E-MUET CORPUS VOCABULARY ENHANCEMENT

MARMI'ATI AL – AZIMAH BINTI AZHARI

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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MARMI'ATI AL – AZIMAH BINTI AZHARI

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BORANG PENGESAHAN STATUS TESIS*

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Alamat tetap: LOT 8544,

JALAN PEGAWAI,

SG. RAMAL BARU, 43000 KAJANG

Nama Penyelia

Tarikh: 25/8/2016 Tarikh: 25/08/2016.

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I hereby declare that this project report entitled

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

STUDENT : _____ Date : 23 AUGUST 2016

(MARMI'ATI AL – AZIMAH AZHARI)

SUPERVISOR: _____ Date : 23 AUGUST 2016

(PN MASHANUM BINTI OSMAN)

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I am also want to thank all my friends for contributed to the creation of E-MUET Corpus Vocabulary Enhancement. I would like to express my gratitude to all who helped in development of this system.

ABSTRACT

E-MUET Corpus Vocabulary Enhancement is a system that helps students especially MUET candidates to assist the learning English and MUET. This system is focusing on Reading and Writing as these are the most papers that are difficult to score. In this E-MUET Corpus Vocabulary Enhancement, few modules has been created that help the system to achieve the objectives and the development. This system has provide the module to find the definition of a word and the example.

Modules that has been created are the definition of word where the candidates can search the definition of word, concordance module which they can search the frequency each word appear in MUET papers past years and this system also offers a few set of question which allows candidates answer the quiz and know their performance. I really hope this system can help the candidates achieve a better score in MUET especially Reading and Writing paper.

ABSTRAK

E-MUET Corpus Vocabulary Enhancement adalah sistem yang membantu pelajar terutamanya calon MUET dan membentu pembelajaran bahasa Inggeris dan MUET. Sistem ini memberi tumpuan kepada membaca dan menulis kerana Reading dan Writing adalah kertas peperiksaan yang susah untuk pelajar mendapat markah tinggi. Beberapa modul telah dibuat untuk membantu sistem dalam mencapai objektif.

Sistem inni telah menyediakan satu modul yang membenarkan pelajar mencari maksud sesuatu perkataan dan contoh .Modul konkordans pula membenarkan pelajar mencari kekerapan satu perkataan dalam soalan peperiksaan MUET yang lepas. Sistem ini juga menawarkan beberapa set soalan yang memberi peluang kepada pelajar untuk menjawab soalan dan mengetahui prestasi mereka. Saya berharap sistem ini akan dapat membantu calon mencapai skor yang lebih baik dalam kertas Reading adnWriting.

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CHAPTER I

1. INTRODUCTION

1.1 Overview

Nowadays, Malaysian University English Test(MUET) is a hot issue for Malaysian education because it is a must for the undergraduate students to pass with certain band before graduate. MUET is also a prerequisite in applying for admissions into all public universities and colleges in Malaysia. MUET has 6 different bands to differentiate the capability of candidates in English skills, from Band 1 to Band 6. There are 4 sections in MUET which are Reading, Listening, Writing and Speaking. The maximum score for each component is 45 each for Listening and Speaking, 120 for Reading Comprehension and 90 for Writing. Different university will have different band scores for different courses (reference).

CORPUS is a lexical database of English vocabulary that often use in MUET examination. Synsets are interlinked by means of conceptual-semantic and lexical relations. Synsets is a group of English word into sets of synonyms. The resulting network of meaningfully related words and concepts can be navigated with the browser. CORPUS structure makes it a useful tool for MUET Reading linguistics. E-MUET Corpus for Vocabulary Enhancement superficially resembles a WordNet in that it groups words together based on their meanings. However, there are some important distinctions. First, this system is not covering all vocabulary in English but just covering words which are complicated and often appeared in MUET examination. Secondly, WordNet( ) labels the semantic relations among words but this system does not follow any explicit pattern with WordNet.

E-Muet Corpus for Vocabulary Enhancement is a system that helps students who wants to know the meaning of vocabulary which often use in MUET exam. This system will cover vocabulary which related to MUET according to the collection of MUET papers. It will helps student to score MUET especially in Reading paper. This E-MUET will help students to find the past year question without having difficulties. The objective of this system is to develop a corpus of MUET question paper. Corpus is a collection of a large or complete collection of writings, a body of utterances. It is basically a dictionary for vocabulary but in this system it will just be a simple dictionary for vocabulary that often use in MUET. Secondly, to analyze the word which in MUET question paper such as concordance, collocation. Lastly, to develop corpus for MUET vocabulary enhancements. MUET examination is divided to 4 section – Reading, Listening, Writing and Speaking. This E-MUET will focus on Reading and Writing as this two papers affected the marks the most.

1.2 Problem Statement

This system is proposed due to a few problems that faced by MUET candidates which are the students have the problem with the meaning of the word used in MUET examination especially for Reading and Writing paper. Words used in MUET examination basically is complex and hard to understand by candidates. So, this system will help the students to understand the meaning of the word and help them to use the words in Writing paper. Secondly, the students did not know how to find the resources of past year MUET examination question to do some revision. This is important for the candidates to be familiar with the question. Last but not least, the students did not know how to score MUET examination. They are not familiar with the question and they did not know the question trick.

1.3 Objective

Objectives are basically the mission for this system to accomplish. These are the objectives:

- **To develop a corpus of MUET question paper and vocabulary**

  It will provides the collection of MUET examination paper for candidates to do the revision using past year question. It also gives the meaning of complex word that has been used in the past MUET examination.

- **To analyses the words in the MUET question paper.**

  This system will create a simple dictionary that focused on vocabulary that has been used in MUET examination for a several times

- **To overcome the problems of students to score in MUET.**

  It helps the candidates to be familiar with MUET question so the candidates know how to score in the examination as MUET paper has the same kind of trick in question. The candidates can know their performance by answering the question that has been provided.

1.4 Scopes

User : The target users are administrator and candidates of MUET

Module:

- Administrator

- Update word and question

Admin is able to insert and update the complex words with the meaning. Admin also can update the question for the candidates to answer.

- User
  - Registration

    The candidates need to register into the system for the system to keep the performance of candidates.
  - Searching Words

    The candidates able to insert word for them to search the meaning.
  - Question

    The candidates can answer the question that has been provided for them to try and know their performance by answering the question and this system has offers a few set of questions for the candidates.

1.5 Project Significance

The benefits of E-MUET Corpus for Vocabulary Enhancement are this system will help to save the time consuming. For an example, the candidates need to do some revision using the past year MUET examination, but it was not stated anywhere. So, the candidates have to open each link that provided or search the hard copy in library.

Besides, this system will help candidates to identify the question strategy and pattern that has been used in MUET examination every year. It will help students to score in MUET. Furthermore, the question that provided is to test the performance of candidates after they used this system so the students will familiar with any kind of question in MUET.

Next, this system will be a simple dictionary which it will give the meaning of the words that only used in MUET especially the complex word. So, the candidates will do not have the problem to understand the complex word or sentences.

1.6 Expected Output

This system should help user to finding meaning of words that might hard for certain students and help user in getting past year examination in easy way. They also can practice their reading skills in this system as this system prepared some quiz or question for the user to answer. The concordance function in this system will help students know what words will come out often in MUET.

1.7 Conclusion

This system will using Web Development and Agile method as it will be user friendly system. It will help in reducing time for the user to finding the resources. There are few modules which are divided to two target which are the user and administrator. The module for administrator is Update word and question. The modules for the candidates are Registration, Searching Word and Question.

CHAPTER 2

2. LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

A literature review can be only a basic synopsis of the sources, but it usually has an organizational pattern and combine both summary and synthesis. So, basically this chapter will introduce the important information of the source. It also will explain the new creation, innovation and enhancement of E-MUET Corpus for Vocabulary Enhancement. In this chapter, we will compare the other research and this new system. It might give a new interpretation of old material or combine new and old interpretation. This will explain more the importance of this system.

2.2 Facts and Finding

Based on the previous research, Expectaion –based Teaching: An Action Research in English Report Writing (Ai Kiat Teo,2013) the most challenging faced by MUET candidates are writing. So, they need to find a tool that can help them in improving their writing. The author was proposed to teach students with demograpic values when studying English to make the learning way is more fun. Another approach is Expectation based teaching approach where the lecturer need to know if the students understand the learn process or not. The objective of this research is to test the effectiveness of an expectation-

based teaching approach and to explore whether demographic variables will moderate the relationship between expectation-based teaching and content quality.

Comparing this research with this system, it will have the difference in terms of the approaches to the user. In this journal, they have suggest two kind of approaches which are using Demographic values while studying and Expectation based teaching. While this system will used direct approach to the user. The user will need to search the word that they do not understand to find the answer and at the end of the system, there will be questions for the user to test themselves whether they understand and their performance. The objectives for the journal is to find whether the approaches are effective to students while this system's objectives are to help the student who take MUET exam.

Another research is MUET, English and Dilemma for Undergrads (Wan Salman Wan Sallam,2014). This research discuss about the MUET requirement for each universities. In this research, MUET is not a one of the satisfactory reflection in communicaton skills.

The research A Corpus Study of Structural Types of Lexical Bundles in MUET Reading Texts (Christina,2014) is about the obstacles for student to answer Reading MUET examination. Insufficient knowledge of structural forms which appears to be an obstacle in Reading and Speaking tests has been proven in a few past studies. The objectives are to investigate whether a similar trend is happening in reading tests. This study is conducted by analysing reading passages of MUET, a criterion- referenced test that gauges the overall English Language proficiency of candidates in the cumulative score of four language skills (Listening, Speaking, Reading and Writing) in a single Band score.

There is slightly common in this journal and system which is this both journal are focusing in Reading. This system also focusing in Writing Examination as for both of the paper, they have the most f marks in MUET. The objectives for this two journal also same, which is to investigate the pattern of the question. Basically, this two journal believe that there are pattern in MUET examination.

E-MUET is proposed to help the students with different approach which is to help them to find the past year MUET examination. They need to train themselves to answer MUET before taking the real MUET. So, that the students familiar with any kind of question.

Furthemore, this system will help with highlighten the spot topic and give the definitions of complex words.

The pie chart is below is the finding that can be concluded after the questionnaire (shown in Appendix) has been answered from a group of candidates of MUET. This is the proof why this system can help candidates to score MUET.

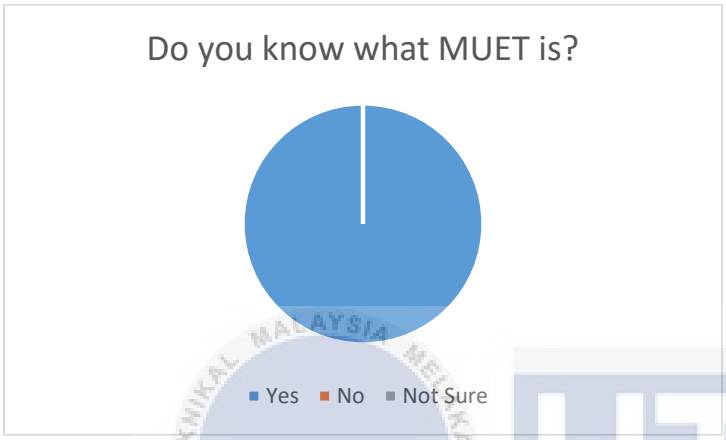

Figure 2.1 Pie Chart of Question 1 in Questionnaire

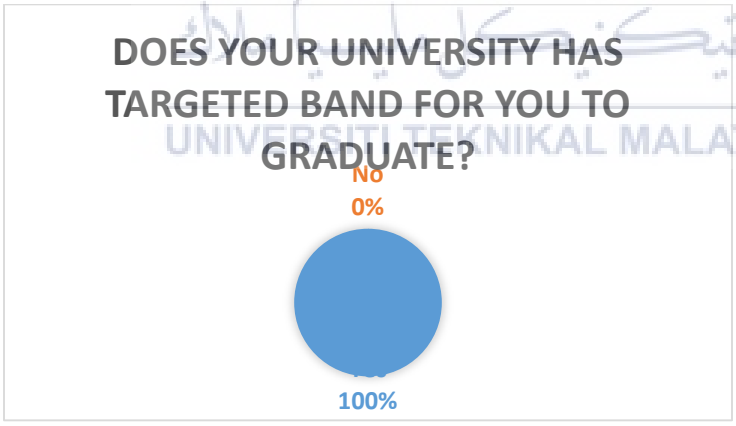

Figure 2.2 Pie Chart of Question 2 in Questionnaire

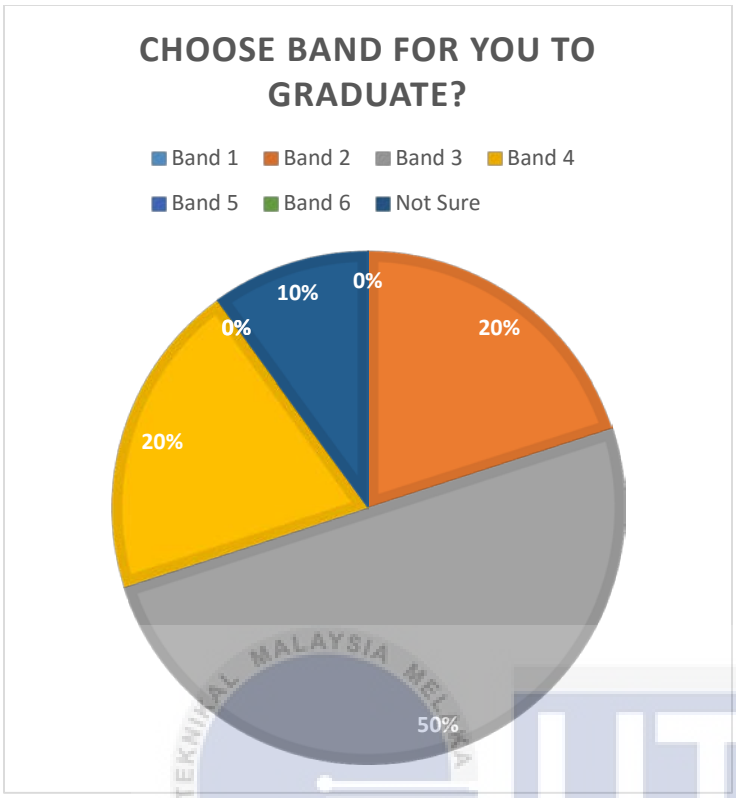

Figure 2.3 Pie Chart of Question 3 in Questionnaire

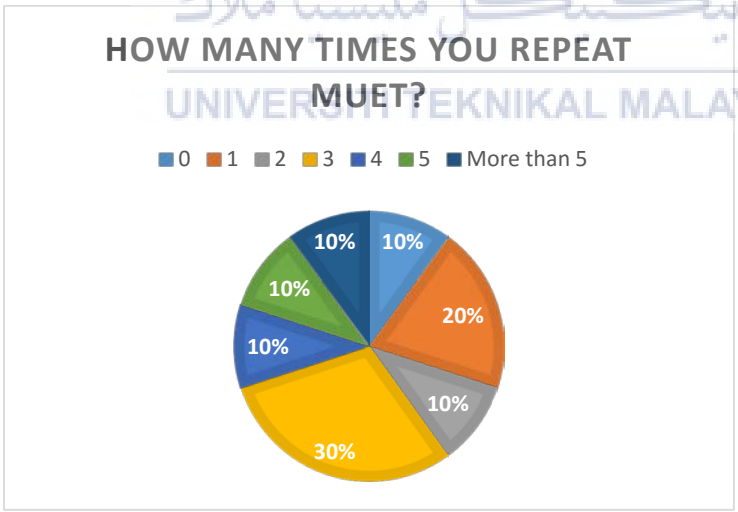

Figure 2.4 Pie Chart of Question 4 in Questionnaire

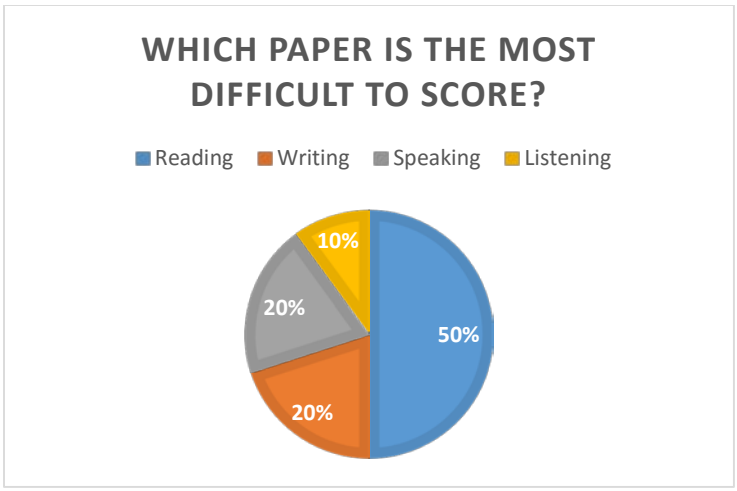

Figure 2.5 Pie Chart of Question 1 in Questionnaire

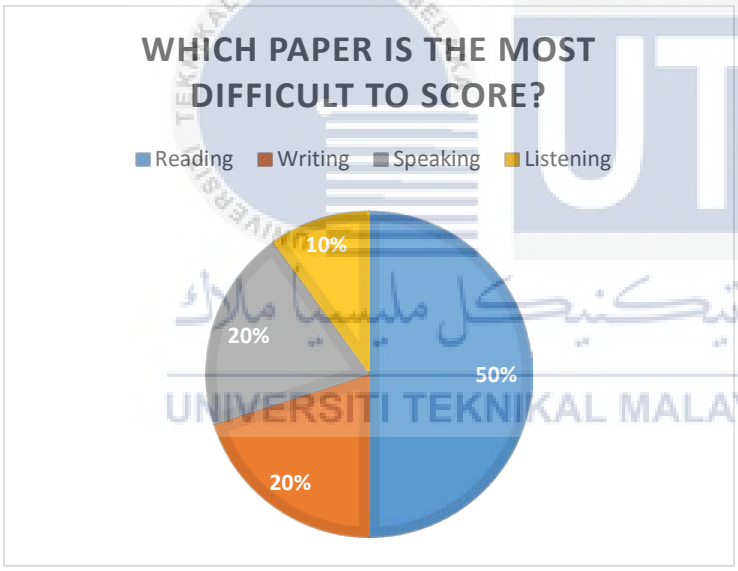

Figure 2.6 Pie Chart of Question 6 in Questionnaire

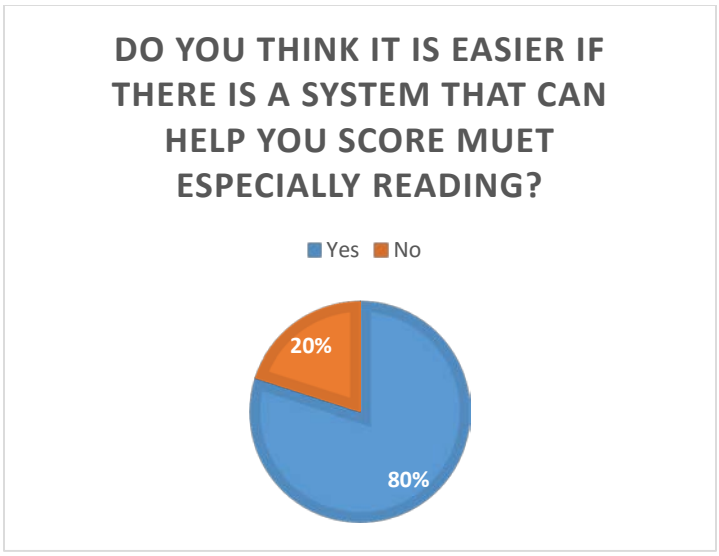

Figure 2.7 Pie Chart of Question 7 in Questionnaire

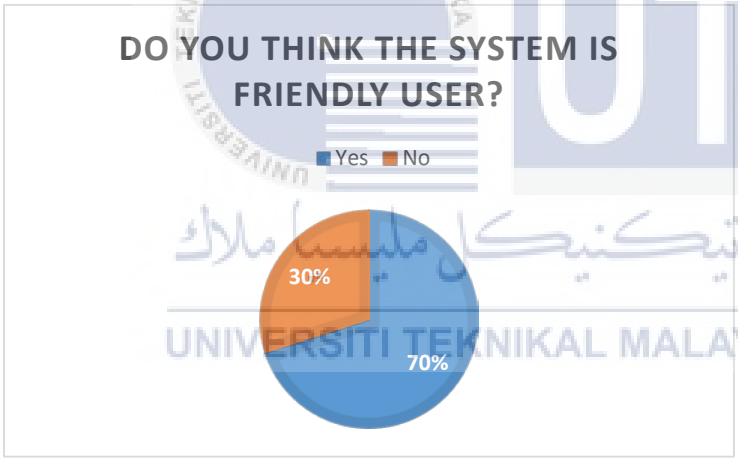

Figure 2.8 Pie Chart of Question 8 in Questionnaire

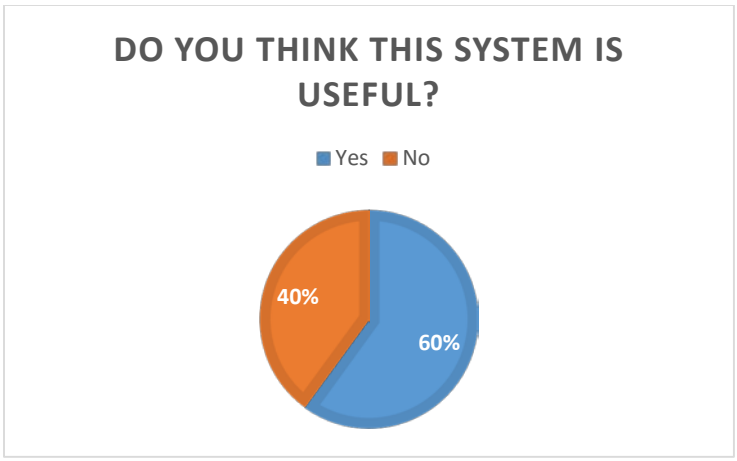

Figure 2.9 Pie Chart of Question 9 in Questionnaire

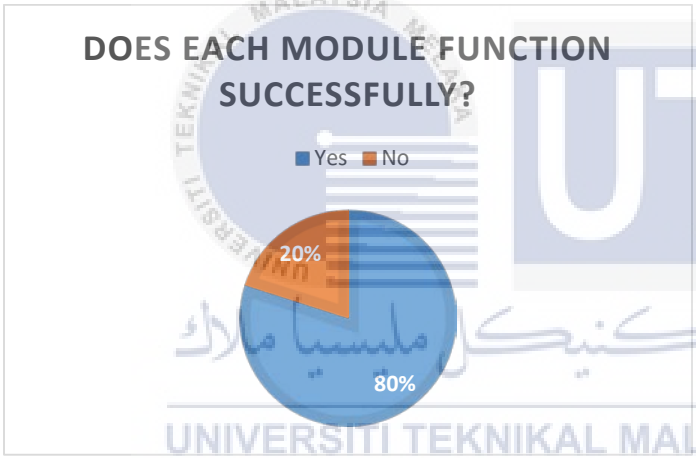

Figure 2.10 Pie Chart of Question 10 in Questionnaire

2.2.1 Domain

2.2.2 Existing System

Dewan Bahasa dan Pustaka is the most close to this, E-MUET Corpus Vocabulary Enhancement. Dewan Bahasa dan Pustaka is one of the system that introduces the concordance and collocation. The concordance and collocation is not widely used by

people but the function is very helpful for the user. So from the Dewan Bahasa dan Pustaka, this system has adapt a few functions especially the concordance. Dewan Bahasa dan Pustaka is for Bahasa Melayu terms but in this system, it focused only on the terms that has been used in MUET examination.

WordNet is also one of the reference that has been used, the WordNet is a dictionary for English terms, but it has no concordance or other function. So, the adaption that has been made in this system is the definition of word. The idea is for the user can search the definition of the word that has been used in MUET often. It is not for every words in English.

2.2.3 Technique

Structured Systems Analysis and Design Method (SSADM) takes after the waterfall lifecycle model beginning from the plausibility study to the physical configuration phase of advancement. One of the primary components of SSADM is the concentrated client contribution in the prerequisites examination stage. The clients are made to close down every stage as they are finished guaranteeing that necessities are met. The clients are given clear, effectively justifiable documentation comprising of different diagrammatic representations of the framework. SSADM splits up an improvement venture into stages, modules, steps and assignments.

The most importantly model created in SSADM is the information model. It is a piece of prerequisites assembling and comprises of all around characterized stages, steps and items. The procedures utilized as a part of SSADM are sensible information demonstrating, information stream displaying and element conduct displaying. A portion of the essential qualities of SSADM are it is helpful amid prerequisites detail and framework configuration stage. In addition, it is straightforward and effortlessly comprehended by customers and engineers. SSADM likewise separate an undertaking into little modules with all around characterized goals

2.3 Project Methodology

In this proposed system, the suitable methodology is Agile Methodology. Incremental programming improvement strategies follow back to 1957. In 1974, E. A. Edmonds composed a paper that presented a versatile programming improvement process. Concurrently and autonomously, the same routines were produced and sent by the New York Telephone Company's Systems Development Center under the heading of Dan Gielan. In the mid-1970s, Tom Gilb began distributed the ideas of transformative venture administration (EVO), which has developed into focused engineering.[9] During the mid-to late 1970s, Gielan addressed widely all through the U.S. on this strategy, its practices, and its advantages.

Agile method is an alternative to traditional project management. The method is a group of software development methods in which solutions evolve through collaboration between self – organizing, cross functional teams. It promotes adaptive planning, evolutionary development, and early delivery, continuous improvement and encourages rapid and flexible response to change. It also help teams respond to unpredictability through incremental, iterative work cadences known as sprints.

It was first proclaimed as Agile Manifesto also known as The Manifesto for Agile Software Development in 2001, six years after “Agile Methodology” was originally introduced by the preeminent software engineers of the late 80’s and early 90’s and come out the DSDM Consortium in 1994 although its roots go back to the mid 80’s at DuPont and works by James Martin and James Kerr et al.

Figure 2.11: Agile Methodology

2.4 Project Requirements

E-MUET Corpus for Vocabulary Enhancement is a new system which act as a simple dictionary but strict to only certain word that has been used in MUET examination so the system itself is an improvement for MUET.

2.4.1 Software Requirement

a. Development Tools

- Notepad++
- Adobe Dreamweaver CS5

b. Operating System/Server

Processor: Intel® Core™ i3-3110M CPU @ 2.40 Ghz

Memory (RAM): 4.00GB(3.87 GB useable)

System type: 64-bit Operating System, x64-based processor

2.4.2 Hardware Requirement

- A laptop with Notepad++ / Adobe Dreamweaver CS5

2.4 Project Schedule and Milestones

Table 2.1 Schedule and Milestones

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Proposal Submission															
Proposal Amendment															
Chapter 1: Introduction															
Preparation of Chapter 1 & Chapter 2															
Chapter 2 & Chapter 3: Methodology and Progress Report 1 Presentation															
Demo, Chapter 2 & Chapter 3															
Mid-semester Break															
Demo and Chapter 4: Algorithm Design															
Progress Report 2 Presentation															
Demo															
Final Year Project 1 Demo															
Presentation															
Final Presentation Final Year Project 1															

2.5 Conclusion

In conclusion, I have used Agile methodology because it helps our system development to perform better and suitable for our project. This documentation are produced to detailed about our system and give more understanding about the system.

CHAPTER 3

3. ANALYSIS

3.1 Introduction

3.2 Problem Analysis

As this is the first system for MUET, so no known existing application to be compare with. But, we can compare with Dewan Bahasa dan Pustaka as both of the system have the same concept. The problem with the system is too many instructions and things the user need to do in one time. The system has not given explanation to the user how to use the system and the definition for certain instruction such as concordance and collocation. The flowchart of the system as below:

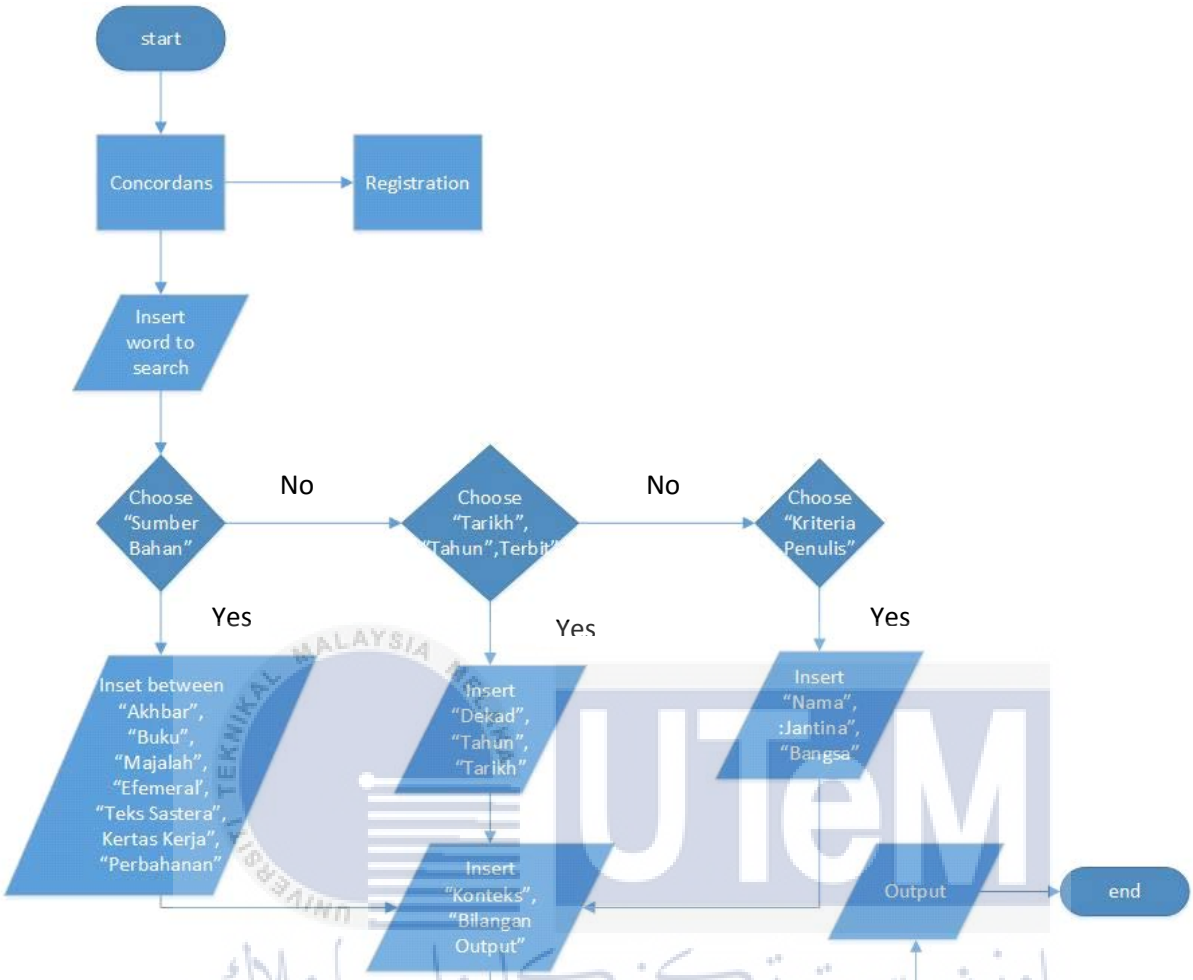

Figure 3.1 Flowchart of Dewan Bahasa dan Pustaka system

As for this E – MUET vocabulary for enhancement, the problem is the words only specific that has been used in MUET examination past year. So, any words that are not in MUET before, will be not in this system.

The sequence diagram for E-MUET Corpus Vocabulary Enhancement:

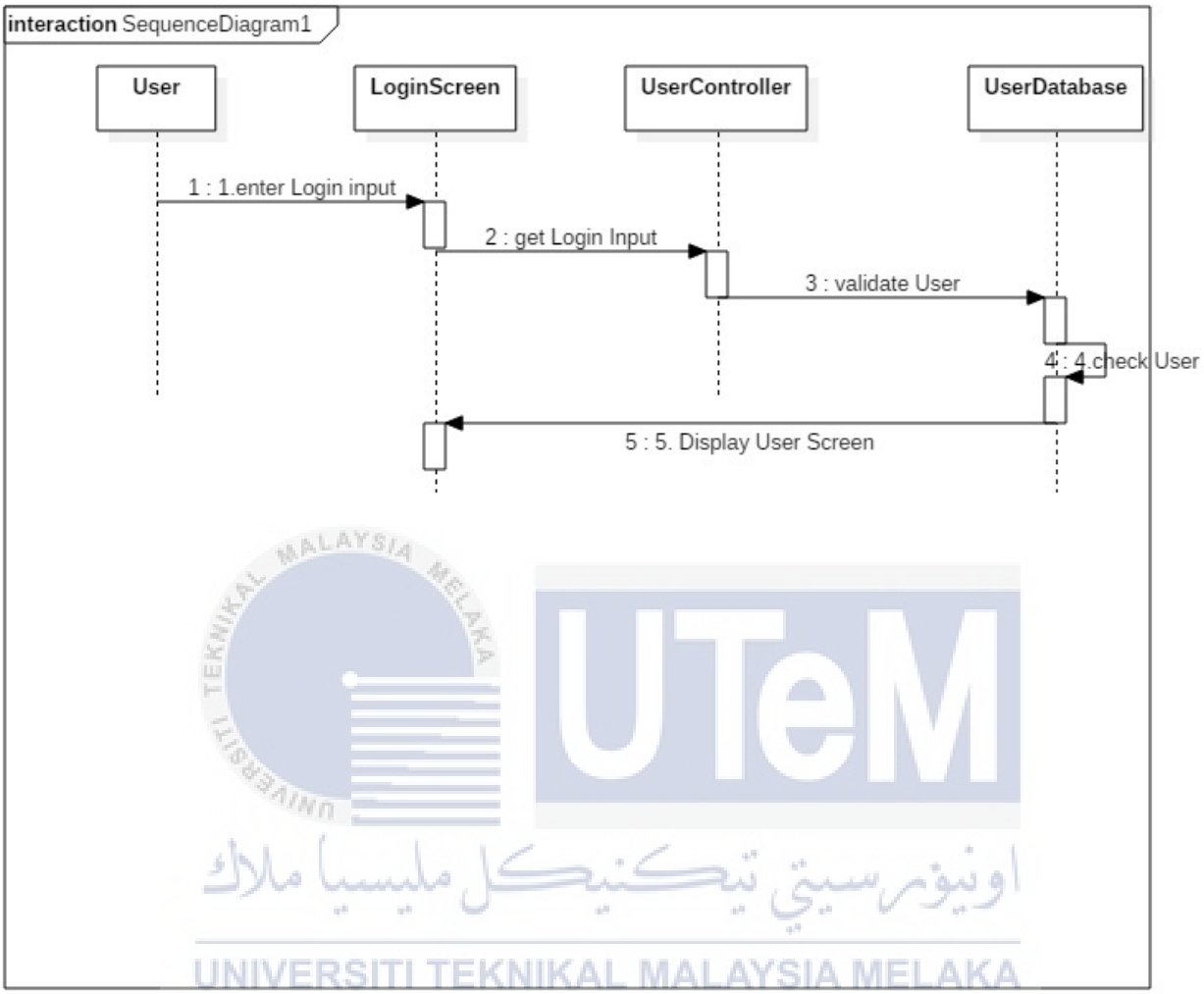

Figure 3.2 The sequence diagram for Login

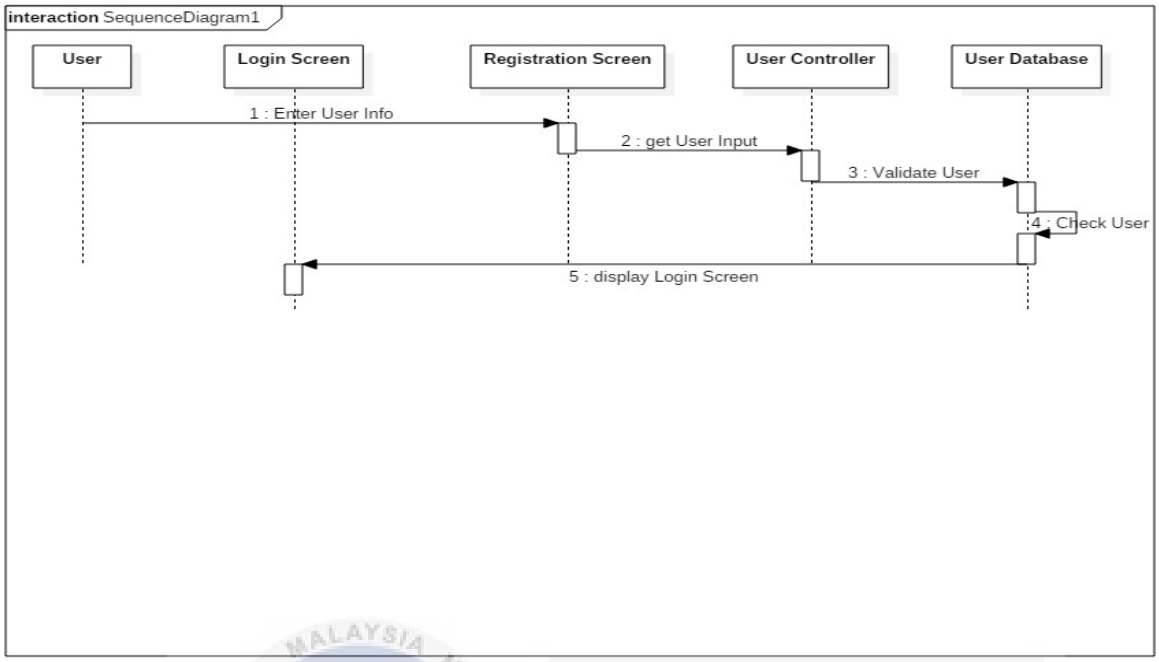

Figure 3.3 The sequence diagram for Registration

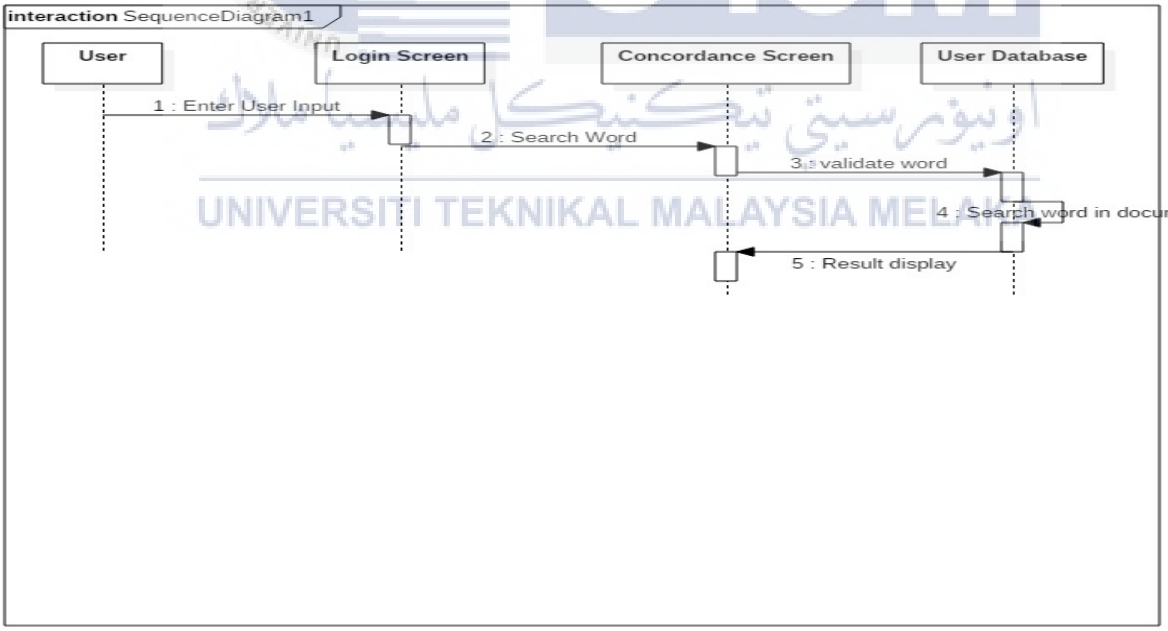

Figure 3.4 The sequence diagram for Concordance

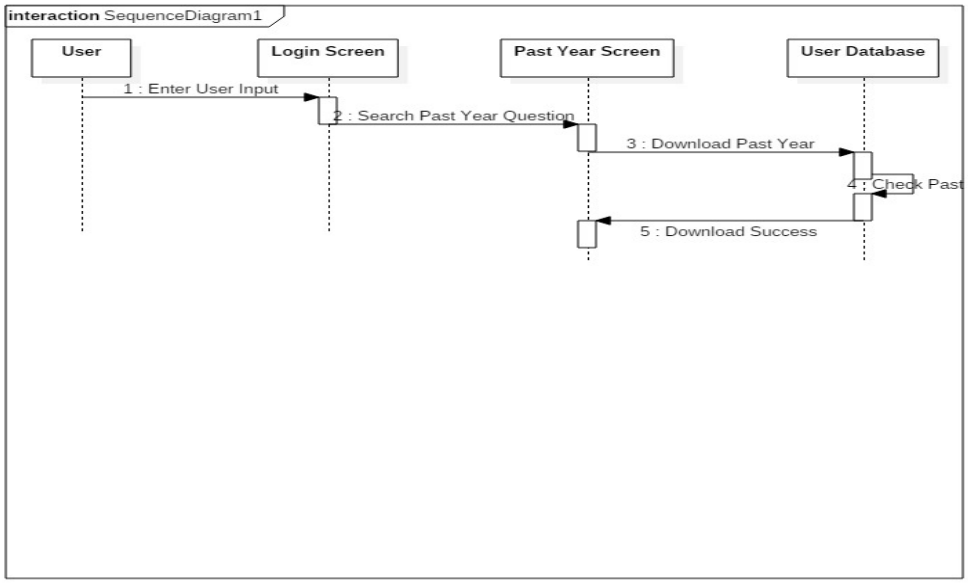

Figure 3.5 The sequence diagram for Past Year examination

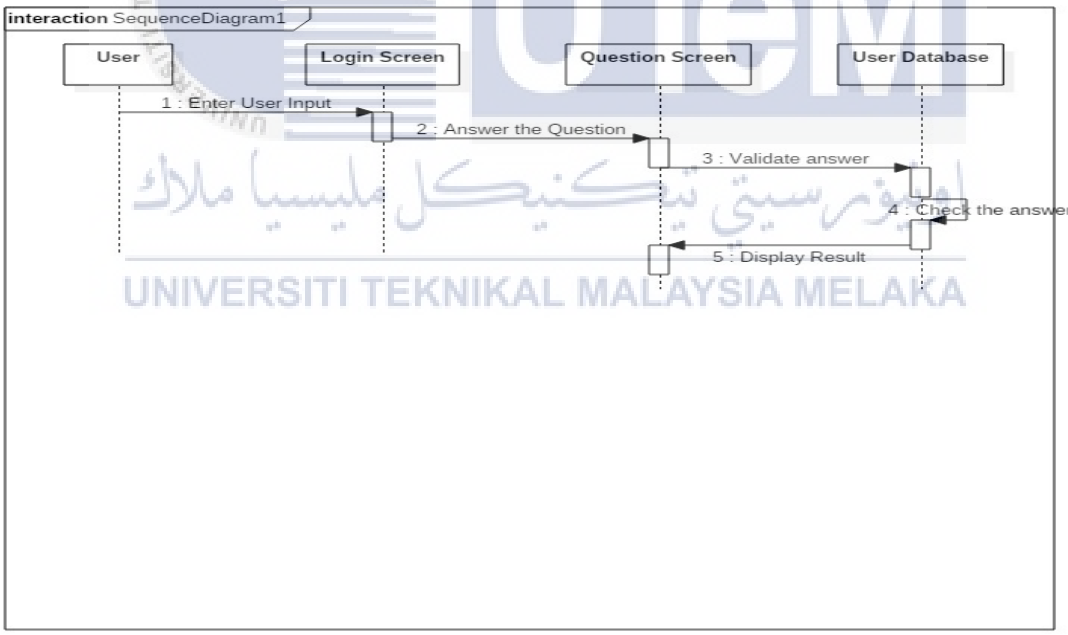

Figure 3.6 The Sequence diagram for Question

3.3 Requirement Analysis

3.3.1 Data Requirement

Table 3.1 Table Data Requirement for User

Attribute Name	Description	Type	Required	PK/FK
User_id	User id	Int(50)	Y	PK
name	User name	Varchar(100)	Y	
address	User address	Varchar(150)	N	
email	User email	Varchar(80)	Y	
phoneno	User phone number	Int(20)	N	
username	Username for login	Varchar(30)	Y	
password	Password for login	Varchar(8)	Y	

Table 3.2 Table Data Requirement for Word

Attribute Name	Description	Type	Required	PK/FK
idSearch	For Searching using id	Int(100)	Y	PK
word	Word in database	Varchar(1000)	Y	
meaning	Meaning of the word	Varchar(2000)	Y	

Table 3.3 Table Data Requirement for documents

Attribute Name	Description	Type	Required	PK/FK
id	Id for documents(past year)	Int(10)	Y	PK
filename	Name of the documents	Varchar(255)	Y	
Contents	Contents in the document	text	Y	

3.3.2 Functional Requirement

Table 3.4 Table Functional Requirement

FR_NO	REQUIREMENT	DESCRIPTION
E-MUET1_1	Registration	The system should allow to create a new account.
		The system should allow the saving of username and password into database.
E-MUET2_1	Login	The system should allow the user to enter username and password to login.
		The system must display error message to user if the input entered is invalid.
E-MUET3_1	Update word and question	The system should allow the admin to update any words and question.

		The system should allow the saving of words and question into the database.
E-MUET4_1	Searching Words	The system should allow the user to search the words that they want to search.
		The system should pop out error message if the words are not in dictionary.
E-MUET5_1	Question	The system should allow the user to answer the question that has been provided.
		The system should pop out the marks and the correct answer.
		The system should save the user's marks in database.

Use Case Diagram

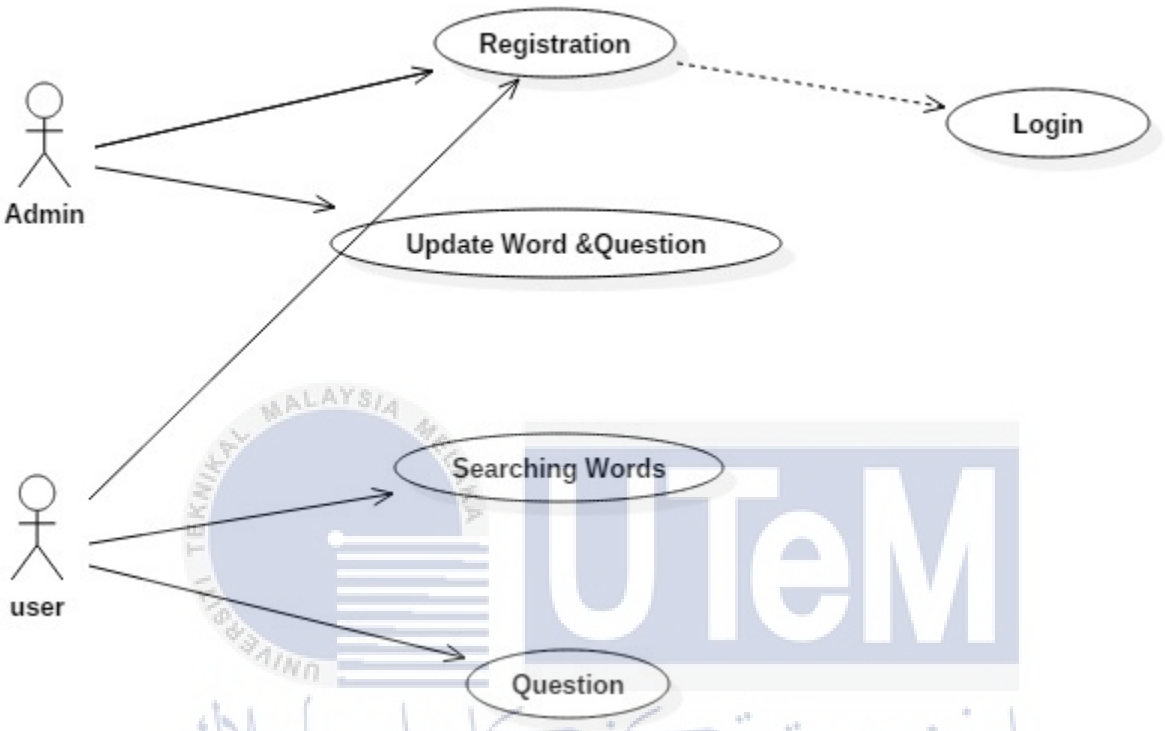

Figure 3.7 Use Case for E-MUET Corpus Vocabulary Enhancement

3.3.3 Non Functional Requirement

Table 3.5 Table Non Functional Requirement

NFR_NO	REQUIREMENT	DESCRIPTION
E-MUET6_1	Data Integrity	Consistency – Data shall be 100% consistent at all sites and at all times.
E-MUET7_1	Availability	The system must available for user to use when user wants to.

3.3.4 Others Requirement

3.4 Conclusion

This chapter is a conclusion about the analysis and requirement of E-MUET Corpus Vocabulary Enhancement which is newly developed. Structured System Dynamic Methodology (SSDM), a systemic methodology product of the combination from two different systems thinking paradigms. This SSDM's objective is to improve project management and control which useful in this system. It also help in develop better quality systems so the system will long lasting in maintenance. SSDM also covers those aspects of the life-cycle of a system from the feasibility study stage to the production of a physical design. In this chapter, it has described the sequence diagram and data dictionary that explained how each component works together in this system.

CHAPTER 4

4. DESIGN

4.1 Introduction

For designing the system, more aspect must be consider for develop interactive interface system. That interactive interface will interact user to using this system. The module is devoted to the design of interactive systems which are modeled with the Database-centric architecture or data-centric architecture. With data-centric architecture, it will increase versatility in output product formats and contents. Instead of a standard set of architecture product with set formats, product would be developed as needed in format, and including information, tailored to the specific use.

4.2 High Level Design

4.2.1 System Architecture

System Architecture is the conceptual model that defines the structure or behavior of a system. It is important to the overall structure. It is also known as network architecture which is the structure or level that encapsulates the system and database and prevent the direct access to the database. Besides that, system architecture is a response to the conceptual and practical difficulties of the description and design of complex system. It will help to describe consistently and design efficiently complex system. It also can provide a plan from which product can be procured and system developed that will work together to implement the overall system.

Figure 4.1 The figure of system architecture

4.2.2 User Interface Design

Figure 4.2,4.3 The home page of E-MUET Corpus Vocabulary Enhancement

The user can login and register to the system in this page.

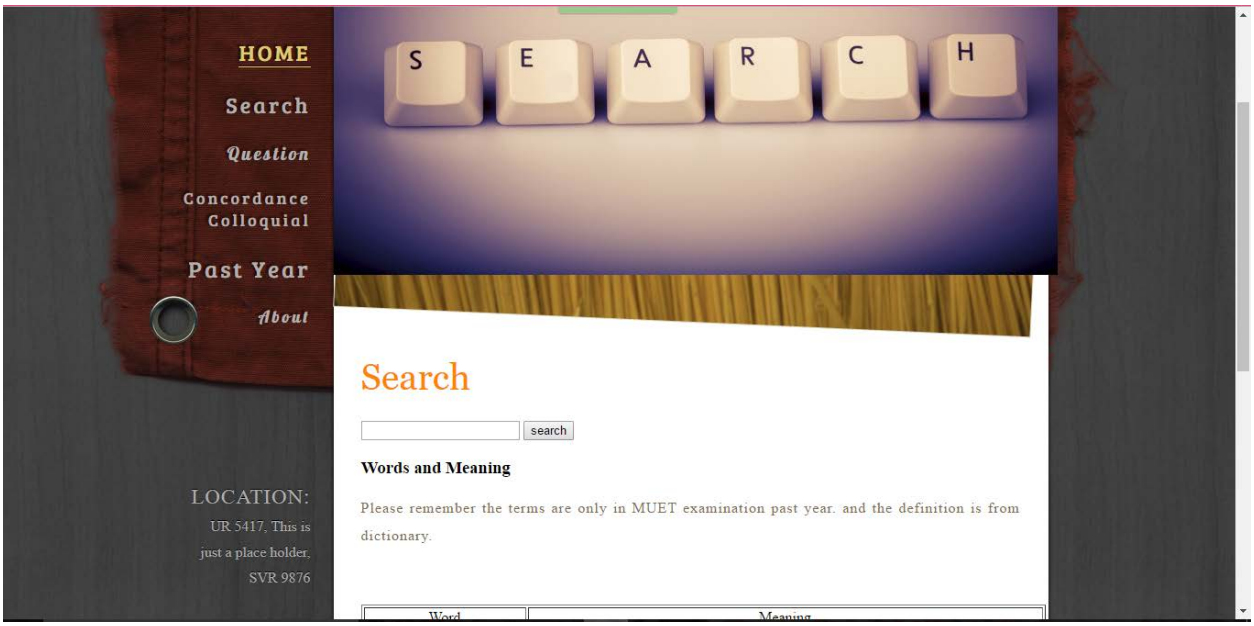

Figure 4.4 The page for Search function

This page is for the user to search any words they want to know the definition.

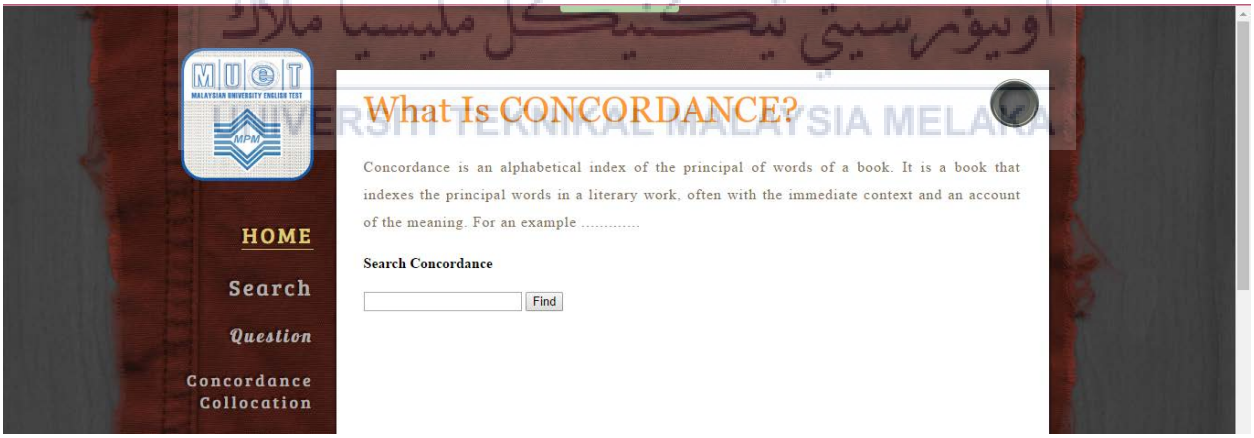

Figure 4.5 The page for Concordance function

This is for user to see the structure of the sentences for the words that they have search for.

Figure 4.6 The page for user download Past Year examination

The user can download the Past Year paper here to do some revision.

4.2.3 Database Design

4.2.3.1 Conceptual and Logical Database Design

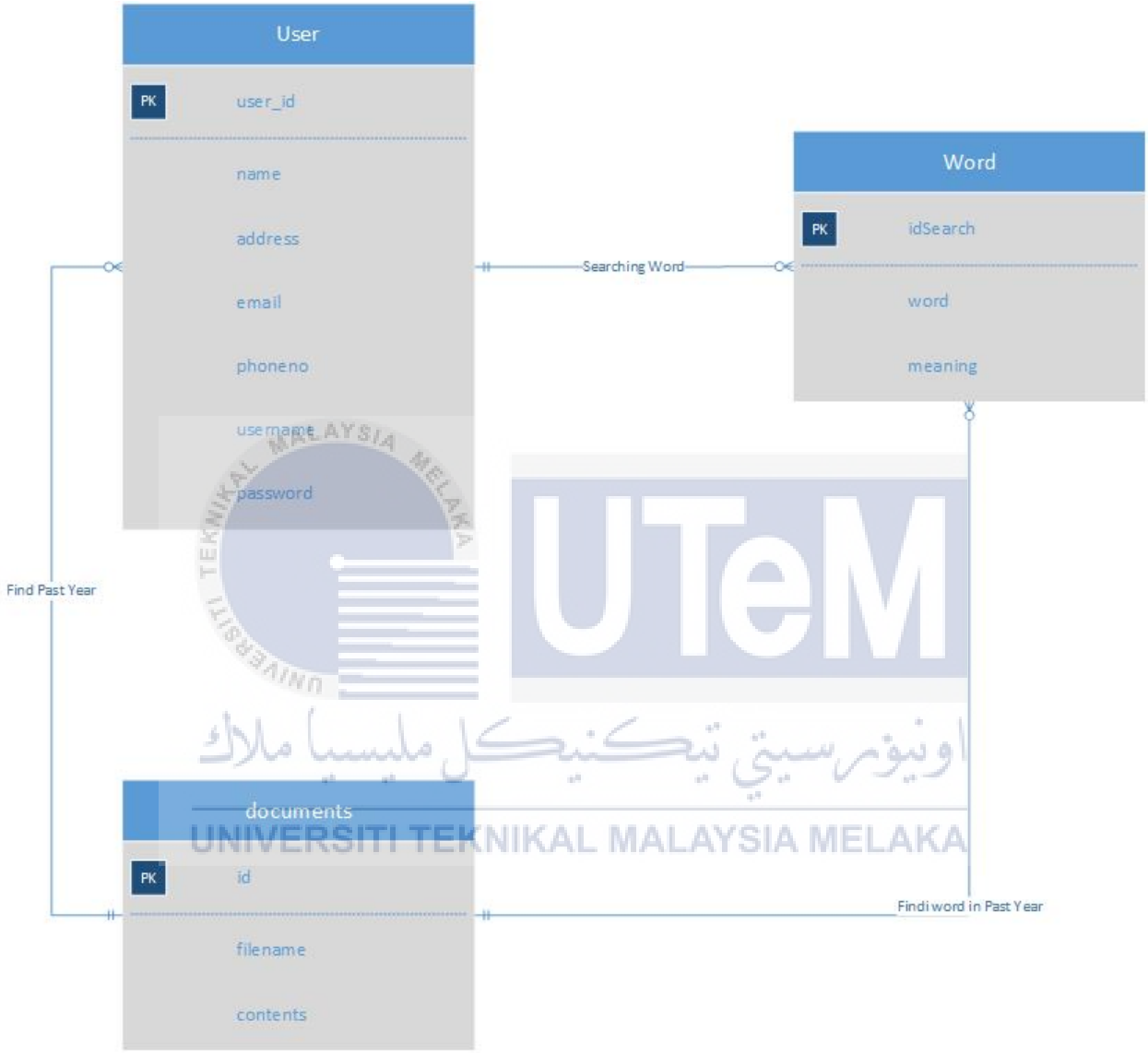

Figure 4.7 Figure of Entity Relationship Diagram of E-MUET system

4.3 Detailed Design

4.3.1 Software Design

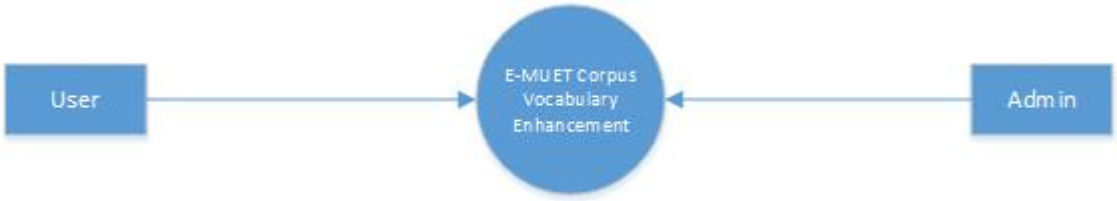

Figure 4.8 Context Diagram of E-MUET Corpus Vocabulary Enhancement

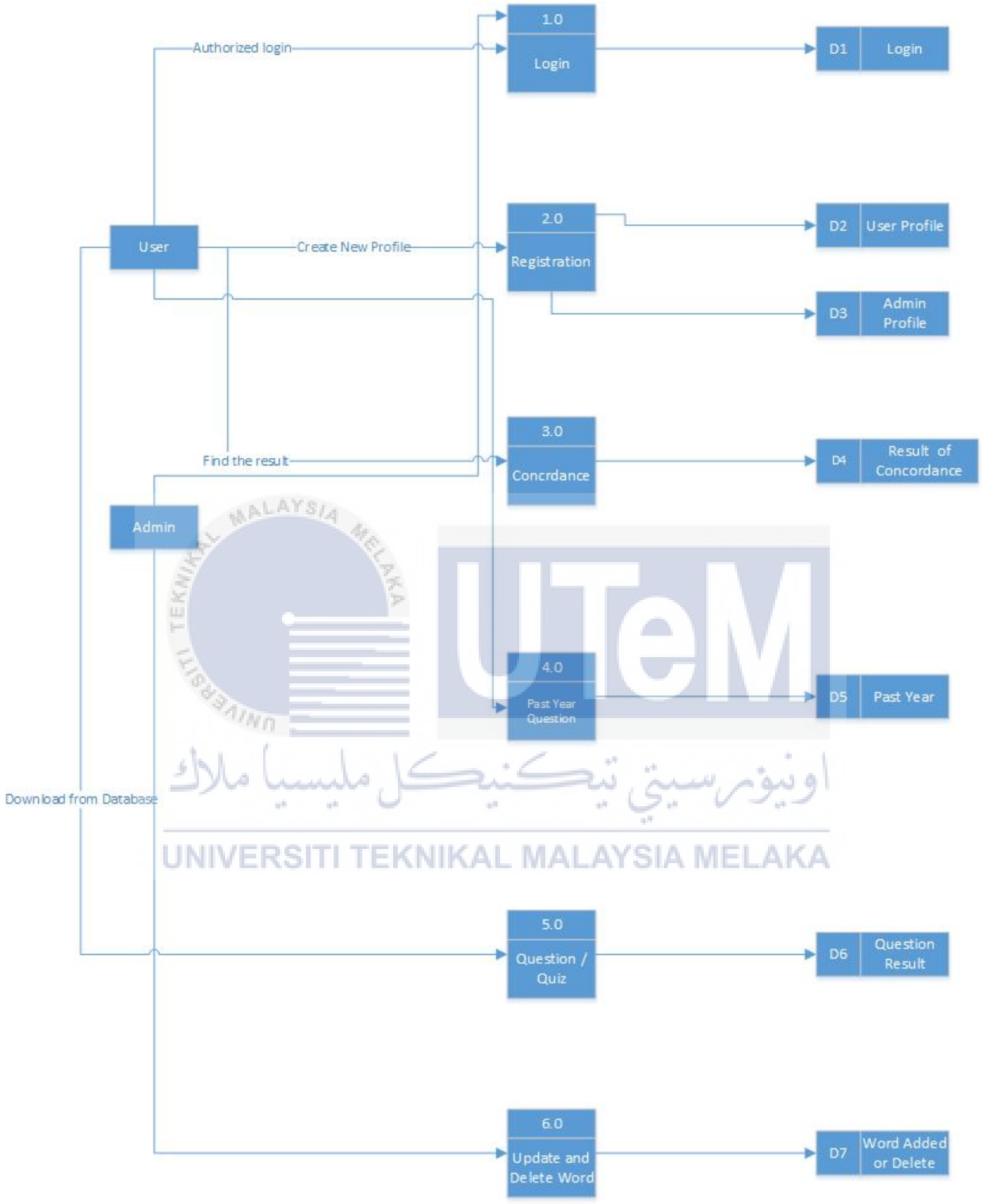

Figure 4.9 Data Flow Diagram for E-MUET Corpus Vocabulary Enhancement

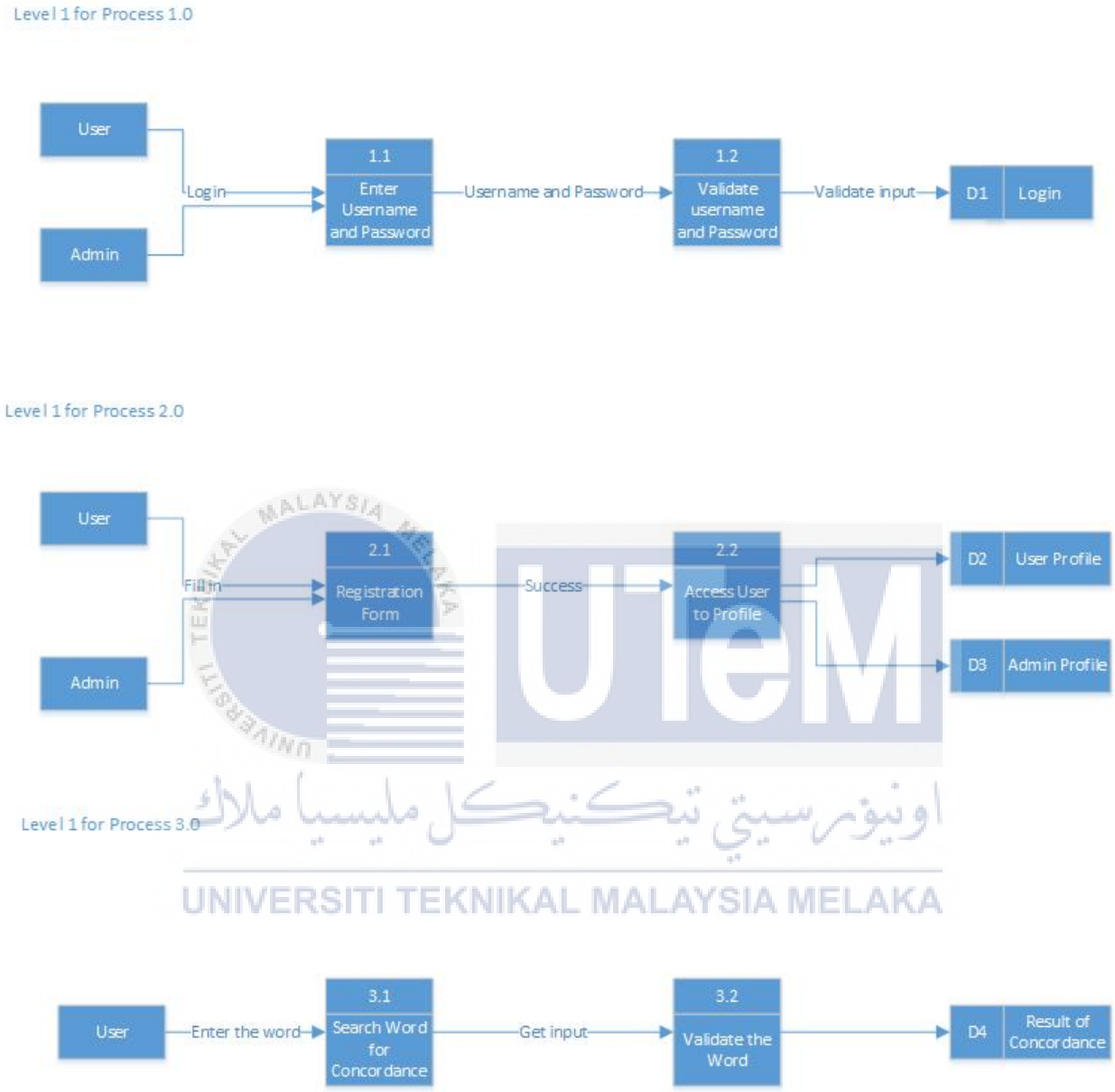

Figure 4.10 Level 1 for Process 1.0,2.0 and 3.0

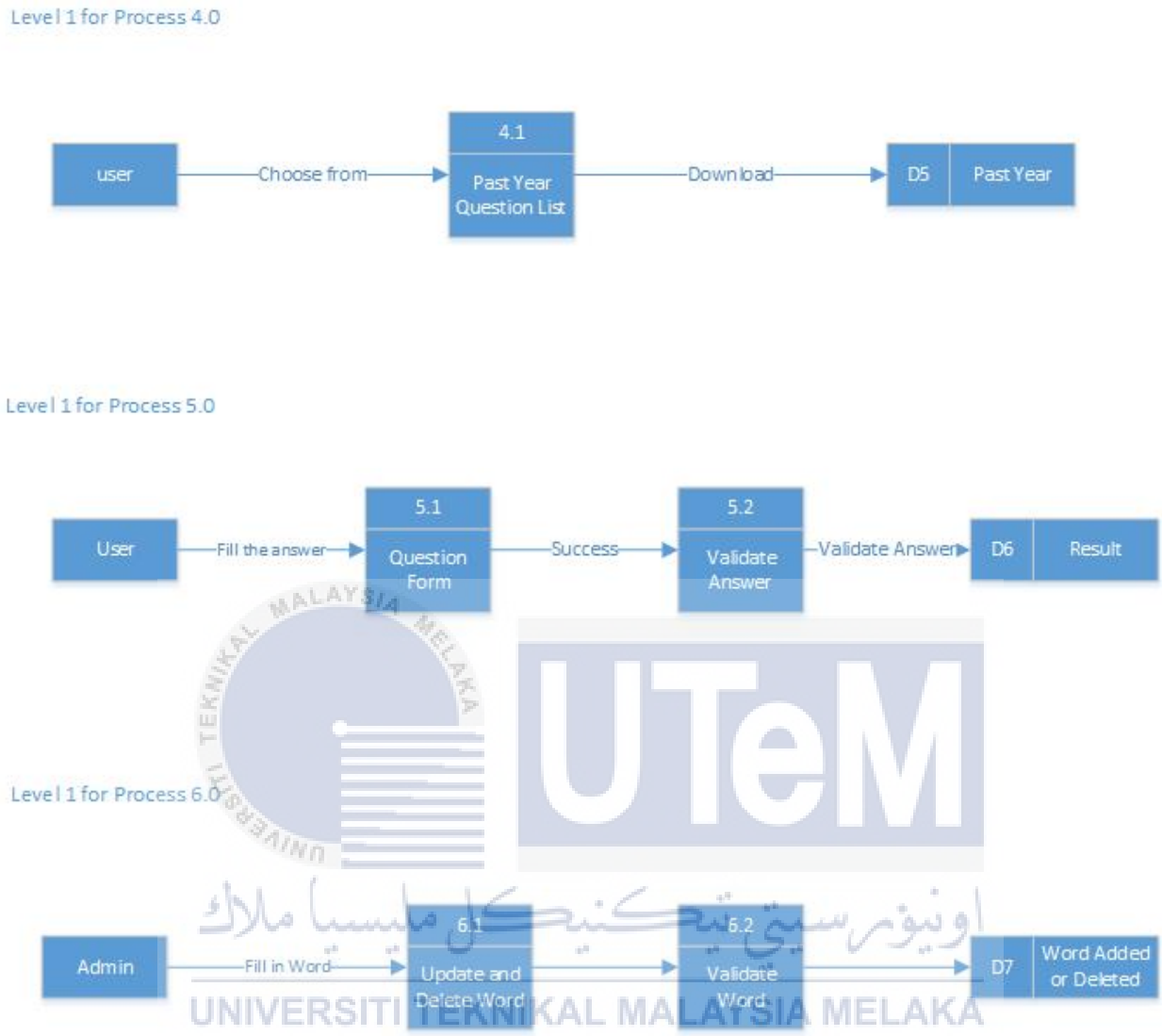

Figure 4.11 Level 1 for Process 4.0, 5.0 and 6.0

Pseudocode

Login

1.0 Start

2.0 Input Username and Password

3.0 if (type):

3.1 user

3.1.1 User Menu

3.2 Admin

3.2.1 Admin Menu

4.0 Else

5.0 End

User Menu

1.0 Start

2.0 Home

3.0 Concordance

4.0 Past Year

5.0 Question

6.0 End

Concordance

1.0 Start

2.0 Enter Word

2.1 Search Word

2.1.1 Yes

2.1.1.1 Display Result of Concordance

2.1.2 No

2.1.2.1 Display "No Result"

3.0 End

Past Year

1.0 Start

2.0 Display Past Year Question List

2.1 Choose Past Year

2.1.1 Download Past Year

3.0 End

Question

1.0 Start

2.0 Answer the Question

2.1 Submit the Answer

2.1.1 Yes

2.1.1.1 Display Result of Answer

2.1.2 No

2.1.2.1 Display Nothing

3.0 end

Admin Menu

1.0 Start

2.0 Home

3.0 Update and Delete Word

4.0 End

Home

1.0 Start

2.0 if(choose=="Register")

2.1 Yes

2.1.1 Input name, address, email, phoneno, username and password

2.2 No

3.0 else

4.0 End

Update and Delete Word

1.0 Start

2.0 If(choose=="Add Word")

2.1 Yes

2.1.1 Input word, menaing, example

2.2. No

3.0 else if(choose=="Delete Word")

3.1 Yes

3.1.1 Input word

3.1.1.1 Display "Record delete successfuly"

3.2 No

4.0 end

4.3.2 Physical Database Design

Table for User

CREATE TABLE User

(

User_ id int;

Name varchar(100);

Address varchar(150);

Email varchar(80);

Username varchar(30);

Password varchar(8);

)

Table for word

CREATE TABLE word

(

idSearch int(200);

word varchar(1000);

meaning varchar(2000);

example varchar(3000);

)

Table for documents

CREATE TABLE documents

(

Id int(10);

Filename varchar(255);

Contents text;

)

4.4 Conclusion

As a conclusion, in this chapter has described the overall view of how system has been design or simply can means system design. There are few diagrams which are included in order to give more perceptive about the overall view design of new system.

These are several diagrams included in this chapter which is system architecture Data Flow Diagram, Context Diagram, Entity Relationship Diagram, this framework will describe this E-MUET Corpus Vocabulary Enhancement and structure, its component and how it fit together.

The database design part, an entity relationship diagram and Physical Database Design is included to give information about the relationship between the tables that have been create to save the data and detail. Data dictionary is a collection of data type, content, format and attributes that are used to save the data and detail.

CHAPTER 5

5. INTRODUCTION

5.1 Introduction

This chapter is about the implementation of the system. System implementation is the process of defining how the system should build and ensuring that system is operational and used. It is important to ensure that the system are meets quality standards. The purpose is, to make the system available to a prepared set of users (the deployment), and positioning on-going support and maintenance of the system within the organization. This phase will include the installation, configuration, running, testing and making necessary changes of the system.

E-MUET Vocabulary Enhancement system has 2 modules which include user and admin and few parts which are registration, searching words, questions and update the words. Each of this modules has its own function and that is why these modules need to do implementation in term of logical design to physical software and hardware.

5.2 Software Development Environment Setup

5.2.1 Notepad++

Notepad++ is a tool that free source code editor and Notepad replacement that supports several language. Running in the MS Windows environment, it use is governed by GPL License. Notepad++ is written in C++ and uses

pure Win32 API and STL which ensures a higher execution speed and smaller program size. It supports tabbed editing which allow working with multiple open files in a single window. Notepad++ is automatic backup of unsaved files and it can auto completion for a subset of the API of some programming language. It can supports C, C++, C#,Caml, CSS, HTML.

5.2.2 WAMP Server

WAMP is a free open source cross-platform web server solution stack package developed by Romain Bourdon and consisting of the Apache web server, OpenSSL for SSL support, MySQL database and PHP programming language. It can manage server settings and access the logs easily. It is a simple, lightweight distribution that makes it extremely easy for developers to create a local web for testing purposes.

Everything needed to set up a web server – server application (Apache), database and scripting language is included. WAMP is also a cross platform which means it works equally well on Linux, Mac and Windows. Since it most actual web server deployments use the same components as WAMP, it makes transitioning from a local test server to a live server extremely easy as well.

5.2.3 MICROSOFT WINDOWS 10 EDUCATION

This project use operating system Windows 10 Education (64 bit). Service pack 1 used to deploy the project and for the WAMP server.

5.3 Software Configuration Management

System configuration need to be managed well. Purpose for need in software management us to test the whole system and defines the error of misconfiguration, error in codes of both software and hardware.

5.3.1 Configuration Environment Setup

E-MUET Vocabulary Enhancement System will be uploaded on online server. The online server that is used in this system is tigabits.com.

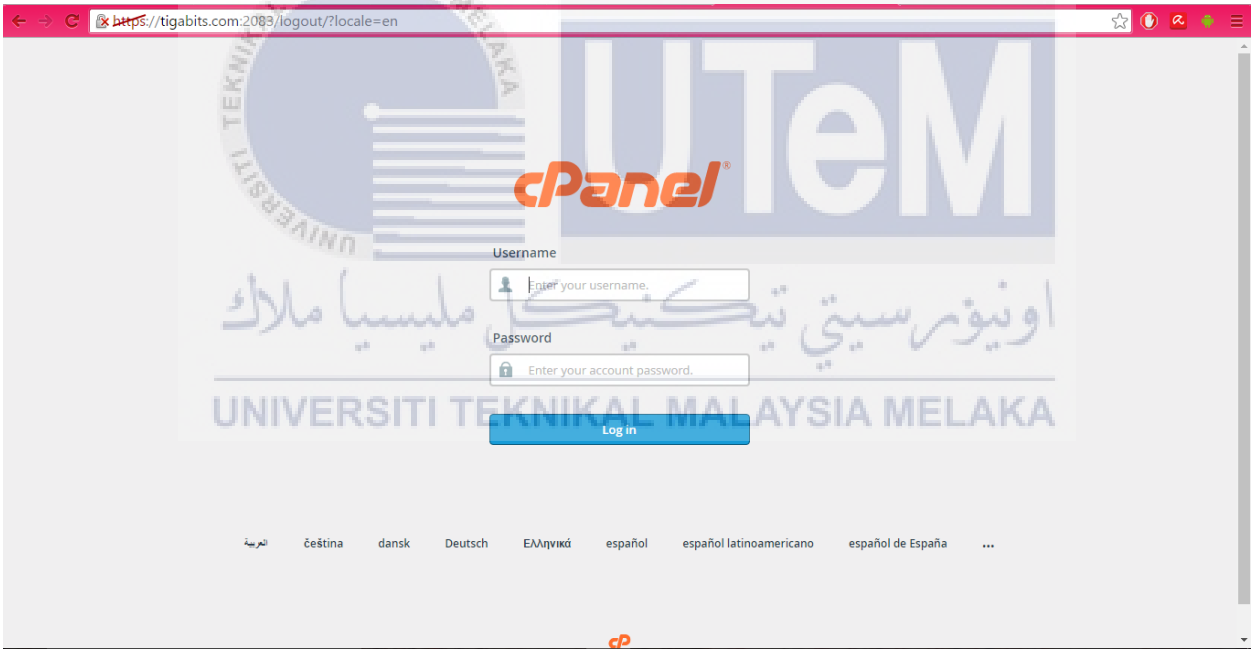

Figure 5.1 : Homepage of tigabits.com

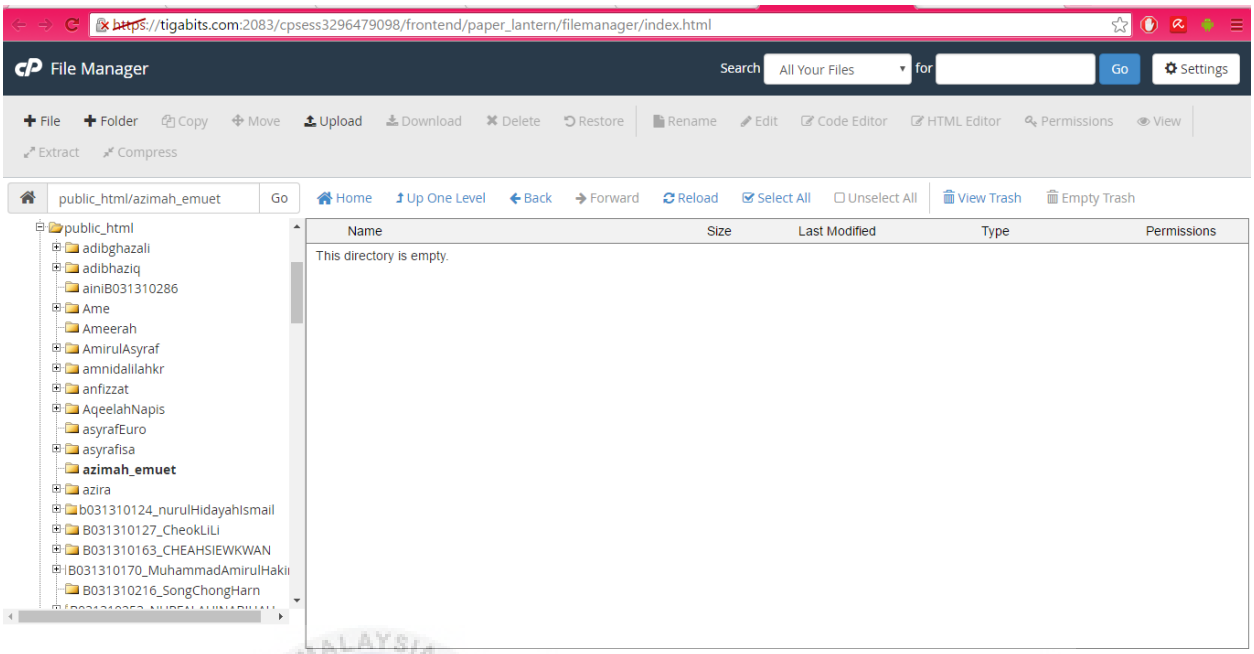

Figure 5.2: The name of the folder in the server

E-MUET Vocabulary Enhancement need to create a folder in the server so that the system can used the database.

5.3.2 Version Control Procedure

The version control procedure has defined as a store of records, regularly the documents for the source code of E-MUET Corus Vocabulary Enhancement with checked access. Each change made to the source is followed, alongside who rolled out the improvement, why it made, and to make sure the system can run successfully.

This system will need to control various versions of the system to maintain and make the system run smoothly. The control procedure additionally helps the developer to upgrade the system and redesign the capacity in the framework then comprehend what is the lack in the system before distribute to the end user.

5.4 Implementation Status

Table 5.1 Implementation Status

Module Name	Description	Complete Duration	Date Completed
For User			
Registration	Registration into application means it needs transferring data information such as name, email, username, password in the same time.	1 week	23 March 2016
Searching words	The user can search the words they want to define in the system so the system will send to the library.	2 week	13 April 2016
Question	The system will give a few questions from the library, as soon the user give the answers, it will send direct to the library for checking the answer.	3 week	3 May 2016
Concordance	It will sort the word in the past year and give the right sentence to the user.	3 week	25 May 2016
For Administration			
Registration	Registration into application means it needs transferring data	1 week	23 March 2016

	information such as name, email, username, password in the same time.		
Update Word and Question	The admin will insert information and the system will check based on the past year.	2 week	6 April 2016

5.5 Conclusion

This chapter concludes that the implementation of the system is important stage because it involves in getting the new system to operates properly in its environment including installation, configuration, testing and making changes into the system.

This system can be access by website and it is suit for the user who will takes the MUET examination. This system is fully developed by PHP, HTML and MySQL. It will ensure that data be made is available to authorized anytime.

CHAPTER 6

6. TESTING

6.1 Introduction

This system has been through acceptance testing approach. Black box testing is the technique of testing without having any knowledge of the interior workings on the application. While white box testing is the detailed investigation of internal logic and structure of the code. This is different approaches are to ensure the software if fully tested before it submit to the client.

6.2 Test Plan

The test plan is in charge in associate with each of the stage of testing in the system during development life cycle.

6.2.1 Test Organization

The personal who involved in testing is the E-MUET Corpus Vocabulary Enhancement system developer and a few students from BITS. Developer will take care of unit testing while the others will act as observer. The observer should observe and make sure the result executes according to the description of expected outcome.

The testing also will involves a group of students who will be the candidate of MUET examination. This group will suit in the testing because of the system is made for them so if we want to know if this system will actually help the students out, so this group is the best choice.

6.2.2 Test Environment

This testing will be carried out at Universiti Teknikal Malaysia Melaka as the group of students will be selected here. This is the main location to do the testing as MUET is important because the students need to pass the specific band to graduate on time. So, UTeM will be a perfect place to do the testing.

6.2.2.1 Hardware

Testing will be conducted using the hardware such as a personal computer.

6.2.2.2 Software

The testing will be organized using software Microsoft Windows 10 Education, Google Chrome and MySQL.

6.2.3 Test Schedule

Activities and Event Activities			
Test ID	Date	Activity/Event	Hours
EMC-01	14/7/2016	Login Module : Unit Testing	1
EMC-02	14/7/2016	Registration Module : Unit Testing	1
EMC-03	16/7/2016	Searching Words Module: Unit Testing	2

EMC-04	16/7/2016	Question Module: Unit Testing	2
EMC-05	18/7/2016	Concordance Testing: Unit Testing	3
EMC-06	20/7/2016	Update Word and Question: Unit Testing	3
EMC-07	23/7/2016	Unit Testing	8
EMC-08	3/8/2016	Integration Testing	10

Table 6.1 Test Schedule

6.3 Test Strategy

Black box testing are choose to do the testing on the system because white box testing alludes to the utilization of project source code as a test basis that is as the basis for designing test and test cases.

A black box component is a compiled program that is protected from alteration by ensuring that a programmer can only access it through an exposed interface.

The idea is the tester has no knowledge of the inner workings on the program being tested. The tester might know what is input and the expected outcome but not the results are achieved. So this will tell the developer whether the system is give a correct response to the action that make by user or not. The black box texting makes bot the developer and tester understand and accessible to the system.

6.3.1 Classes of Tests

As the black box testing that will be implement in this complete system after a few testing will conducted on the system.

The black box testing has a few techniques but the chosen one is State Transition testing. This testing can be described in what is called a ’finite state machine’ because of the system can be in a number of different condition/states and

the transition starting with one state then onto the next are dictated by the principles of the 'machine'.

The four major aspects of state transition includes:

- The states that the software may be in(open/closed, valid/invalid)
- The transition from one state to another
- The events that cause a transition
- The action that result from a transition

This will be used in E-MUET Corpus Vocabulary Enhancement to test each of module run smoothly and response accurately to any action. This technique will fully test on the system and not the program structure of the code. In any given state, one event can bring about one and only activity, however that the same event from an alternate state may bring about an alternate activity and an alternate end state.

This testing also shows to the tester any possible response the system will provide. It will save time and energy. This testing will help in cover all the angle of testing scenarios.

6.4 Test Design

6.4.1 Test Description

Table 6.2 Login Unit Test

Test ID	EMC-01
Purpose of Test	To ensure that • The user can be able login to the system.
Test Environment	• Windows 10 Education • Google Chrome • Connected to MySQL database
Test Steps	Enter the username and password. Click login button.

	Positive and Negative Testing If the user inserts the wrong username or password, message will display to notify user that the username or password is invalid. Error Guessing If the user does not insert all the required fields, the message box will display to notice user to insert username and password.
Expected Result	After complete the steps, main page will be displayed according to the user password since the user password since different level of user will lead to different menu. There are two different level of user which are user and administration.

Table 6.3 Registration Unit Test

Test ID	EMC-02
Purpose of Test	To ensure that: • The user can be able to create a new account before use the system
Test Environment	• Windows 10 Education • Google Chrome • Connected to MySQL database
Test Steps	Click Register button. Fill in all the required field. Positive and Negative Testing If the user fill in the field that required number with alphabet, the data will not be stored. Error Guessing If the user does not insert all the required fields, the message box will display to notice user to insert information.

Expected Result	After all the steps complete, the user need to login again to be able to use the system.

Table 6.4 Searching Words Unit Test

Test ID	EMC-03
Purpose of Test	To ensure that: • The user can search definition of words of MUET examination past year
Test Environment	• Microsoft 10 Education • Google Chrome • Connected to MySQL database
Test Steps	Login to the system. Click on Words menu. Fill in the field with word that the user wants to define. Positive and Negative Testing If the user fill in the field with the words that are not in MUET past year so it will display no result. Error Guessing If the user does not insert all the required fields, the message box will display to notice user to insert information.
Expected Result	After all the steps complete, it will show the definition of word and example how to use the words.

Table 6.5 Question Unit Test

Test ID	EMC-04
Purpose of Test	To ensure that: • The user can answer some question to test their understanding • The user can monitor their performance
Test Environment	• Microsoft 10 Education

	• Google Chrome • Connected to MySQL database
Test Steps	Login to the system. Click on Question menu. Answer the question and click Submit button to get the marks. Positive and Negative Testing If the user does not answer the question, message will display "Please answer the question". Error Guessing If the user does not insert answer, the message display will give the notice to the user.
Expected Result	After all the steps complete, it will give marks of the answer to the user so the user can monitor the performance.

Table 6.6 Concordance Unit Test

Test ID	EMC-05
Purpose of Test	To ensure that: • The user can search word that often use in MUET past year. • The user can be able learn the structure of the sentences use in MUET.
Test Environment	• Microsoft 10 Education • Google Chrome • Connected to MySQL database
Test Steps	Login to the system. Click on Concordance menu. Fill in the field words that the user want to find. Positive and Negative Testing If the user fill in the field with the words that are not in MUET past year so it will display no result.

	Error Guessing If the user does not insert all the required fields, the message box will display to notice user to insert information.
Expected Result	After all the steps complete, it will show the result of the words use in sentence with list of years.

Table 6.7 Update Word and Question Unit Test

Test ID	EMC-06
Purpose of Test	To ensure that: • The admin can be able to insert new word and question to the system
Test Environment	• Microsoft 10 Education • Google Chrome • Connected to MySQL database
Test Steps	Login to the system. Fill in the field with the correct data. Positive and Negative Testing If the user fill in the field with the words that are not in MUET past year, the message will display “Not matched”. Error Guessing If the user does not insert all the required fields, the message box will display to notice user to insert information.
Expected Result	After all the steps complete, the message will display “Data save”.

Table 6.8 Unit Testing

Test ID	EMC-07
Purpose of Test	To ensure that: • Each page or module can run smoothly and successfully.

Test Environment	• Microsoft 10 Education • Google Chrome • Connected to MySQL database
Test Steps	**1.** Login Module Login to E-MUET Corpus Vocabulary Enhancement by inserting the valid username and password. **2.** Registration • Click on the Sign Up button and fill all the fields. • Then submit and the user needs to log in to the system to re-check if the user profile has been keep n the database **3.** Searching Words • Select Search button to enter the words the user wants to define. • The page will displayed the word that has been search, if the word does not in the database. • It will give a message to alert the user. **4.** Question • The user click on the Question module. • The question will be displayed, every time the user refresh the page, the new set of question will be displayed. • The user can click on the screen to answer the question. • The user can click the Submit button. **5.** Concordance • The user click on the Concordance module. • The user enter the input and can click the submit button.

	• The page will display the result, and give a message to alert the user if the input does not in the database. **6.** Update Word and Question • The admin can login to the system. • The page will display one page for admin to update word and keep in the database.

6.4.2 Test Data

Table 6.9 Test Data

Module	Test Data	Expected Result
Login	User enter username and password.	The user is granted access to the system if information is valid.
Registration	Information of user.	User information is save into database.
Searching Words	Selected word need to define.	Words that keep in database will display.
Question	User's answer.	The performance will be save into database.
Concordance	Selected word need to find.	Words and sentences that keep in database will be display.
Update Word and Question	Word information.	The information will be save into database.

6.5 Test Results and Analysis

Table 6.10 Test Case for Login Module

Functional Requirement	Test Requirement	Pre-Condition	Input/Test Data	Steps	Pass/ Fail	Expected Results
Login	Validate the username and password are able to insert alphabet	None	redblueman	1.Open the application 2.Enter the data in username and password field	Pass	Data input successfully
					Fail	
	Validate that username and password are able to insert digits	None	Red25		Pass	Data input successfully.
					Fail	
	Validate that username and password are able to insert symbol	None	Red_25		Pass	Data input successfully.
					Fail	
	Validate that password should be hidden with **	None	Red05		Pass	Data input shows * on the screen.
					Fail	
	Validate the login button function is available.	A valid registered account.	Username: Redblueman 25		Pass	User login successfully after login button clicked.

			Password: Red05		Fail	
	Validate that user unable to login with wrong username or password	None	Username: redblueman Password: redblueman		Pass	System display message incorrect username or password
					Fail	User able to login successfully.
	Validate that user able access this system only after they login	User must has a valid registered account.	Username: Redblueman Password: Red05		Pass	Home page displayed.
					Fail	

Table 6.11 Test Case for Registration

Functional Requirement	Test Requirement	Pre-Condition	Input/Test Data	Steps	Pass/ Fail	Expected Results
Registration	Validate that the required information are not empty when registration	The user should log in to the system.	Name : Mohammad Ridzuan Email: Redblueman 25@gmail.com	1.Open the application 2.Enter the input to all required fields 3. Click register button	Pass	Registered successfully
					Fail	User cannot register.
	Validate that the system can get input from the user	The user should login to the system.			Pass	Input data is stored into the database
					Fail	The data cannot be stored.

Table 6.12 Test Case for Searching Words Module

Functional Requirement	Test Requirement	Pre-Condition	Input/Test Data	Steps	Pass/ Fail	Expected Results
Searching Words	Validate that the words user wants to define is in database	The user should get the definition of the word	Search: Miniscule	1.Open the application 2.Click Word menu 3. Enter the word	Pass	The page will display word and definition.
					Fail	The page display the word with no definition
	Validate that the user unable get the definition if the word is not in database	The page should stay on the same page			Pass	System displays a message “There is no such word”
					Fail	The page display the word.
	Validate that the user should get the definition of the word if the word in database	The page should display word and definition			Pass	The page will display word and definition
					Fail	The message display “There is no such word”

Table 6.13 Test Case for Question Unit Test

Functional Requirement	Test Requirement	Pre-Condition	Input/Test Data	Steps	Pass/ Fail	Expected Results

Question	Validate that the user will get the question after click Question menu	The user should answer the question.		1.Open the application 2.Click Question menu	Pass	The page will display a few of question.
					Fail	The page display nothing.
	Validate that the user can answer the question				Pass	System accept the user input.
					Fail	System cannot accept user input.
	Validate that every time user refresh the page, new set of question appear				Pass	System should display the new set of question.
					Fail	System display the same question as previous.
	Validate that after user answer the question, the marks will be given	The user should answer the question			Pass	System will display mark for user
					Fail	System did not display the marks.

Table 6.14 Test Case of Concordance Unit Test

Functional Requirement	Test Requirement	Pre-Condition	Input/Test Data	Steps	Pass/ Fail	Expected Results
Concordance	Validate that the word is in Past Year	The user should get the		1.Open the application	Pass	The page will display a list of the sentences with

	MUET examination.	sentences according to the word.		2. Login to the application 3. Click Concordance Menu		year according to the word.
					Fail	The page display nothing.
	Validate that the user can insert the word.				Pass	System accept the user input.
					Fail	System cannot accept user input.
	Validate that the year of each sentences will be in screen once user enter the input.				Pass	System should display the sentences with year.
					Fail	System display the sentences or nothing.

6.6 Conclusion

As a conclusion, this system has space to improve. The analysis during testing phase is very important as it ensure the condition of the system is run as expected. The test case and test schedule will help the developer to make sure they can controls the system. Besides that, the system should be executed before delivery with the specific intend and ti find and remove all the errors or bugs. This will make the system delivered free error and bugs and will fulfill the requirement specifications.

Moreover, testing procedure is interminable where by directing the testing to the system, there are some critical of issue and mistakes that may be happened when utilizing the system showed up. Subsequent to directing the testing utilizing the abandoned information and the duplicate of live data, each of the unit is working legitimately and error free.

All the tables above shows how the system run as a whole and the expected outcome for each response from the user. The table will guide the tester how to test and they can know the bug or error right away during the testing. The tables also will guide the user which input is right and not.

CHAPTER 7

7. CONCLUSION

7.1 Observation on Weakness and Strength

E-MUET Corpus Vocabulary Enhancement has been developed as web application. The interface of this system is user friendly, minimal yet simple. This system does not have the user guide for user to use the system. Interface is consistent term of layout arrangement, attractive font size and color of the background. Greatest advantage is to help the candidates of MUET to understand more about MUET examination. This system also provides the question to monitor the performance of the user.

E-MUET Corpus Vocabulary Enhancement however has some flaws especially the consistency of the data. There is no limitation amount of storage to user so it will lead to the lack of security. As this system is implement on online server because it is not using the secure platforms. Any user can hack the system online. Moreover, the word definition and concordance only response when there is the word in the system's database so there is limitation of word. It will be hard for the user because there is a lot of words but the words are limited to MUET paper only.

7.2 Propositions for Improvement

This system needs some improvement in order to increase the commercial values. First, E-MUET Corpus Vocabulary Enhancement need future enhancement with increase the flexibility of the system. This system can search the words across all the online dictionary because right now the system only detect the word which only in the database. To ease the user and admin, the system need to sort the word across all online database.

Moreover, it can be improved in terms of performance and portability which can help the system run smoothly. The system can accept or updated new questions and the system need to be in maintenance gradually. So, the system will be up to date always.

7.3 Project Contribution

E-MUET Corpus Vocabulary Enhancement will contribute to my university, Universiti Teknikal Malaysia Melaka, especially Pusat Bahasa dan Pembangunan Insan. The user manual will be at Appendix.

7.4 Conclusion

As a conclusion, all chapters which are Chapter 1 to Chapter 6 have been done completely. After go through the entire chapter above, the purpose of developing and way to develop the system are clearly shown. This report are capable to act as a guidance or reference for next developer to improve the system using the same methodologies. This E-MUET Corpus Vocabulary Enhancement will contribute towards many parties.

As a whole project, I believe this system has met the stated objectives in Chapter 1. This system has develop a corpus of MUET question paper and vocabulary at Question and Concordance. The Concordance also met with the second objective which analyses the word in MUET examination and listed out the years. I really hope this system can help students to score in MUET.

REFERENCES

1. Teo A.K , Boo H.V, Grace E.H(2013), 'Expectation-based Teaching': *An Action Research in English Report Writing,* Volume 1, November 2013,

   <http://www.kedah.uitm.edu.my/CPLT/images/stories/v1n2/Article4.pdf>

2. Christina O.S.B and Yuen C.K (2014), 'A Corpus Study of Structural Types of Lexical Bundles in MUET Reading Texts', Volume 20, 2014,

   <https://www.academia.edu/7498660/A_Corpus_Study_of_Structural_Types_of_Lexical Bundles_in_MUET_Reading_Texts >

3. Dewan Bahasa dan Pustaka, 2008

   <http://prpm.dbp.gov.my/>

4. Black Box Testing: Types and Techniques of BBT, 'Testing Interview Questions, Testing Tips and Resources, Types of Testing", 2016

   <www.softwaretestinghelp.com/black-box-testing/>

5. N. Alexander(2014), 'Black Box Techniques', April 2014,

   <https://www.qualitance.com/blog/black-box-techniques>

APPENDIX
Questionnaire

1. Do you know what MUET is?

   ☐ Yes ☐ No ☐ Not Sure

2. Does your university has targeted band for you to graduate?

   ☐ Yes ☐ No ☐ Not Sure

3. If yes for question 3, choose the band for your course to graduate? If no, proceed to question 5.

   ☐ Band 1 ☐ Band 3 ☐ Band 5 ☐ Not sure
   ☐ Band 2 ☐ Band 4 ☐ Band 6

4. How many times you repeat MUET?

   ☐ 0 ☐ 2 ☐ 4 ☐ More than 5. State _____
   ☐ 1 ☐ 3 ☐ 5

5. Which paper is the most difficult to score? Choose. (maximum 2)

   ☐ Reading ☐ Speaking
   ☐ Writing ☐ Listening

6. Do you think it is easier if there is a system that can help you score MUET especially Reading ?

   ☐ Yes ☐ No

7. Do you think this system is friendly user?

☐ Yes ☐ No

8. Do you think this system is useful?

☐ Yes ☐ No

9. Does each module function successfully?

☐ Yes ☐ No

10. Any suggestion to improve the system?

_____