

Universiti Teknologi MARA

**System Enhancement:
Sistem Amanah Tugas Akademik (SATAv2)**

Mohd Helmi Bin Hashim

**Thesis submitted in fulfillment of the requirements for
Bachelor of Science (Hons) Business Computing
Faculty of Computer and Mathematical Sciences**

JANUARY 2014

DECLARATION

I certify that this report and the research to which it refers is the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



.....
MOHD HELMI BIN HASHIM

2011352339

JANUARY 15, 2014

ABSTRACT

This research aims to enhance the lecturer workload system which is Sistem Amanah Tugas Akademik (SATA), which is currently executed in Universiti Teknologi MARA (UiTM) (Terengganu). Main purpose of this research is to solve the current problems that involved the data mistakenly recorded into the system. The time tabling committees is the main users of this system. As the result, this research come out with a prototype system that incorporate of one faculty which is Fakulti Sains Komputer dan Matametik (FSKM) that include two departments which are Computer Sciences department and Mathematics department. The ability of the prototype system is simplifying the data entry method and improves the certain interface on it. The result of this research is the comparison between the current system and the enhancement system. For the future enhancement, the system can be focus on minimize more on user selections menu such as more filtering at item to select the classroom and lecture type. Other than that, the future enhancement can be made by directly link to the system that generates time table slot that known as iCress.

TABLE OF CONTENTS

CONTENT	PAGE
SUPERVISOR'S APPROVAL	ii
DECLARATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	x
LIST OF TABLES	xi
 CHAPTER ONE: INTRODUCTION	
1.1 Background of Study	1
1.2 Problem Statement	3
1.3 Aims and Objectives	4
1.4 Scope	4
1.5 Significance	4
1.6 Research Framework	5
1.7 Expected Outcome	5
1.8 Conclusion	6
 CHAPTER TWO: LITERATURE REVIEW	
2.1 Introduction	7
2.2 Web-Based System	7
2.2.1 Benefit of Web Based System	7

2.2.2	Challenge in developing	8
2.3	Web-based System Architecture	9
2.3.1	Relational Database Management System (RDBMS)	10
2.3.2	Middleware	11
2.3.3	Web Server	12
2.4	Enhancement System	12
2.5	Method / Model Development	13
2.5.1	Waterfall Model	15
2.5.2	Spiral Model	16
2.6	Lecturer Workload System	18
2.6.1	Lecturer Workload/Roles	18
2.7	Sistem Amanah Tugas Akademik (SATA)	19
2.7.1	SATA Architecture	19
2.8	Implication of Literature Study	21
2.9	Conclusion	22

CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Introduction	23
3.2	Research Flow	23
3.3	Analysis	25
3.3.1	Gathering Information	25
3.3.2	Literature Review	25
3.4	Design	26
3.4.1	System architecture design	26
3.4.2	Software and Hardware Specification	30
3.5	Implementation	31
3.6	Testing	32
3.7	Documentation	32