

Universiti Teknologi MARA

Student Luggage Storage System (SLSS)

Sofea Aida binti Sallehan

**Thesis submitted in fulfilment of the requirements for
Bachelor of Information Technology (Hons.) Business Computing
Faculty of Computer and Mathematical Sciences**

July 2020

ACKNOWLEDGEMENT

Alhamdulillah, praises and thanks to Allah because of His Almighty and His utmost blessings, I was able to finish this research within the time duration given. Firstly, my special thanks go to my supervisor, Miss Fazlin Marini binti Hussain who gives endless guidance, support, time and contribution. Not to be forgotten, my lecturer for both CSP600 and CSP650, Miss Nik Marsyahariani binti Nik Daud for a complete guidance given through these two semesters. In addition, an appreciation and special thanks to lecturers and others who are involved in this research for their commitment and contribution in providing useful information and ideas.

Special appreciation also goes to my beloved parents and other family members who keep on giving motivation words and endless support. Without all of their encouragement, I would definitely unable to completely finish my research. Last but not least, I would like to give my gratitude to my dearest classmates and friends who keep on giving strong support, lending their hand, put some effort and time to help me through the final year project progress.

ABSTRACT

Student Luggage Storage System (SLSS) is a prototype of a room booking system that provide students with room or space to store their personal belongings during semester break and it is being developed for the students of UiTM Cawangan Terengganu Kampus Kuala Terengganu (UiTMCTKKT). This system is proposed as an alternative for the students to book the room and for the house owner to make a room rental service. The development of this system is based on the current business process. Students faced few difficulties to find a space to put on their personal belongings during the end of semester. The objective of this system is to identify current process and problems with the current system, to design and develop a system for both user requirements and system requirements and to evaluate functionality and usability of the system. Users that involved in this system are students, house owner and staff of Kerawang College. The method to build this system is System Development Life Cycle (SDLC). To achieve the outlines of the objectives, there are six phases to be used in the project framework. The six phases are planning, analysis, design, development, implementation and testing and documentation. The system has been tested and evaluated using test plan, scenario and user evaluation from four representative users. The metrics used for the usability testing is recommended by the International Organization for Standardization (ISO). It is based on effectiveness, efficiency and satisfaction metrics. Based on the findings, the system is falls under the range of acceptable which means it is ideal to be use by the users. It is hoped that SLSS can enhance the flow of the current business process for both students and house owner.

TABLE OF CONTENTS

CONTENT	PAGE
SUPERVISOR APPROVAL	ii
STUDENT DECLARATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	ix
LIST OF TABLES	xi
CHAPTER ONE: INTRODUCTION	
1.1 Background of Study	1
1.2 Business Process	2
1.3 Problem Statement	5
1.4 Objective	6
1.5 Scope	6
1.6 Significance	7
1.7 Project Framework	8
1.8 Gantt Chart	11
1.9 Conclusion	12
CHAPTER TWO: LITERATURE REVIEW	
2.1 Introduction	13
2.2 Information System	13
2.2.1 Rental Management System	14
2.2.1.1 Benefits of Rental Management System	15
2.3 Rental Records Management System	16
2.4 Ten Usability Heuristics by Jakob Nielsen	17
2.5 System Development Models	19

2.5.1 Waterfall Model	19
2.5.1.1 Adapted Waterfall Model	21
2.6 Similar Existing System	22
2.6.1 FlexiStorage	22
2.6.2 Cube Self Storage	22
2.6.3 Extra Space Asia	23
2.6.4 EZ Secure Storage	24
2.6.5 Comparison of System Features	24
2.7 Implication of Literature Review	25
2.8 Conclusion	26

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction	28
3.2 Project Development Methodology	28
3.3 System Planning	31
3.3.1 Preliminary Investigation	31
3.4 System Development	31
3.4.1 Analysis Process	32
3.4.2 Design Process	34
3.4.2.1 Context Diagram	35
3.4.2.2 Data Flow Diagram (DFD) Level 0	35
3.4.2.3 Data Flow Diagram (DFD) Level 1	36
3.4.2.4 Entity Relationship Diagram (ERD)	37
3.4.2.5 Site Map	40
3.4.2.6 User Interface	40
3.4.3 Development Process	43
3.4.3.1 Hardware Specification	43
3.4.3.2 Software Specification	44
3.4.4 Testing and Evaluation Process	44
3.4.4.1 Expert Evaluation	48
3.4.4.2 User Evaluation	49
3.5 System Documentation	50