FKEKK COMPONENTS DATABASE

HAFIZAH BINTI JAMIL

This report is submitted in partial fulfillment of requirement for the award of Bachelor Electronic Engineering (Industrial Electronics) with Honours

Faculty of Electronic and Computer Engineering
Universiti Teknikal Malaysia Melaka

April 2010

© Universiti Teknikal Malaysia Melaka

UNIVERSTI TEKNIKAL MALAYSIA MELAKA
FAKULTI KEJURUTERAAN ELEKTRONIK DAN KEJURUTERAAN KOMPUTER

BORANG PENGESAHAN STATUS LAPORAN
PROJEK SARJANA MUDA II

Tajuk Projek : FKEKK COMPONENTS DATABASE

Sesi Pengajian :

0	9	/	1	0

(a)

Saya HAFIZAH BINTI JAMIL mengaku membenarkan Laporan Projek Sarjana Muda ini disimpan di Perpustakaan dengan syarat-syarat kegunaan seperti berikut:

1. Laporan adalah hakmilik Universiti Teknikal Malaysia Melaka.
2. Perpustakaan dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan dibenarkan membuat salinan laporan ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. Sila tandakan (√) :

☐	**SULIT***	*(Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)
☐	**TERHAD****	**(Mengandungi maklumat terhad yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)
☐	**TIDAK TERHAD**	

Disahkan oleh:

_____
(TANDATANGAN PENULIS)

Alamat Tetap: 159 Felda Endau,
86900 Endau,
Johor

Tarikh: ……..

_____
(COP DAN TANDATANGAN PENYELIA)

Tarikh: ……..

© Universiti Teknikal Malaysia Melaka

"I hereby declare that this report is result of my own effort except for works that have been cited clearly in the references."

Signature :…….

Name : HAFIZAH BINTI JAMIL

Date : 30 APRIL 2010

© Universiti Teknikal Malaysia Melaka

"I hereby declare that I have read this report and in my opinion this report is sufficient in terms of scope and quality for the award of Bachelor of Electronic Engineering (Electronic Industrial) with Honours"

Signature : …….

Supervisor's Name : ENGR. KHAIRUDDIN BIN OSMAN

Date : 30 APRIL 2010

© Universiti Teknikal Malaysia Melaka

Specially dedicated to my beloved family especially my parents.
Last but not least, to my supervisor, my friends and all the UTEM lecturers

© Universiti Teknikal Malaysia Melaka

ACKNOWLEDGMENT

Alhamdulillah. First of all, all praised and thank you to ALLAH for leading and giving me strength and guidance to complete in writing this Projek Sarjana Muda (PSM) report entitled “FKEKK COMPONENTS DATABASE”.

First and foremost, I extend my thanks and appreciation to my supervisor, Engr. Khairuddin Bin Osman for all the willingness to respond my question and guide me to complete this project. My deeply thanks to all lecturers in FKEKK who had help me a lot in my project.

Very special thanks to my parent and also my friends who always giving me full support and motivation. Thanks to all who involved to helping me to complete my report. Thank You.

© Universiti Teknikal Malaysia Melaka

ABSTRAK

Pengkalan Data Komponen Fakulti Kejuruteraan Elektronik dan Kejuruteraan Komputer (FKEKK) adalah satu laman sesawang yang direka untuk membantu pelajar mengetahui status komponen yang terdapat di dalam simpanan stor FKEKK. Selain itu, laman web ini membantu pihak pengurusan stor merekod dan menyimpan data secara efektif dan selamat. Sistem ini juga menyediakan maklumat ringkas mengenai beberapa jenis komponen berserta dengan gambar-gambar komponen tersebut. Untuk mengetahui status komponen, pelajar hanya perlu memilih jenis komponen yang diingini. Kemudian satu paparan akan dikeluarkan untuk memberitahu status komponen tersebut. Selain itu, laman web ini juga menyediakan ruangan untuk pelajar memuat turun borang pemohonanan komponen dan borang tuntutan yang akan diserahkan kepada penyelia sebelum dihantar ke stor komponen. Pengkalan data juga di bina bagi menyimpan data serta menukar sebarang maklumat yang dikawal oleh pihak pengurusan stor. Sistem ini menggunakan pengkalan data jenis Bahasa penyata serentak (My SQL) yang mana ianya berfungsi dapat menyimpan data dan dapat lihat semula. Bahasa Aturcara Hiperteks (PHP) digunakan sebagai bahasa pengaturcaraan untuk menghubungkan antaramuka dengan pengkalan data. Dengan sistem yang mesra pengguna, pengguna lebih mudah untuk memahami fungsi yang ada di dalam sistem ini.

© Universiti Teknikal Malaysia Melaka

ABSTRACT

Fakulti Kejuruteraan Electronik dan Kejuruteraan Komputer (FKEKK) Component Database is one of website that has been designed to help students know the component status found inside FKEKK store's reserve. Besides that, this website help store management department record and stores data effectively and safe. This system also provides a brief explanation on some type components, with its pictures. To find out the component's status, the student just select the component's required and than click search button. Then the status of the component will be informed through a display. In addition, this website also provides a space for students to download the application form and claim purchasing form to be submitted to the supervisor before being sent to the store component. The store management controlling the changes of information while the data port is builds to keep the data. This system use My SQL stand for 'Synchronize Query Language' type's data port which it functions as data storage and able to recall it back. The PHP stand for Hypertext Preprocessor is programming language used to connect the interface with the database. This user friendly system makes the user easy to understand the system's function.

© Universiti Teknikal Malaysia Melaka

TABLE OF CONTENTS

CHAPTER	CONTENTS	PAGES
	TITLE	**i**
	DEDICATION	**v**
	ACKNOWLEDGEMENT	**vi**
	ABSTRAK	**vii**
	ABSTRACK	**viii**
	TABLE OF CONTENTS	**ix**
	LIST OF FIGURE	**xiii**
1	**INTRODUCTION**	
	1.1 Introduction	1
	1.2 Problem Statement	2
	1.3 Objective Project t	2
	1.4 Scope Project	3
2	**LITERATURE REVIEW**	4
	2.1 Introduction	4
	2.2 Other Web based using the database as a data storage	5
	2.2.1 To locate a Book in a Library	5

© Universiti Teknikal Malaysia Melaka

2.2.2 The 'Webstar' System 6
2.2.3 Car-Part.Com 7
2.2.4 Store and Workshop FKE at UTM Site 8
2.3 Web Based Application 9
2.4 Database Management System (DMS) 10
2.4.1 Categories of Databases 11
2.4.2 Type of Database 11
2.5 My-se-quel 'Synchronize Query Language' My SQL 11
2.5.1 How MySQL works 13
2.5.2 Communicating with the MySQL server 13
2.5.3 Advantages of MySQL 14
2.6 Web Programming Languages 15
2.6.1 Type of Programming Languages 15
2.7 Hypertext Preprosessor (PHP) 15
2.7.2 How PHP works 16
2.7.2 Advantages of PHP 18
2.8 PHP My Admin 18
2.9 HyperText Markup Language (HTML) 20
2.10 Microsoft Frontpage 21

3 METHODOLOGY

3.1 Introduction 23
3.2 Flow Chart 23
3.2.1 Gathering information 24
3.2.2 Plan and Requirement 24
3.2.3 Software Design 24
3.2.4 Programming 25
3.2.5 Debugging 25
3.2.6 Implement 25
3.3 Frame Work for psm i and ii 26
3.4 Block Diagram of frame work 27

© Universiti Teknikal Malaysia Melaka

4 RESULT

4.1 Introduction 29

4.2 Project Operation 29

4.3 Project Design 30

4.3.1 High-Level Design 30

4.3.2 Design Site structure for user 31

4.3.3 Design Site Structure For Admin 32

4.4 User Interface Design 33

4.4.1 Intro design 33

4.4.2 Administrator Site 34

4.4.3 Component Interface 37

4.4.4 User Site Design 38

4.4.5 Download Form 39

4.5 Database Design 40

4.6 Analysis 43

5 DISCUSSION AND CONCLUSION

5.1 Discussion 49

5.2 Conclusion 50

REFERENCES 51

APPENDIX A 53

APPENDIX B 57

APPENDIX C 59

© Universiti Teknikal Malaysia Melaka

LIST OF FIGURES

FIGURE NO	TITLE	PAGES
2.1	**System To locate a Book in a Library**	5
2.2	**The Webstar System**	6
2.3	Car-Part .com System	7
2.4	Store and Workshop FKE site	8
2.5	MySQL Logo	12
2.6	PhpMyAdmin main screen	18
2.7	The example data that content of MYSQL shows via field and tables	19
2.7	The visual shows the example of data typing for content MySQL	20
2.8	The example of command HTML	20
3.1	Flow chart for process methodology	23
3.2	Frame Work for PSM 1	26
3.3	BLOCK DIAGRAM OF FRAME WORK	27
4.1	Site Structure User	31
4.2	Site Structure For Admin	32
4.3	Intro Design	33
4.4	Administrator Main Interface	34
4.5 a)	Admin choose component	35
4.5 b)	Logout button for admin system	35
4.6 (a)	Page for insert the value of IC	36
4.6 (b)	List of components in database	36
4.7	Components detail	37
4.8	The components description	37
4.9	The User Site Design	38
5.0	List of Component	39
5.1	Download form page	39

© Universiti Teknikal Malaysia Melaka

5.2	File Download task	40
5.3	login database designs	40
5.4	The Members table	41
5.5	The Component table	41
5.6	The Battery Table	42
5.7	The config.php	43
5.8	Command connect form with the database	43
5.9	The Row command	44
5.10	Output Command e	44
5.11	Command to change table border and size	44
5.12	Output command	45
5.13	User list display	45
5.14	To create new database	46
5.15	Battery database	47
5.16	The space to insert data	48
5.17	Data are inserted in database	48

© Universiti Teknikal Malaysia Melaka

CHAPTER 1

INTRODUCTION

1.1 Introduction

One of the technology terms that most people have become accustomed to hearing either at work or while surfing the internet is the database. The database used to be an extremely technical term, however with the rise of computer systems and information technology throughout our culture, the database has become a household term

This project was to be applied database in store components FKEKK. The definition of a database is a structured collection of records or data that is stored in a computer system. This project be able to interface Microsoft Office Front page using My SQL 2007. Microsoft Office Front page is a website design tool .To produce the website based, a web server are required as a computer program that is responsible for accepting HTTP requests from *clients* (user agents such as web browsers), and serving them HTTP responses along with optional data contents, which usually are web pages such as HTML documents and linked objects. The data can be accessed by everyone but only the administrator can record, edit or erase any information in database. The administrator can also know the total of component in storage. The database also implement in server or website to monitor status

© Universiti Teknikal Malaysia Melaka

component in store. The student or staff can know status of any component contains in this system.

1.2 Problem Statement

The problem statement of this project:

a) When the technician can not be found, the student not able to know the existence of component.
b) The manual system used before this is not effective.
c) The propose system ease the lecturer to know the available component and its amount.

1.3 Objective Project

The main objective is to applied database in store components FKEKK. This project is able to interface by Microsoft front page using SQL server 2007 or Microsoft access. The second objective is to enable administrator make a list of component, editing or erase any information in database. The third objective for this project is to design a website where the student or staff FKEKK can know status of any component contain in this system.

© Universiti Teknikal Malaysia Melaka

1.4 Scope Project

The scope of this project is:

a) To design the overall interface.
   i. Design interface for user by using Microsoft Front page that contain picture, suitable background, Layout text and accessories so that the page is more interesting and user friendly.
   ii. Design interface for administrator to yield log in form, space to list, edit and erase any information. The administrator can decide whether to allow or not the user to view the database contains.

b) Make a list of all components by type. For example, the value or type lists of component at Diode form. Each form has space to show total of component in storage. All data that been created will be saved in database.

c) All component list or data is linked together to the database to ensure component status can display when value of component are entered.

© Universiti Teknikal Malaysia Melaka

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Based on Handouts and Links website (2007), literature review means published information in a particular subject area, and sometimes in a particular subject area within a certain time period. A literature review can be just a simple summary of the sources, but it usually has an organizational pattern and combines both summary and synthesis.

This chapter will reveal the research about what is Database Management System (DMS), Web based Application, Programming Language, Web based interface and MySql database.

2.2 Other Web based using the database as data storage

There is a lot of other web based that using database as data storage. The differentials are just on the application usage, database type, servers, programming language and interface. In this project, the comparison from aspect application usage at the other web based. Most web based provide same service such as find book at library, know status component at electronic Shop, summary information customer at Telekom Malaysia and to find the Car part that the user required.

© Universiti Teknikal Malaysia Melaka

2.2.1 To locate a Book in a Library

This system is created to easy find a book in library which filled with thousands or even hundreds of thousands of books [8]**.** Figure 2.1 is a system **to** locate a book in a library where the user just type title of book, author or subject to get there book. After that, the system tells whether a book is on the shelves or is unavailable**.** When the user fined the book, they need write down the call number and any other information about the location of the book. This information tell the user where to find the book. These systems most have at any library which all data (title, author, subject of book) is record in database.

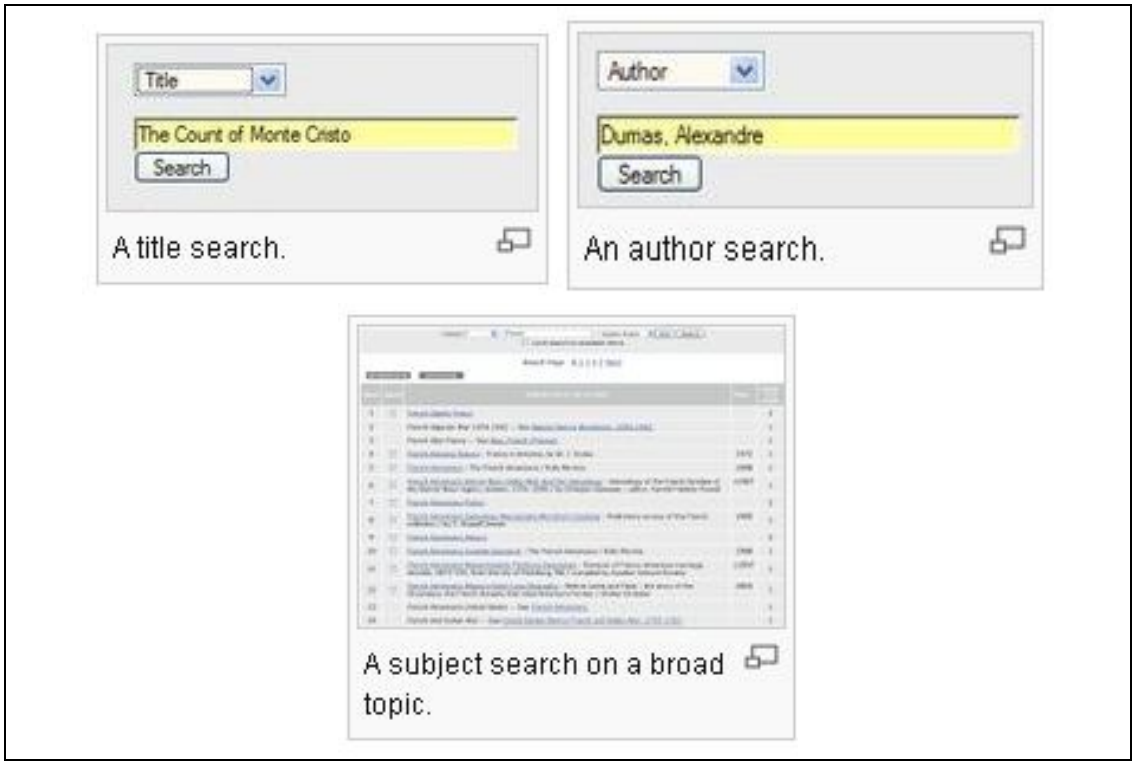

Figure 2.1 systems to locate a Book in a Library

© Universiti Teknikal Malaysia Melaka

2.2.2 The 'Webstar' System

The webstar is system that used at Telekom Malaysia website which has all information about customer is recorded in database. Figure 2.2 is shown the system is to help find the address, customer info, network info, trouble info and summary. The workers just type the telephone number and search all information.

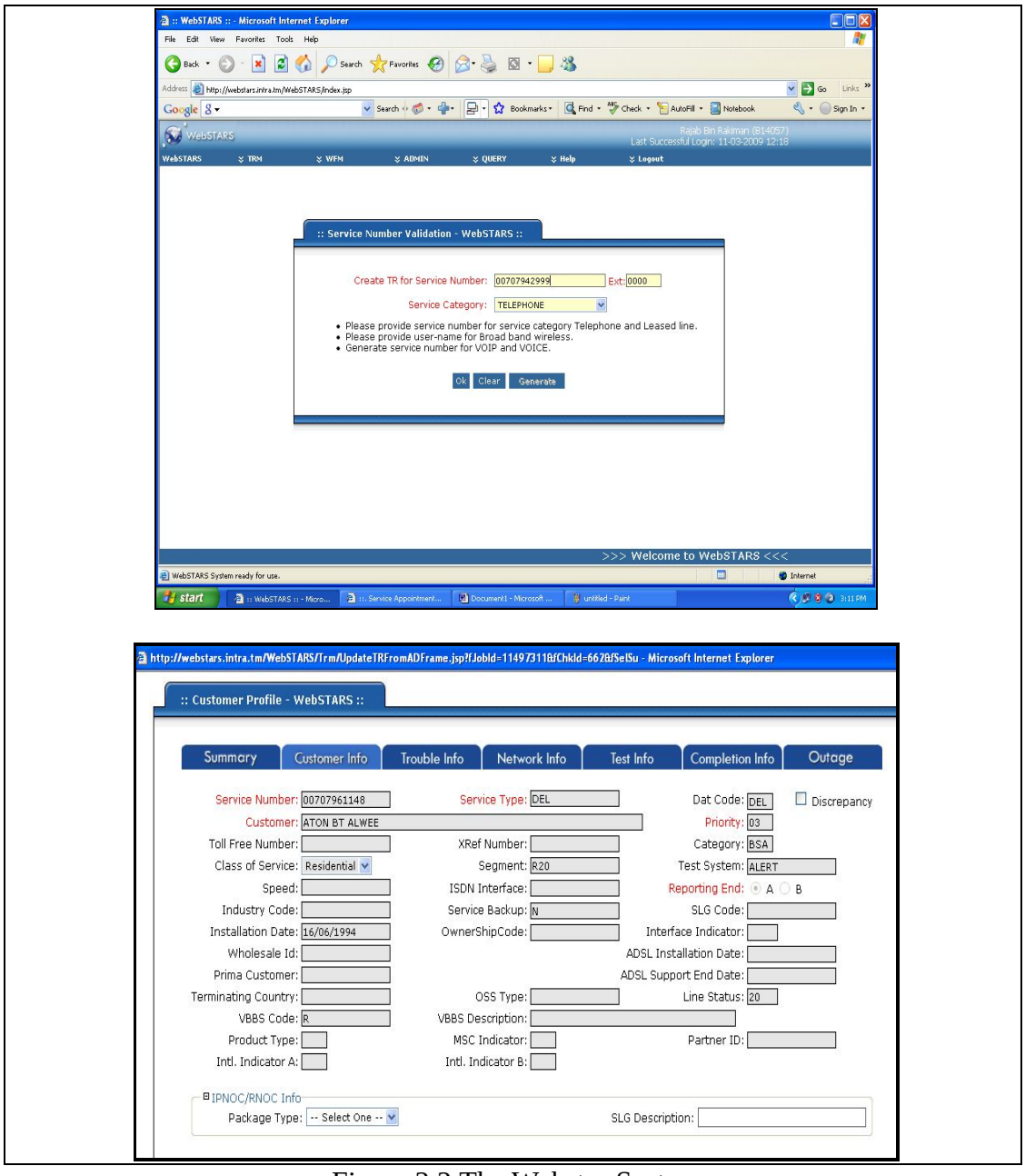

Figure 2.2 The Webstar System

© Universiti Teknikal Malaysia Melaka

2.2.3 Car-Part.Com

Car-Part.Com is one of system that used database to data storage. All Car-part in their shop, are inserted in database so that customer can know status and more advances buying car part via this system [15]. Figure 2.3 above is shown Car part system where customer just select year, model, part, area and prize. After that, status part of component is displayed.

Figure 2.3: Car-Part .com System

© Universiti Teknikal Malaysia Melaka

2.2.4 Store and Workshop FKE at UTM Site

This system is to help the student or staff knows status of components in storage and tools and also provides download application form and claim purchasing form as indicated in figure 2.4.

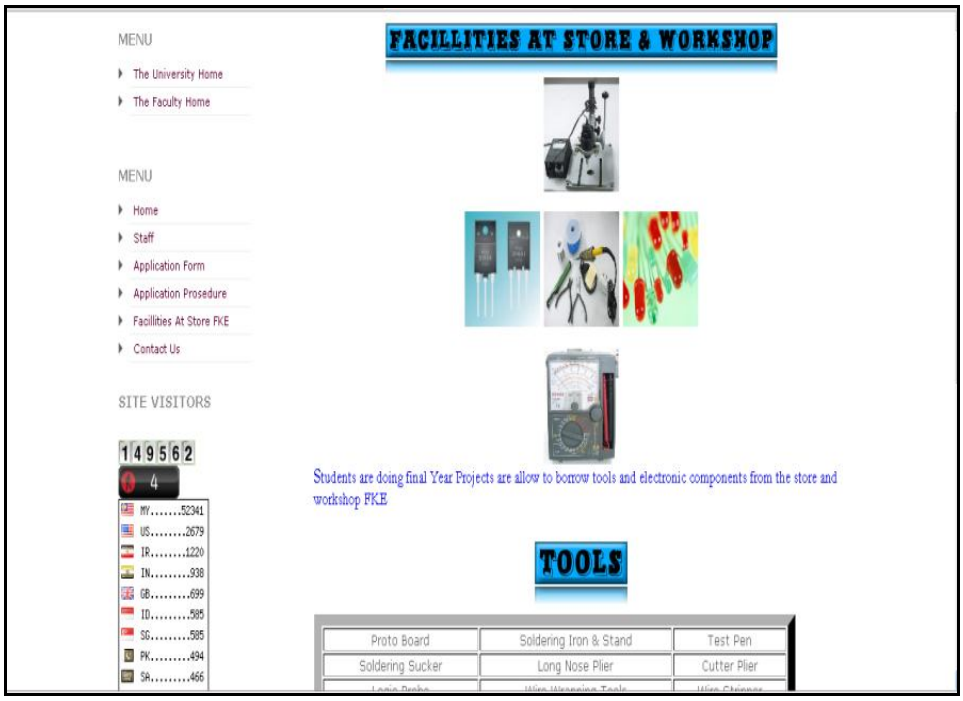

Figure 2.4 Store and Workshop FKE site

© Universiti Teknikal Malaysia Melaka

2.3 Web based Application

An application is a program or group of programs designed for use by an end user (for example, customers, members, or circus acrobats). If the end user interacts with the application via a Web browser, the application is Web based or Web application. If the web application requires the long-term storage of information using a database, it is a web database application [16].

A web database application is designed to help a user accomplish a task. It can be a simple application that displays information in a browser window.

A web based application consists of just two pieces:

Database: The database is the long-term memory of web database application. The application can not fulfill its purpose without the database. But, database alone are not enough

Application: The application piece is the program or group of programs that perform a task. Programs create the display that the user sees in the browser window; accepting and processing information that the user types in the browser, store in the database and get information out of it. The database is useless unless there are movements of data weather data in or data out.

The web pages that created with HTML alone are static, meaning the user can't interact with the Web page. All users see the same Web page. Dynamic Web pages, on the other hand, allow the user to interact with the Web page. Different users might see different Web pages. For instance, one user looking at a furniture store's online product catalogue might choose to view information about the sofas, whereas another user might choose to information about coffee tables. To create dynamic Web pages, there must be another language in addition to HTML.

One language widely used to make WebPages dynamic is JavaScript. JavaScript is useful for several purposes, such as mouse over (for example, to highlight a navigation button when the user moves the mouse pointer over it) or

© Universiti Teknikal Malaysia Melaka

accepting and validation button that user's type into a Web form. However, it's not useful for interacting with a database. We wouldn't use JavaScript to move the information from the Web form into a database. PHP however is a language particularly well suited to interacting with database. PHP can accept and validate the information that users into a Web form and can also move the information into a database [4].

2.4 Database Management System (DMS)

The definition of a database is a structured collection of records or data that is stored in a computer system. In order for a database to be truly functional, it must not only store large amounts of records well, but be accessed easily [6].

In addition, new information and changes should also be fairly easy to input. In order to have a highly efficient database system, need to incorporate a program that manages the queries and information stored on the system.

This is usually referred to as DBMS or a Database Management System. Besides these features, all databases that are created should be built with high data integrity and the ability to recover data if hardware fails. A database management system (DBMS) consists of software that organizes the storage of data. A DBMS controls the creation, maintenance, and use of the database storage structures of organizations and of their end users [7]

© Universiti Teknikal Malaysia Melaka

2.4.1 Categories of Databases

There are several common categories of databases; each type of database has its own data model (how the data is structured). They include; Flat Model, Hierarchical Model, Relational Model and Network Model

a) The Flat Model Database
b) The Hierarchical Model Database
c) The Network Model
d) The Relational Model

2.4.2 Type of Database

There are several types of database:

a) My SQL
b) SQL
c) ODBC
d) IIS
e) Net Framework
f) Java

2.5 My-se-quel 'Synchronize Query Language' My SQL

Database management systems are categorized according to the database model that they support, such as the network, relational or object model. The model tends to determine the query languages that are available to access the database. One commonly used query language for the relational database is SQL, although SQL syntax and function can vary from one DBMS to another. My SQL is a relational database management system (RDBMS**)** [7].

© Universiti Teknikal Malaysia Melaka