

**Universiti Teknologi MARA**

**Community Library Management at  
Kampung Teroi Bukit**

**Nurul Anisatul Batrisyia Binti Mohd Zaudi**

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

**February 2023**

## 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. I'd want to express my heartfelt appreciation to various individuals and organisations that helped me throughout my graduate studies. First and foremost, I would like to thank my supervisor, Madam Yusnita Binti Sokman, for her excitement, patience, insightful remarks, relevant information, practical guidance, and never-ending ideas that have aided me throughout the creation of the system and drafting of this report. Her enormous expertise and extensive experience helped me to effectively accomplish my research. This project would not have been achievable without her help and supervision. I can't think of a better supervisor for my studies. Not to mention, I'd want to express my heartfelt gratitude to Madam NorulHidayah Isa, my CSP650 lecturer, for her assistance in completing the project. I'd want to express my gratitude to you for your understanding and support during these two semesters.

I'd also want to express my heartfelt gratitude to Universiti Teknologi Mara (UiTM) Kuala Terengganu for enrolling me into this programme. Furthermore, it provided me with the opportunity to go further into this knowledge. In addition, I'd want to express my gratitude to my backbone, my mother and father. I might not have made it to this point without their help. Those who have always been there for me and provided genuine support during my studies at UiTM and the process of finishing my project.

Last but not least, I'd like to express my appreciation to my best buddy. They are also among those who contribute significantly to learning. They are always available to assist me. They also provide physical and mental encouragement to me.

## **ABSTRACT**

Kampung Teroi Bukit Community Library is a library located in Yan Kedah. The library was first opened to the public in 2007 after it started operating in 2006. The Kampung Teroi Bukit Community Library still manages library matters manually. Several issues were discovered during an interview with a librarian. Among those issues are guests or members experiencing manual book searches, poor data storage and librarians misfiling borrowed records. As a result, the Community Library Management system in Kampung Teroi Bukit was created to deal with the issues that arise in the current procedures in this library. The objective of this project is to identify the current process of library management system Community Library Kampung Teroi Bukit, to design and develop the system for Community Library Kampung Teroi Bukit and to evaluate the functionality of the system for Community Library Kampung Teroi Bukit. Next, the Adaptation Waterfall model was used as a system approach to develop a Community Library Management system in Kampung Teroi Bukit. There are five steps involved which are analysis phase, design phase, implementation phase, testing phase, and documentation phase. This is because this technique is suitable for small projects such as the Kampung Teroi Bukit Community Library Management System. Following that, Schneirderman's eight golden rules were selected as the theory for the Community Library Management system in Kampung Teroi Bukit in this study. Then, the functional test was done with the supervisor and also 2 librarians from Teroi Bukit Community Library. The results of the study give positive results from the system that has been developed. Finally, it is expected that this system will benefit its users in the present and in the future.

## TABLE OF CONTENTS

<b>CONTENT</b>	<b>PAGE</b>
<b>SUPERVISOR APPROVAL</b>	<b>i</b>
<b>STUDENT DECLARATION</b>	<b>ii</b>
<b>ACKNOWLEDGEMENT</b>	<b>ii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>TABLE OF CONTENT</b>	<b>v</b>
<b>LIST OF FIGURES</b>	
<b>LIST OF TABLES</b>	
<b>LIST OF ABBEVIATIONS</b>	
<b>CHAPTER ONE: INTRODUCTION</b>	
1.1 Background of Study	1
1.2 Current Process	3
1.3 Problem Statement	5
1.4 Objective	6
1.5 Scope of Study	7
1.6 Significant of the Study	9
1.7 Framework	9
1.8 Conclusion	11
<b>CHAPTER TWO: LITERATURE REVIEW</b>	
2.1 Management Information System	13
2.1.1 Characteristics of Management Information System	15
2.1.2 Component of Management Information System	16

2.1.3	Type of Management Information System	17
2.1.4	Advantage of Management Information System	18
2.2	Library Management System & Online Public Access Catalog (OPAC)	19
2.3	Theory	22
2.4	System Development	30
2.4.1	Waterfall Model	32
2.4.2	Spiral Model	35
2.4.3	V-Shape Model	37
2.5	Similar Existing System	41
2.6	Implication of Literature review on Proposed System	45
2.7	Conclusion	46

### **CHAPTER THREE: METHODOLOGY**

3.1	Introduction	47
3.2	Software Development Life Cycle (SDLC)	48
3.3	Adapted Waterfall Model	49
3.4	Analysis Phase	50
3.4.1	Gantt Chart	53
3.4.2	Functional and Non-Functional Requirements	53
3.4.3	Relationship Between User Requirement and System Requirements	54
3.5	Design Phase	54
3.5.1	Context Diagram	55
3.5.2	Process Flow Diagram	56
3.5.3	Data Flow Diagram	56
3.5.4	Entity Relationship Diagram	58
3.5.5	Site Map	60
3.5.6	User Interface	61