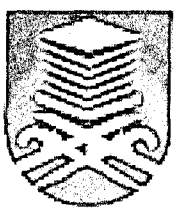
DEVELOPMENT OF E – LEARNING ON LECTURE APPLICATION (CALCULUS)

This thesis is presented in partial for the award of the Bachelor of Electrical Engineering (Honors)

UNIVERSITI TEKNOLOGI MARA



MURNI BINTI JAINAF

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITI TEKNOLOGI MARA

40450 SHAH ALAM, SELANGOR

ACKNOWLEDGEMENT

In the name of Allah Most Gracious and Most Merciful

Alhamdullilah, I am very grateful to Allah for giving me opportunity, strength and blessing throughout the whole evaluation of the project and fully completion of this thesis.

I wish to give my heartiest thanks and my sincere appreciation to my very dear supervisor, Prof. Madya Norhayati Ahmad. All her support, guidance, concerns and diligence made this project possible.

I would like to extend the thanks and appreciations to all my panels, Prof. Madya Kartini Salam and Prof Madya Nooritawati Md Tahir, for their time, suggestion and criticism.

Lastly, my special thanks to my beloved family and friends for their support and encouragement in completing this thesis. I dedicated this piece of work to all of them and to those who helped me directly or indirectly to successfully complete of this project.

Murni Binti Jainaf
Faculty of Electrical Engineering
Universiti Teknologi MARA
Shah Alam, Selangor

ABSTRACT

E-Learning is an internet-enable learning mechanism. It is a combination of computer hardware, software and the internet that can make learning simpler than the conventional learning approach [1]. This project is about developing an e-Learning application on calculus for Degree students.

The system is designed using Visual Basic 6 Programming, Microsoft Access database program and Multimedia Interactive software. Through this system, lecturers and student can teach and learn calculus (MAT 582) interactively according to their pace and time. This system is divided into two sections which are:

- Maintenance section
- Learning Section
  -The learning section is divided into two parts which are the introduction of calculus/ lesson and tutorial question.

TABLE OF CONTENTS

CHAPTER	DESCRIPTION		PAGE
1	**INTRODUCTION**		
	1.1	Introduction	1
	1.2	Project Background	1
	1.3	Objective	2
	1.4	Scope of Project	2
	1.5	Benefits of the Project	3
	1.6	Hardware and Software	3
	1.7	Organization of the Thesis	4
2	**LITERATURE REVIEW**		
	2.1	Introduction	5
	2.2	About E – Learning	5
	2.3	Role of E learning in Education And Development	6
	2.4	CAI versus Conventional Teaching Technique	7
	2.5	Effectiveness of E –Learning	8
	2.6	Computer Based Learning	9
3	**METHODOLOGY**		
	3.1	Introduction	10
	3.2	Waterfall Model	10
		3.2.1 Requirement Definition	11
		3.2.2 Software Definition	11
		3.2.3 Implementation on Definition	11

		3.2.4 Integration and Testing	11
		3.2.5 Operation Maintenance	11
	3.3	Animation and Database	12
	3.4	User Modeling- Unified Modeling Language (UML)	12
4	**SOFTWARE DEVELOPMENT**		
	4.1	Introduction	13
	4.2	Introduction to Visual Basic Programming	14
		4.2.1 Visual Basic – Object Oriented	14
		4.2.2 Application of Visual Basic	14
		4.2.3 Steps for creating the interface	15
		4.2.4 Setting Properties	18
		4.2.5 Writing Code	19
5	**PROJECT DEVELOPMENT**		
	5.1	Introduction	21
	5.2	System Overview	21
	5.3	System Procedures	22
	5.4	UML – User Modeling Using CASE Decision Tree	23
	5.5	Project Screen Design Layout	25
		5.5.1 Screen Design	26
6	**RESULT**		
	6.1	Introduction	34
	6.2	Login Form	34
	6.3	The Administration/Lecturer Main Menu	36