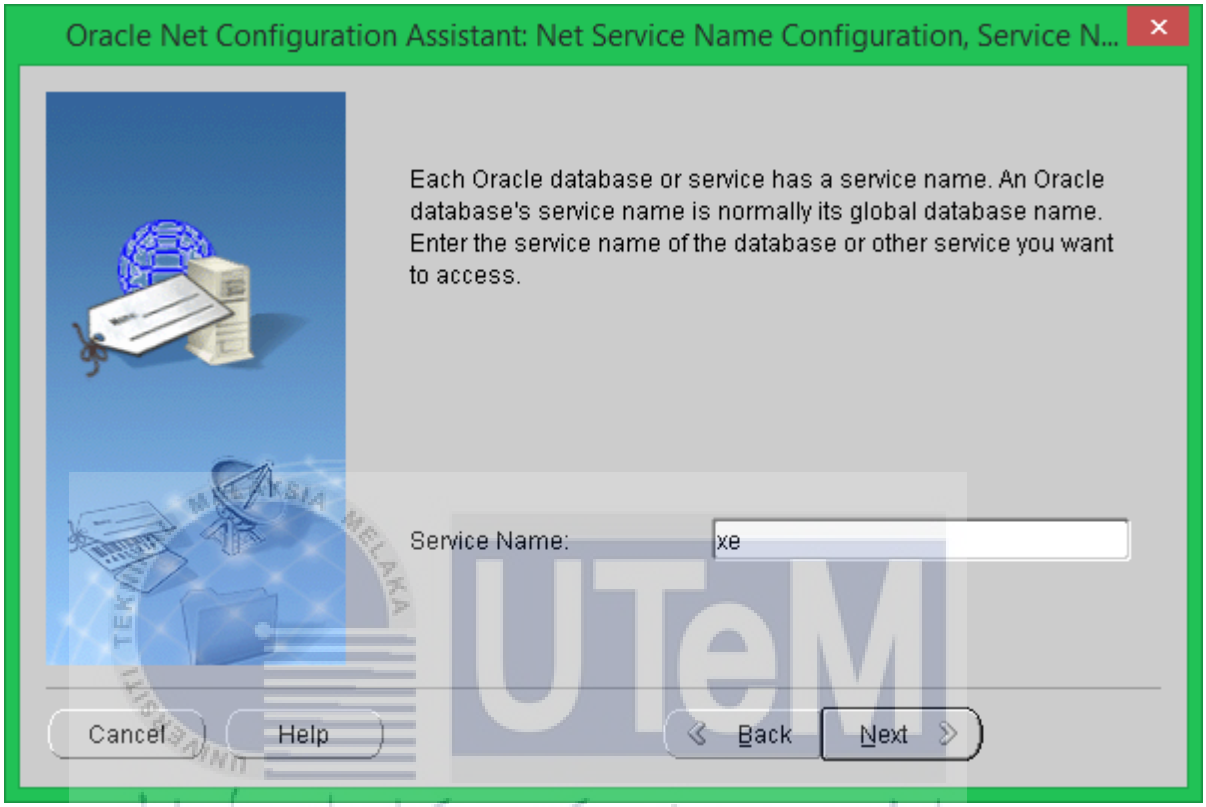


STEP 3: Click Next Button

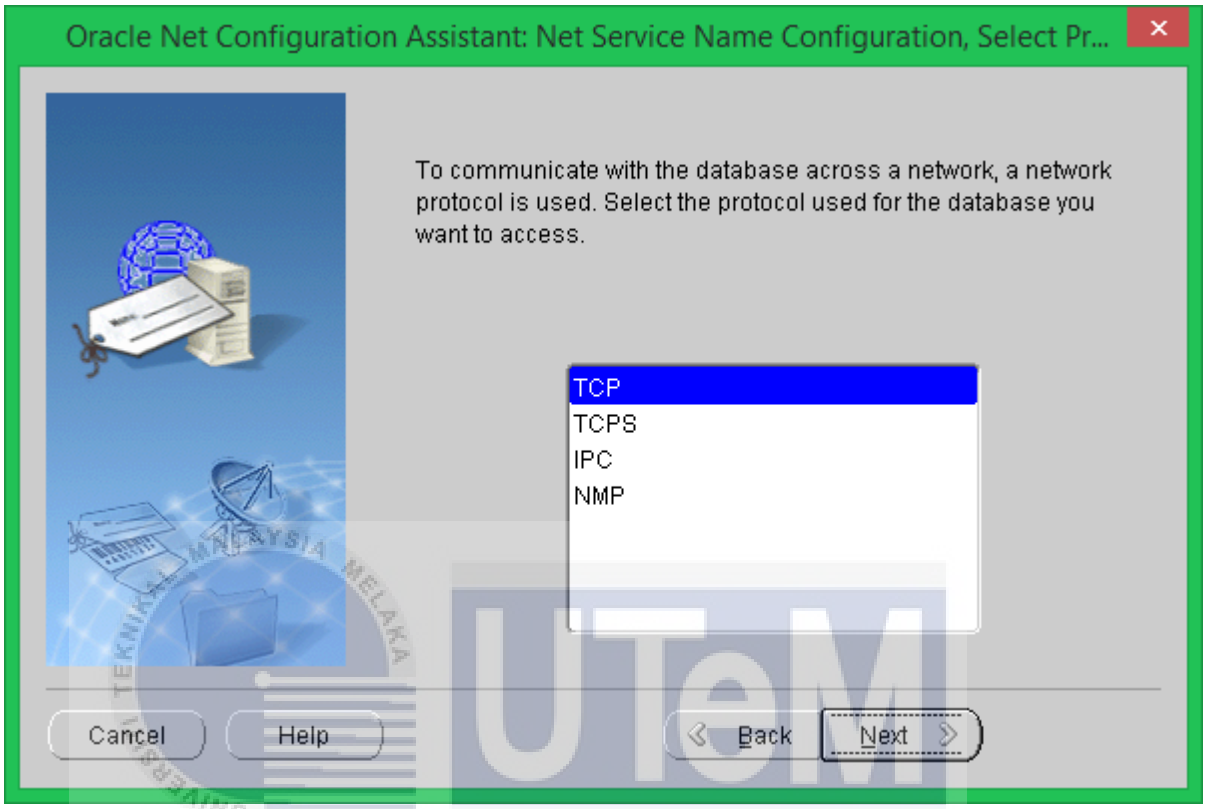
STEP 4: Choose Add option and click next button



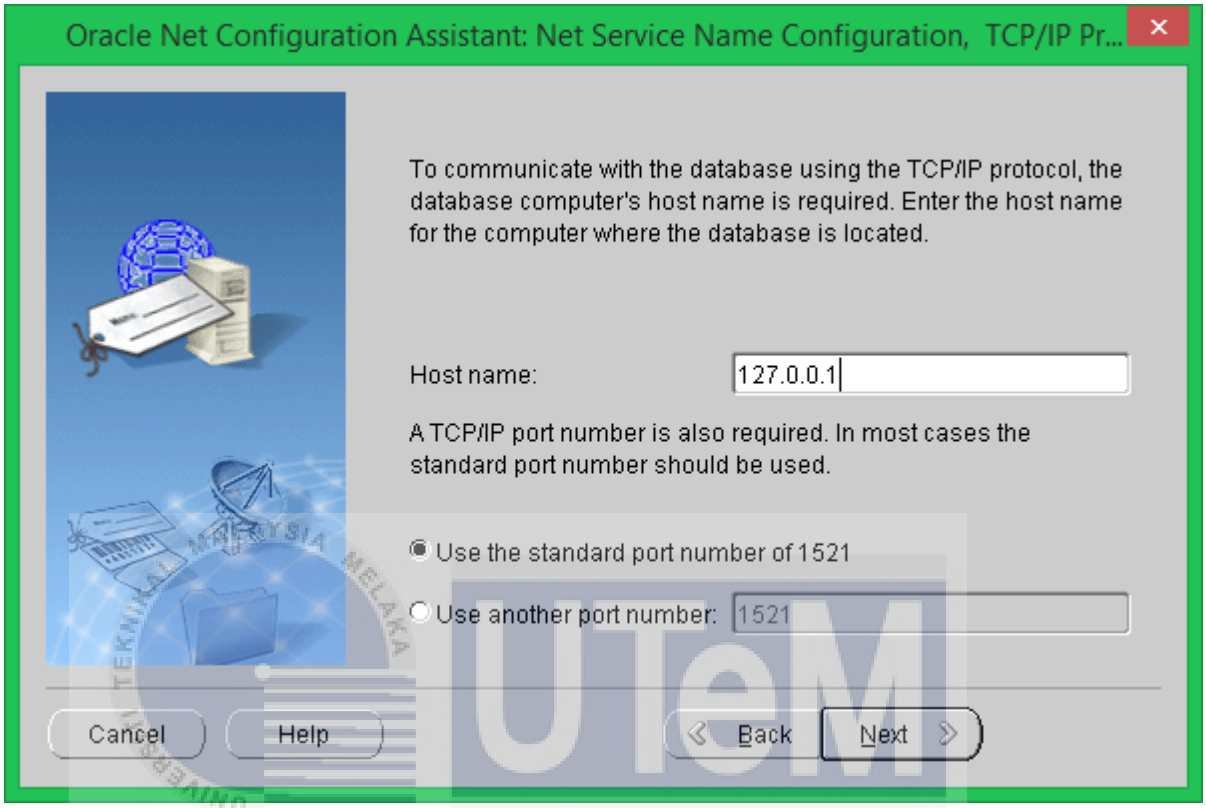
STEP 5: type in “xe” as a new service name. Here, are allowed to use our own service name. But, it advisable to keep as it is.



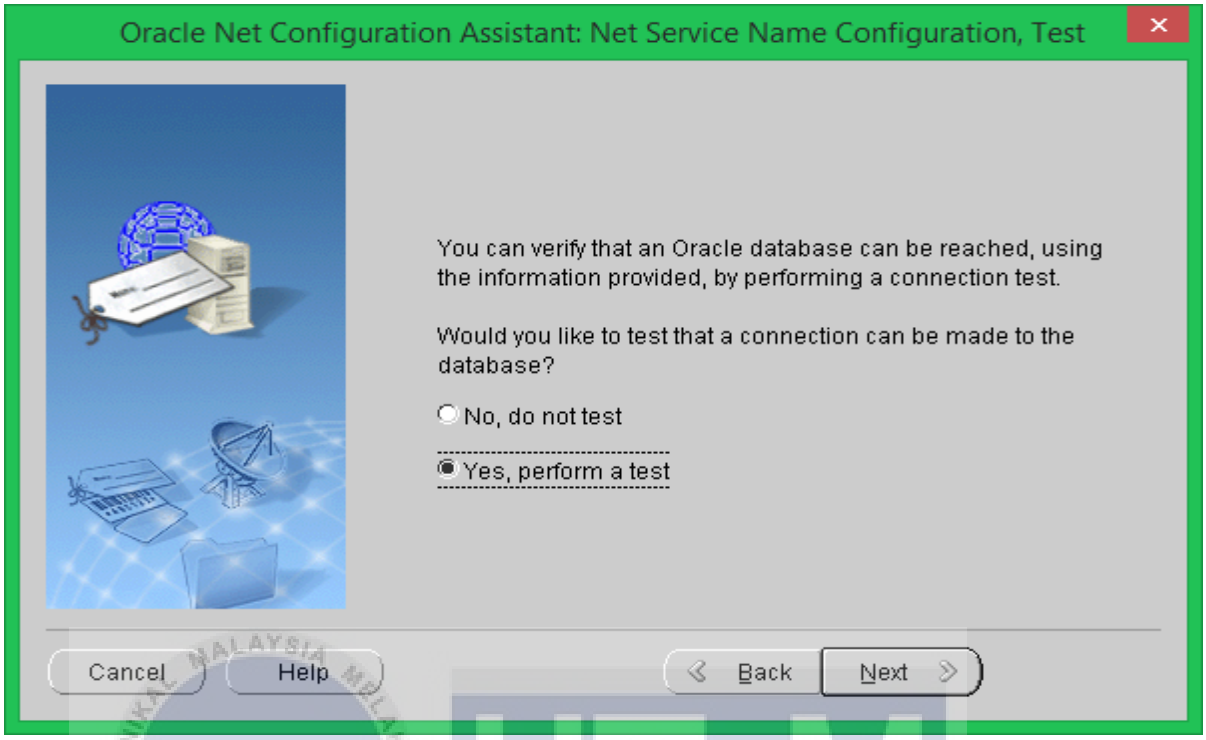
STEP 6: Choose TCP as our network protocol



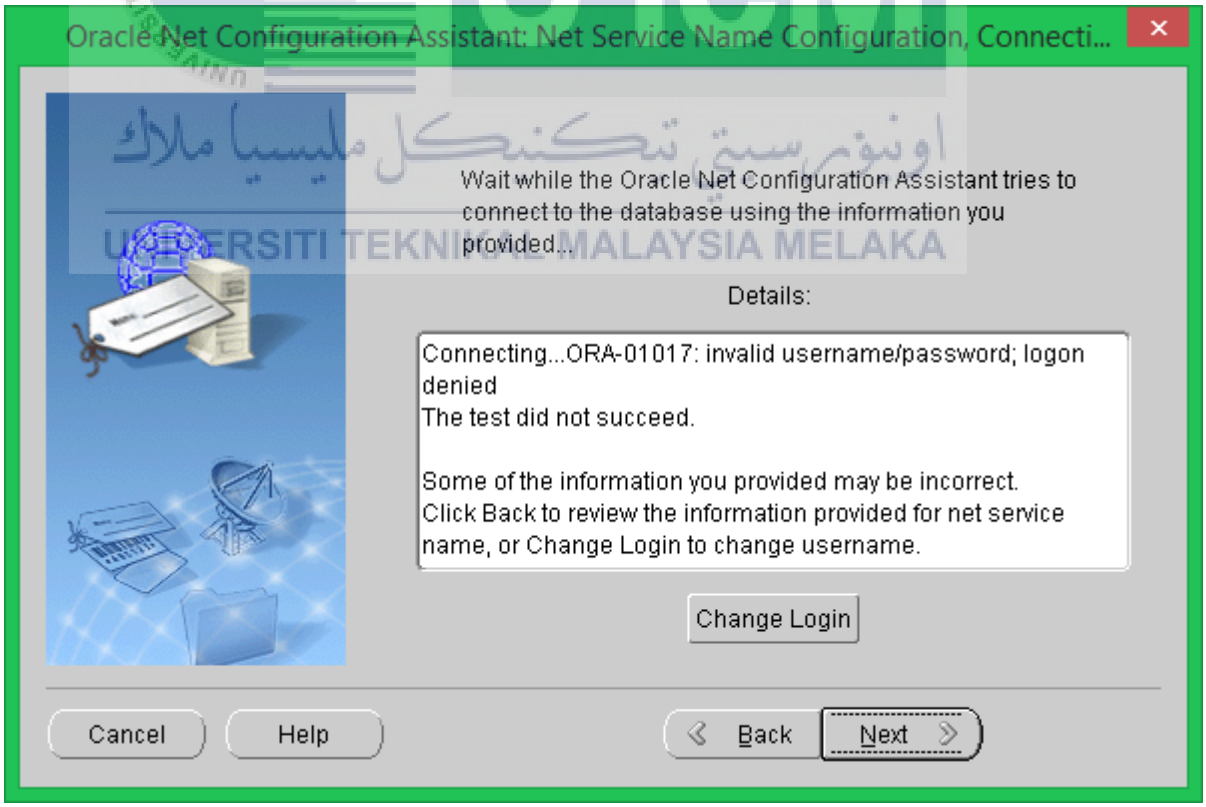
STEP 7: Please key-in IP address of Oracle server. It is located at 127.0.0.1

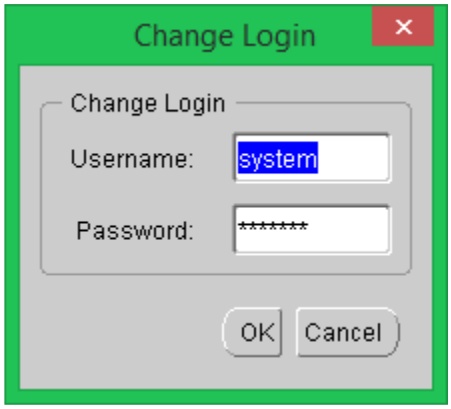


STEP 8: Choose yes, to test our client-server connection

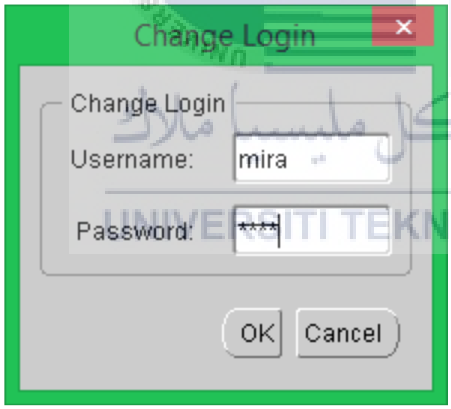


STEP 9: Yes, it will fail because the default is user system and password is wrong. Click change login button.

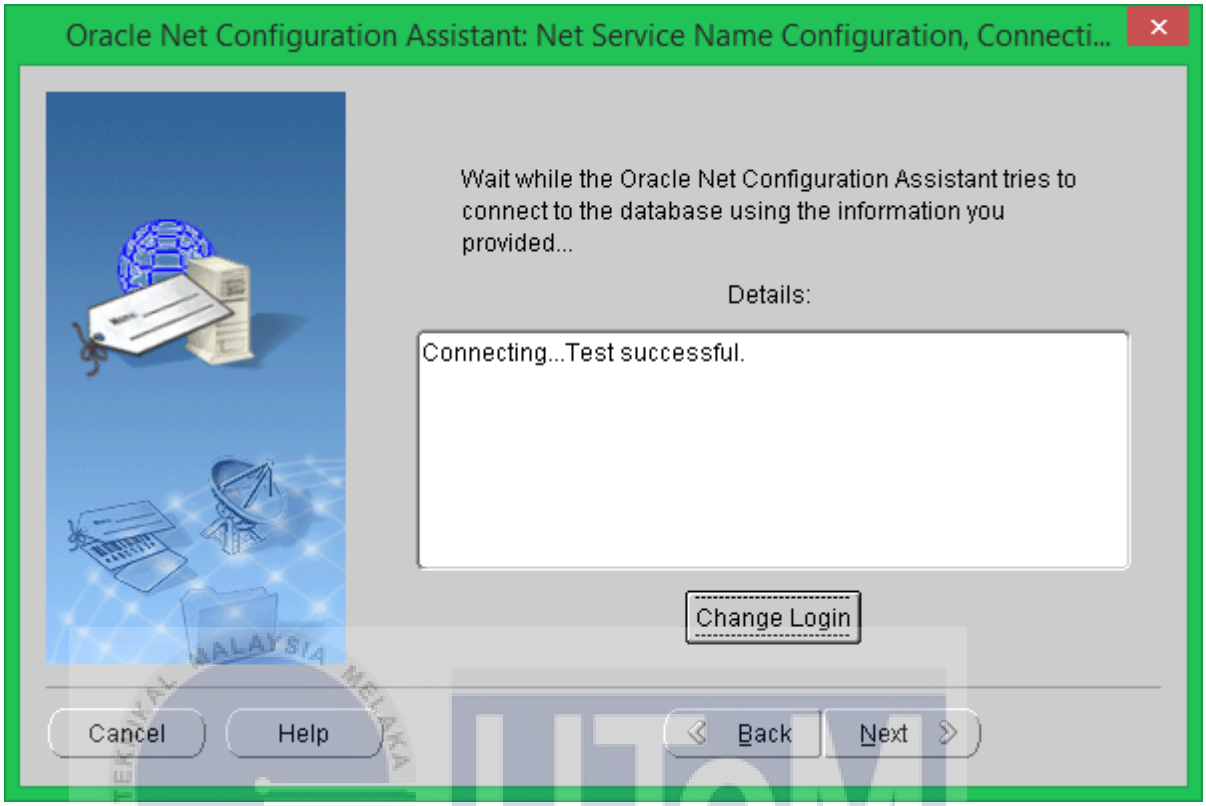


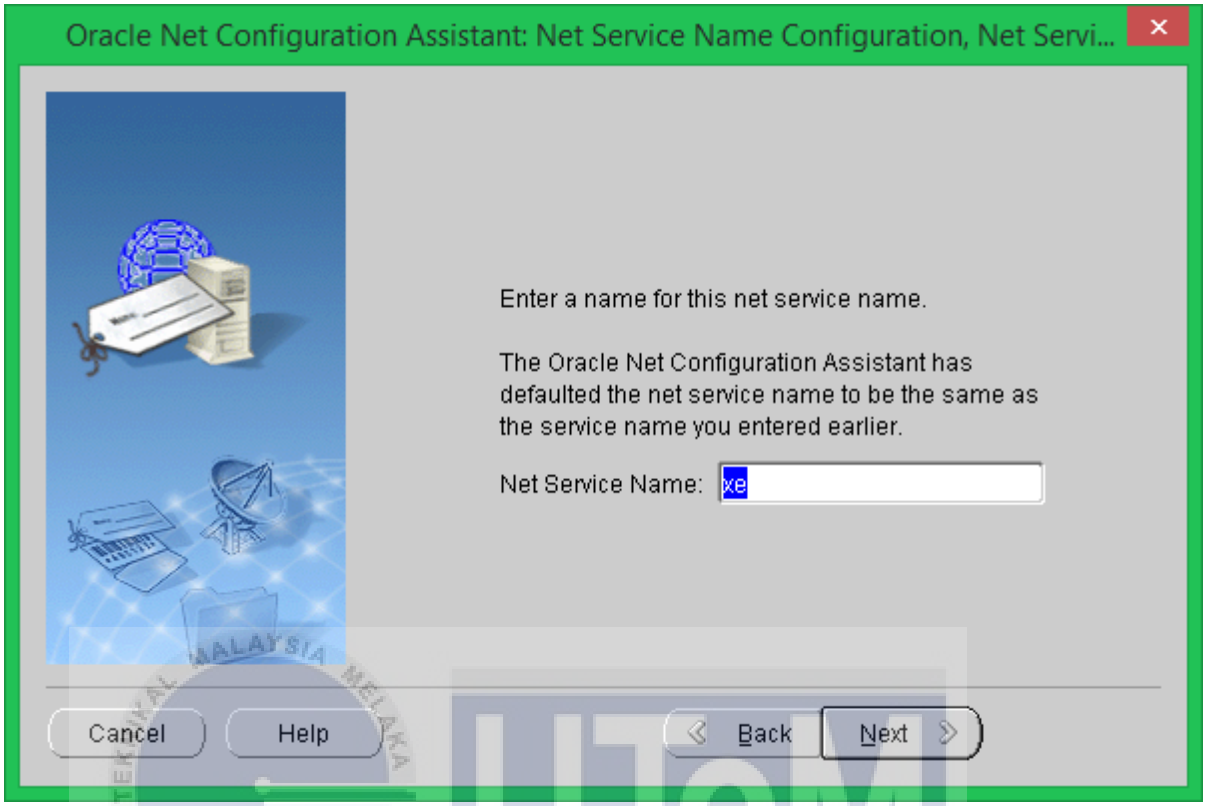


STEP 10: Change it by using our username and password.

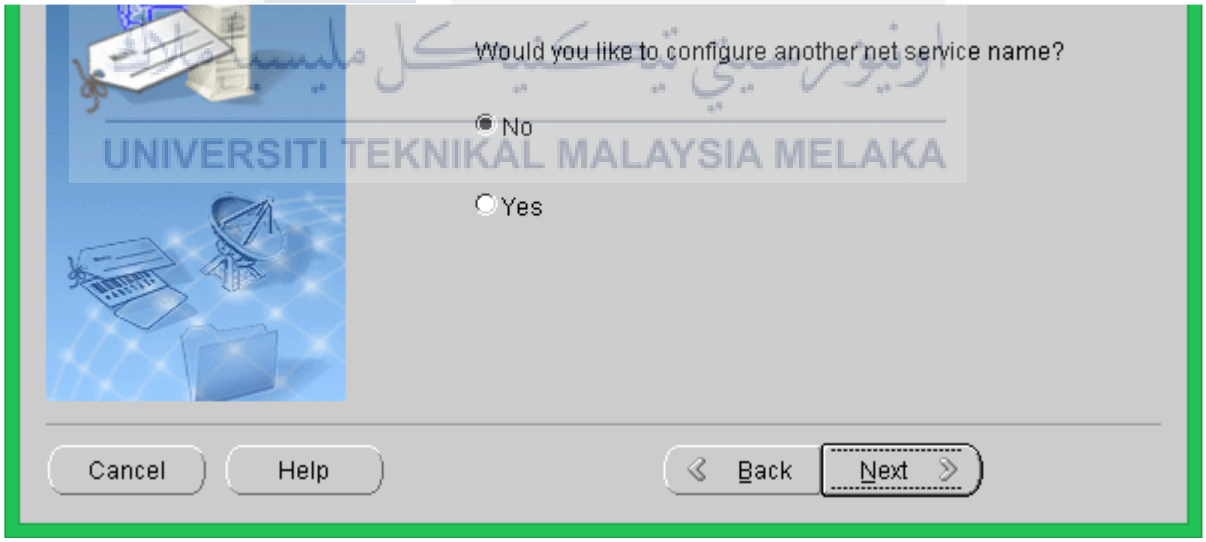


STEP 11: Click next button.

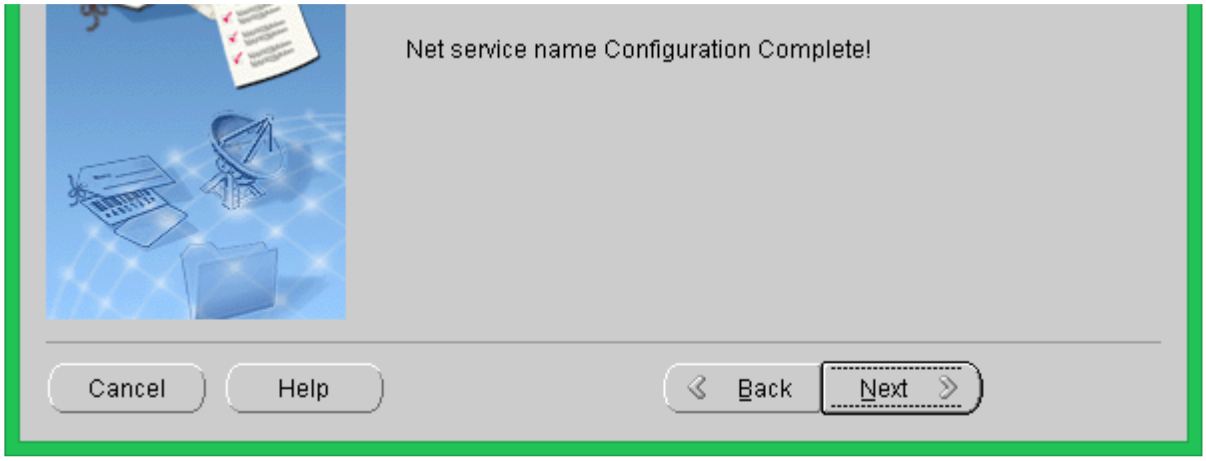




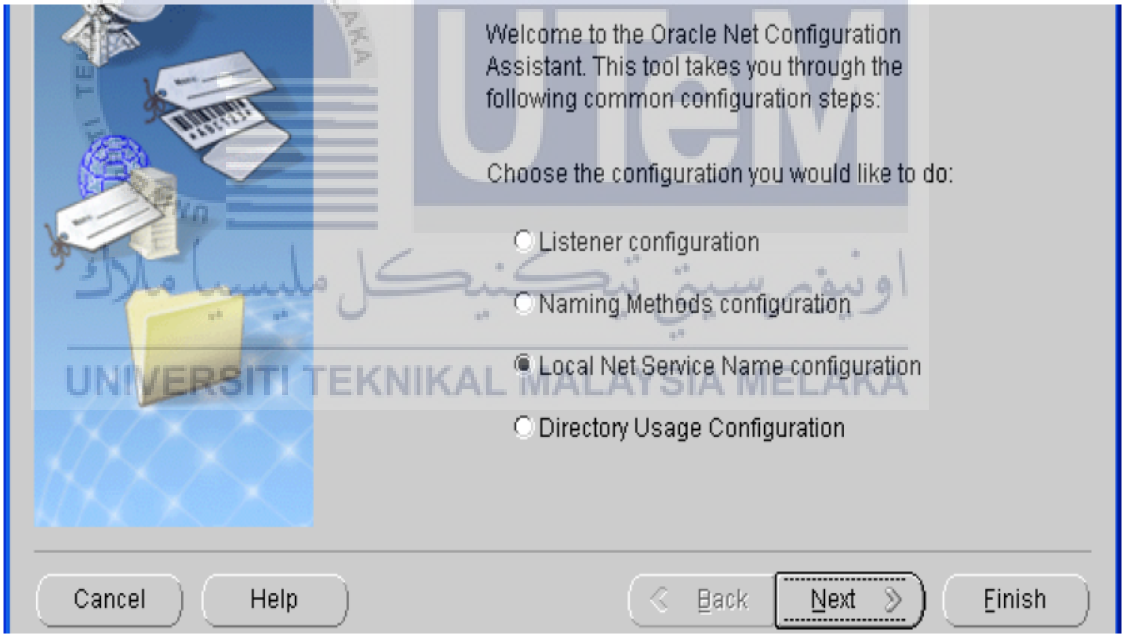
STEP 12: Choose NO and click on the next button.



STEP 13: Click on the next button.



STEP 14: Finally click finish



1.3 Wamp server

1. Downloading WampServer

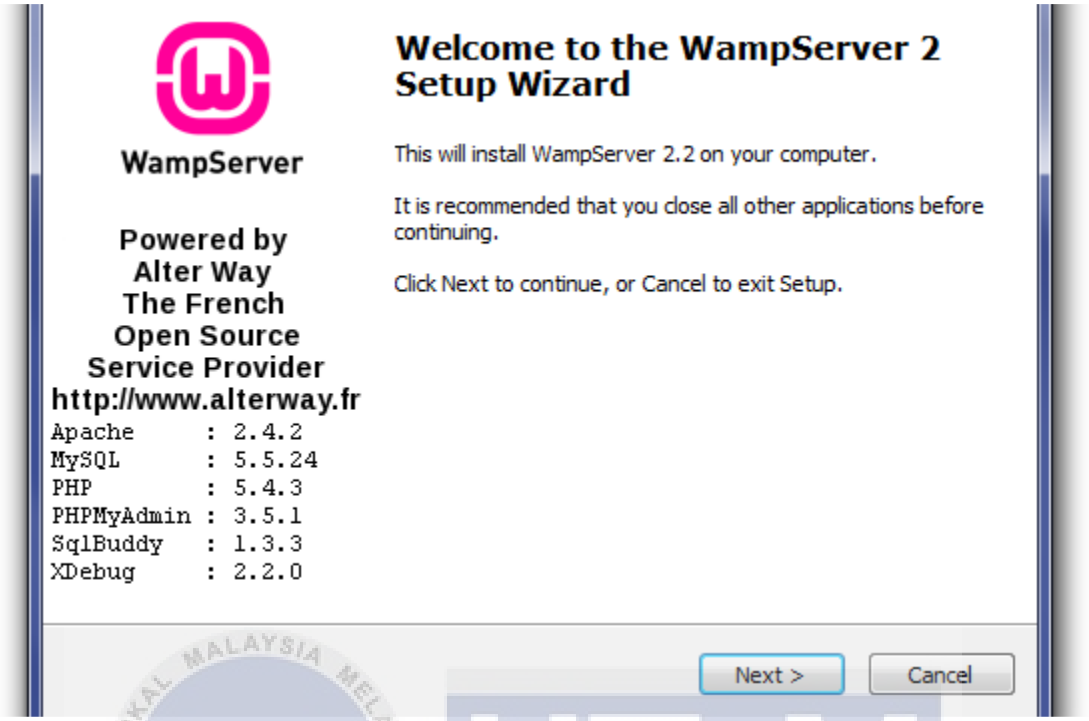
Download the installer file for the latest version of WampServer, and save the file into the computer.

Make sure select the correct installer file according to the version of Windows. To check the system is either 32-bit or 64-bit, do this

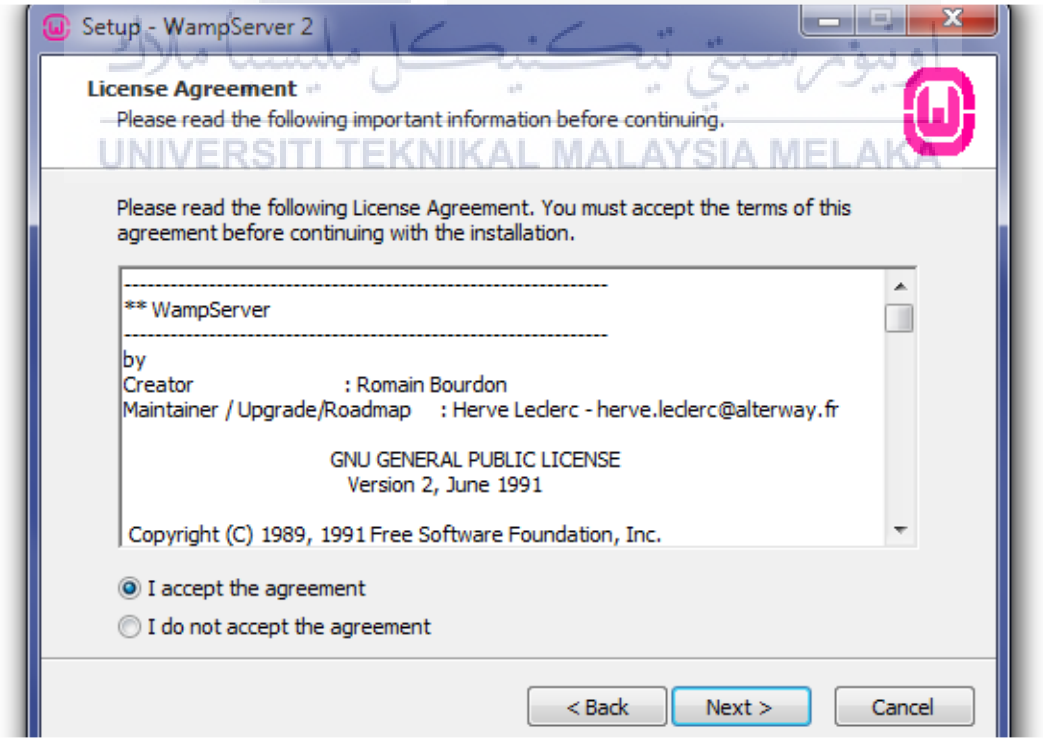
- Right-click on My Computer, and then click Properties.

2. Installing WampServer

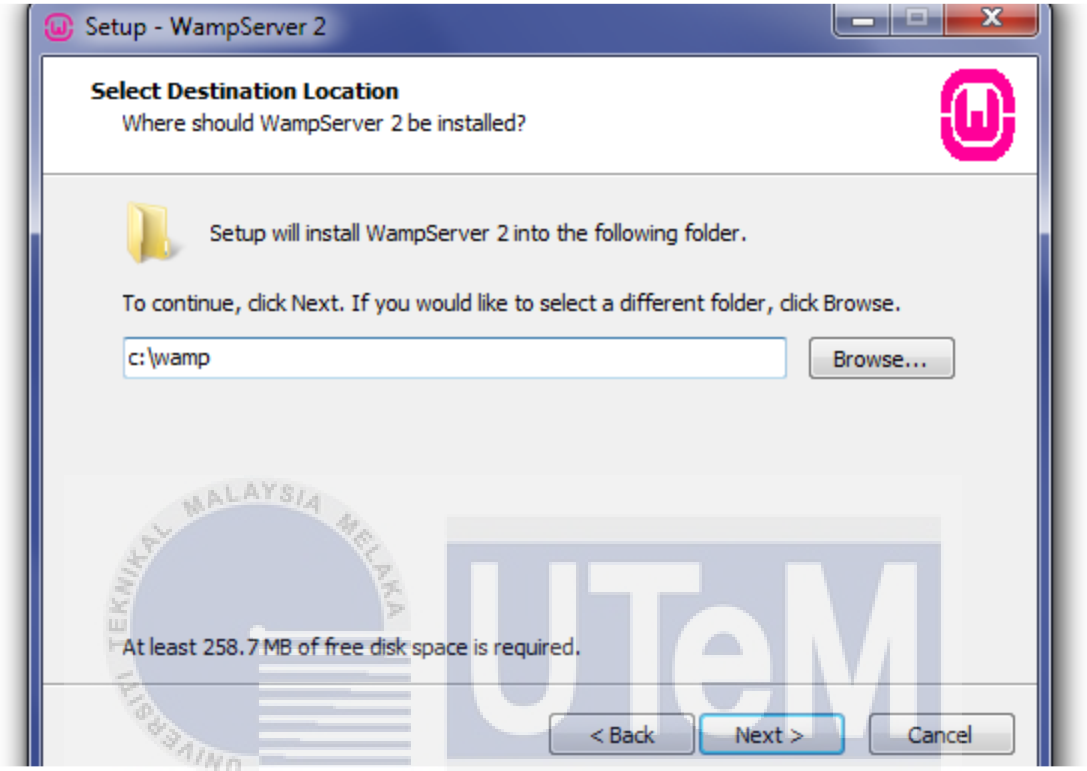
- To start the installation process, open the folder where the file was saved, and **double-click the installer file**. A security warning window will open, ask confirmation to run the file.
- **Click Run** to start the installation process.
- The Welcome to the WampServer Setup Wizard screen was pop-pup. **Click Next** to continue the installation.



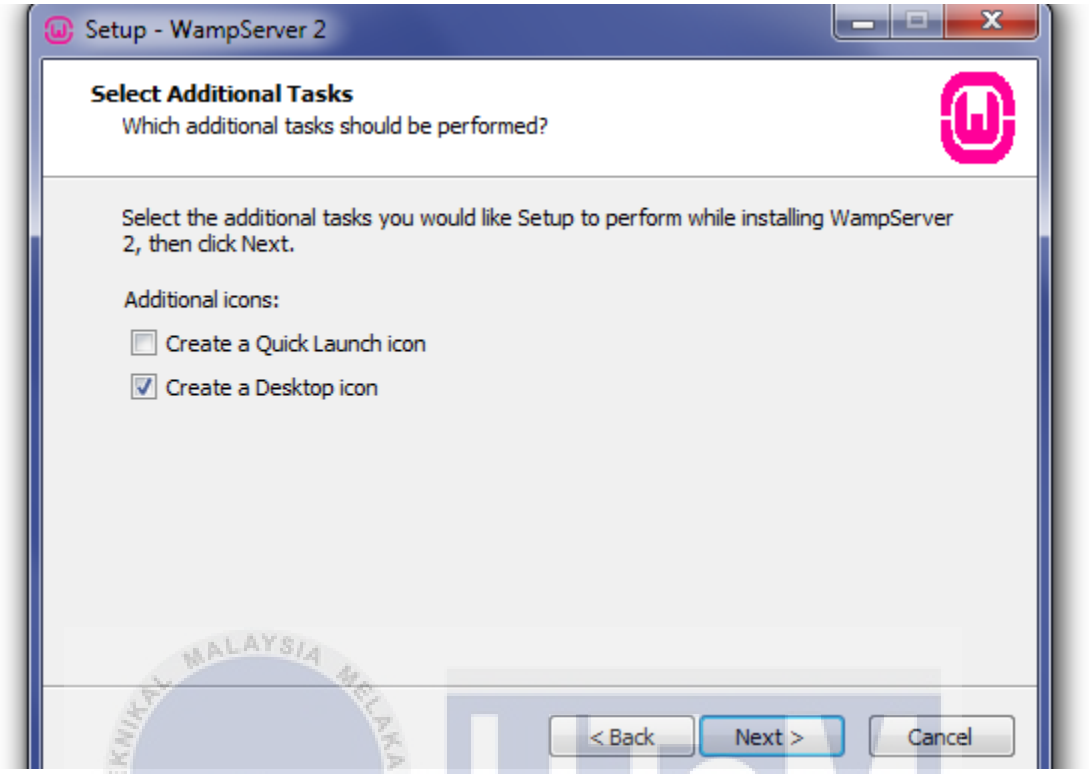
The next screen is the License Agreement. Read the agreement, check the radio button next to **accept the agreement**, then **click Next** to continue the installation.



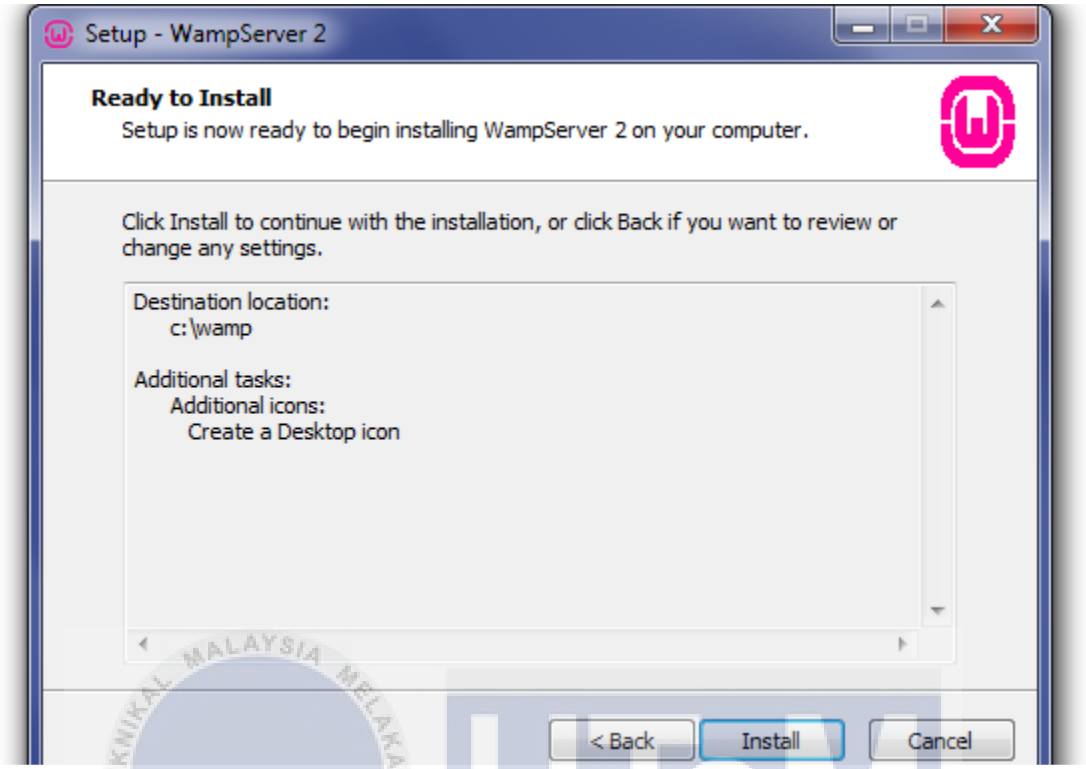
Next you will see the Select Destination Location screen. Unless you would like to install WampServer on another drive, you should not need to change anything. **Click Next** to continue.



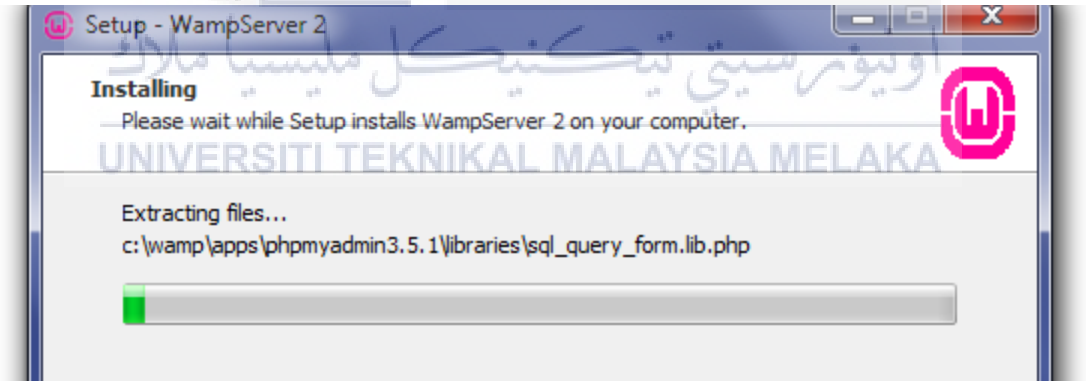
The next screen is the Select Additional Tasks screen. You will be able to select whether you would like a Quick Launch icon added to the taskbar or a Desktop icon created once installation is complete. Make a selections, then **click Next** to continue.



Next is the Ready To Install screen. Review setup choices, and change any of them by **clicking Back** to the appropriate screen, if you choose to. Once have reviewed the choices, **click Install** to continue.



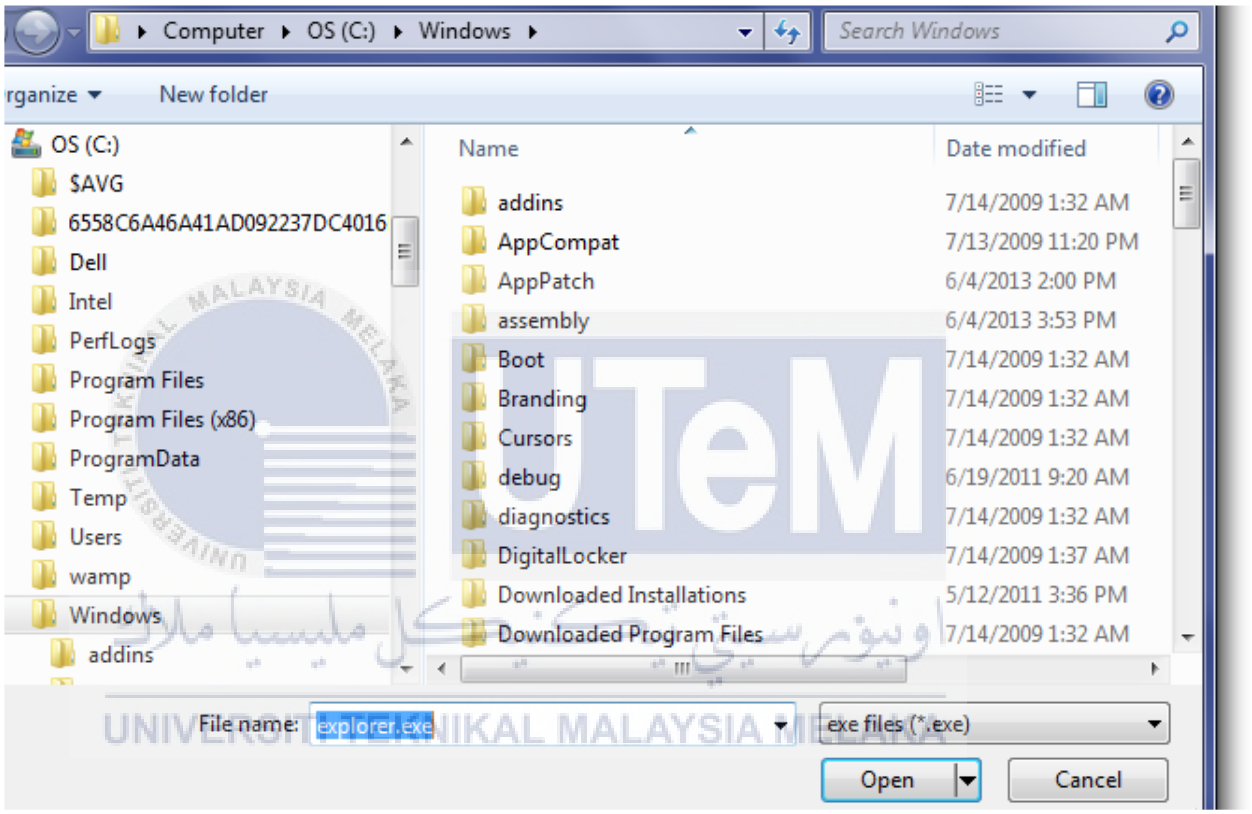
WampServer will begin extracting files to the location that been selected.



Once the files are extracted, select the default browser. WampServer defaults to Internet Explorer upon opening the local file browser window. If the default browser isn't IE, then look in the following locations for the corresponding .exe file:

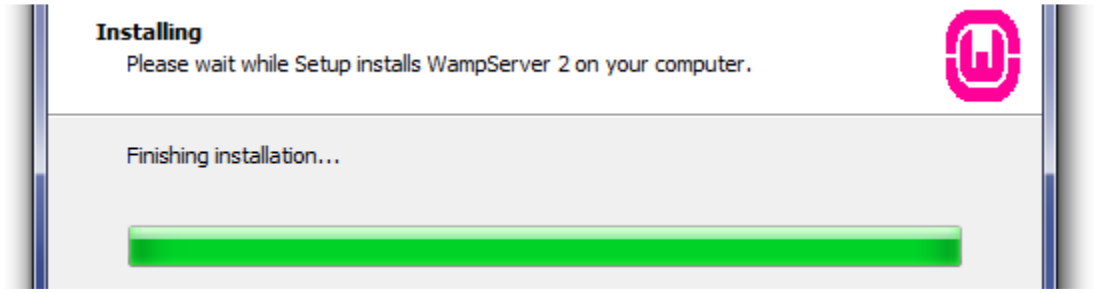
- **Firefox:** C:\Program Files (x86)\Mozille Firefox\firefox.exe
- **Chrome:** C:\Users\xxxxx\AppData\Local\Google\Chrome\Application\chrome.exe

Select the default browser's .exe file, then **click Open** to continue.

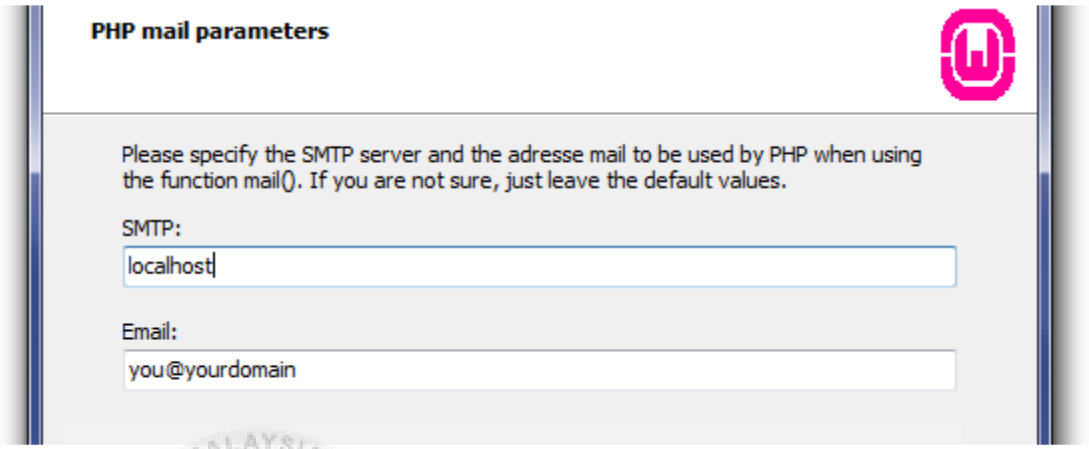


A Windows Security Alert window will open, saying that Windows Firewall has blocked some features of the program. Check whether want to allow Apache HTTP Server to communicate on a private or public network, then **click Allow Access**.

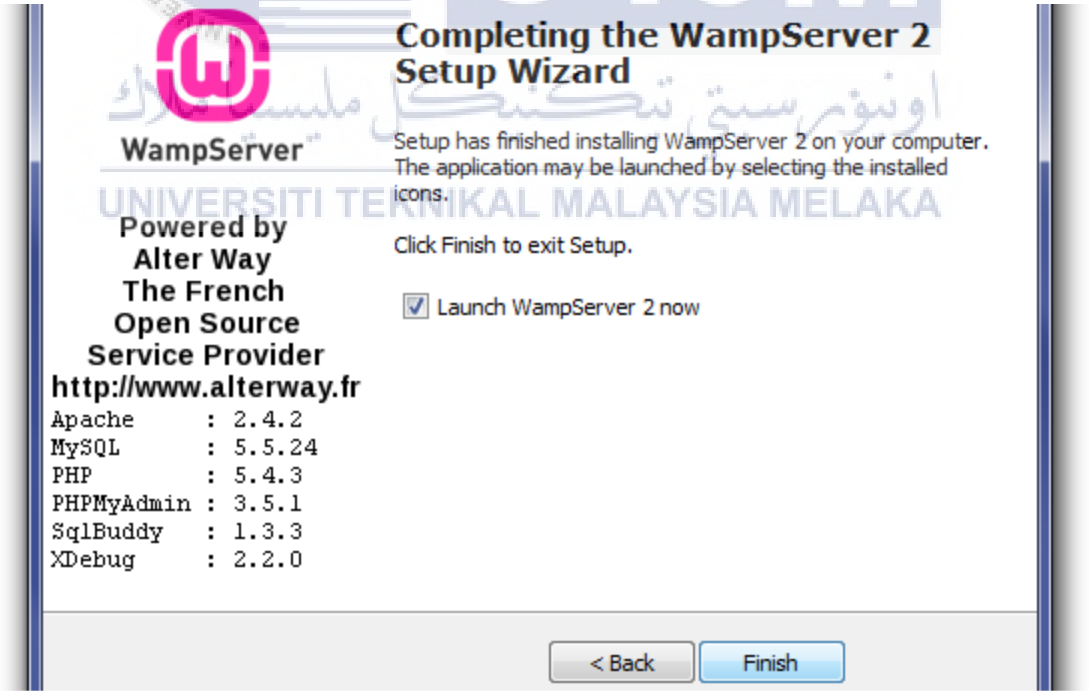
The Setup screen will appear next, showing the status of the installation process.



Once the progress bar is completely green, the PHP Mail Parameters screen will appear. Leave the SMTP server as **local host**, and change the email address to one that had been choose. **Click Next** to continue.



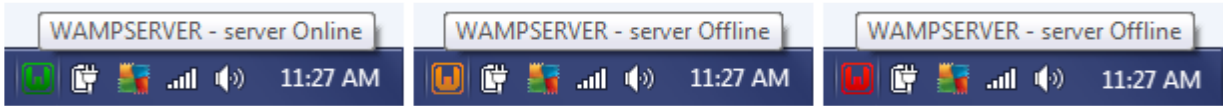
The Installation Complete screen will now appear. **Check the Launch WampServer Now** box, then **click Finish** to complete the installation.



The WampServer icon appear in the systray on the right side of the taskbar.

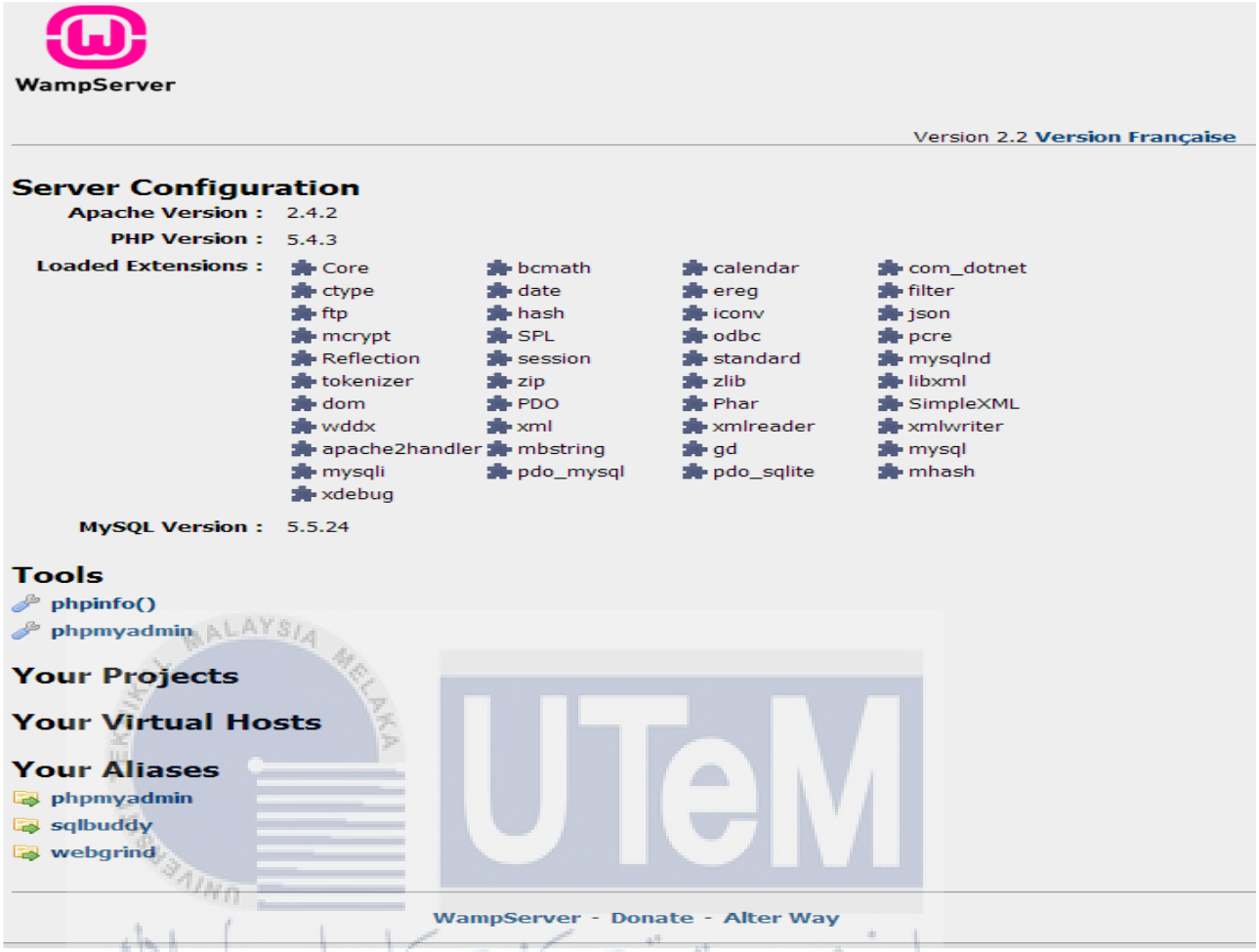
- If the icon is green, then everything is working properly.
- If the icon is orange, then there are issues with one of the services.
- If the icon is red, then both Apache and MySQL services aren't running.

You will need to resolve those issues before continuing.



3. Testing WampServer

Once have completed the installation process, test if the installation is working properly by going to http://localhost/ in browser. The WampServer homepage displayed.



If the WampServer homepage does not display, check that hosts file has **localhost mapped to 127.0.0.1** aren't running any other services on port 80, such as another local server (XAMPP, DesktopServer, etc.), WebDAV, or Skype. Check that phpMyAdmin is working by going to http://localhost/phpmyadmin/ in browser. If get the **cannot connect: invalid settings** error message, then edit the **C:\wamp\apps\phpmyadmin3.5.1\config.inc.php** file in a plain text editor (version number may be different), and ensure this option is set to **true**:

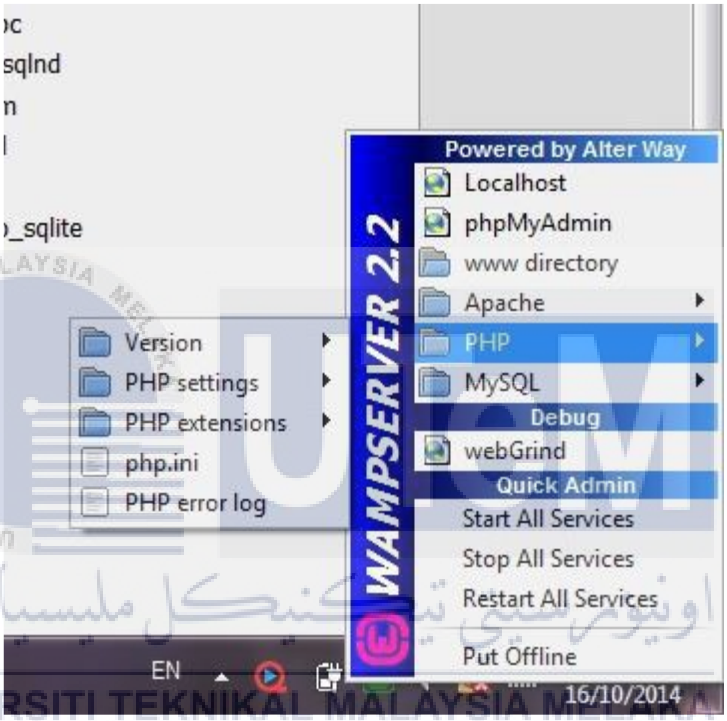
```
$cfg['Servers'][$i]['AllowNoPassword'] = true;
```

4. Configuring WampServer

After had installed and tested WampServer, adjust some configuration options to complete the local setup.

4.2 PHP Configuration

Click on the WampServer icon, go to the **php menu**, and **click on the php.ini** option. This will open the **php.ini** file in your plain text editor. Adjust the following settings:



Set level of error reporting – remove the ; at beginning of line to enable: error_reporting = E_ALL ^ E_DEPRECATED (~line 112)

- Log PHP errors – remove the ; at beginning of line to enable: error_log = "c:/wamp/logs/php_error.log" (~line 639)
- Increase maximum size of POST data that PHP will accept – change the value: post_max_size = 50M (~line 734)
- ncrease maximum allowed size for uploaded files – change the value: upload_max_filesize = 50M (~line 886)

Once have made the above changes, **click Save**.

To allow database oracle used php in wampserver click on **php_oci8** and **php_oci8_11g**.

4.2 Apache Configuration

To use custom permalinks in Word Press, enable Apache's rewrite module. **Click on the WampServer icon**, go to the **Apache > Apache modules** menu, then find and **click rewrite module** to ensure it is enabled. WampServer will change the **httpd.conf** file, and restart Apache automatically.