



MALAYSIA CONSTITUTIONAL LAW SYSTEM, STUDY ON THE
USE ADVANCED SEARCHING ALGORITHM
(RULE-BASED AND HORSPOOL ALGORITHM)

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MASTER OF COMPUTER SCIENCE (MULTIMEDIA
COMPUTING)

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Faculty of Information and Communication Technology

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**A thesis submitted
in fulfillment of the requirements for the degree of Master of Science in Information
and Communication Technology**

Faculty of Information and Communication Technology

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2017

DECLARATION

I declare that this thesis entitled “Malaysia Constitutional Law System, Study on the use of Advances Searching Algorithm (Rule-Based and Horspool Algorithm)” is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature :

Name :

Date :

APPROVAL

I hereby declare that I have read this thesis and in my opinion this thesis is sufficient in term of scope and quality for the award of Master in Computer Science (Multimedia Computing).

Signature :

Supervisor Name :

Date :

DEDICATION

To my beloved mother, Nuur Syamimi Tan Abdullah,

To my memory backbone, Abd Razak Bin Mohd Saleh; father,

To my sponsorship, My Brain15,

And all my dear siblings and friends, especially Nuur Fahana Abd Razak and Juanna Beh,

Without whom none of my success would be possible.

ABSTRACT

Page quality are important to make a good application. Many researchers are implements the page quality using the advanced searching algorithm. To make a good of the average page quality of the Malaysia statute federal constitutional are important for success this study. The federal constitutional has a lot of interrelated acts for every page. Therefore, it is difficult for the users to find all the inter-related acts from the federal constitutional using manual method. In this research, we study about the concept of advanced searching algorithm to build an intelligent web based system. We hope after build the intelligent web based system can solved the problem that user's faced.

ABSTRAK

Kualiti halaman sesebuah aplikasi adalah sangat penting untuk mendapatkan kualiti halaman yang baik. Ramai penyelidik telah mengkaji cara untuk mendapatkan halaman aplikasi yang baik dengan menggunakan algoritma pencarian maju. Oleh itu, untuk mendapatkan kualiti purata halaman bagi Statut Malaysia Persekutuan Perlembagaan adalah amat penting untuk menjayakan kajian ini. Statut Persekutuan Perlembagaan mempunyai banyak ikatan yang saling berkaitan bagi setiap halaman. Oleh itu, pengguna amat sukar untuk mencari halaman yang berkaitan daripada manual Statut Perlembagaan Persekutuan. Justeru itu, kajian ini akan mencari algoritma yang sesuai untuk membangunkan sistem yang berasaskan web aplikasi mudah alih. Kami berharap selepas membangunkan sistem yang berasaskan web dapat menyelesaikan masalah yang dihadapi oleh pengguna.

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TABLE OF CONTENTS

	PAGE
DECLARATION	
APPROVAL	
DEDICATION	
ABSTRACT	i
ABSTRAK	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	viii
LIST OF APPENDICES	ix
LIST OF ABBREVIATIONS	x
CHAPTER	
1. INTRODUCTION	1
1.1 Introduction	1
1.2 Research Background	2
1.3 Problem Statement	2
1.4 Objective	3
1.5 Research Scope	4
1.6 Research Methodology	4
1.7 Project Methodology	5
1.8 Project Significant	5
1.9 Summary	6
2. LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Statute Federal Constitution	7
2.3 Interactive Website	8
2.4 Artificial Intelligent Technique	9
2.5 Advanced Searching Algorithm	10
2.5.1 Classification Algorithm String Matching	12
2.5.2 Technique of string matching algorithm	13
2.6 Rule-Based	14
2.7 Indexing	15
2.7.1 Horspool Algorithm	18
2.7.2 The Role of Horspool Search Algorithm	19
2.8 Related Work	23
2.9 Summary	26
3. RESEARCH METHODOLOGY	28
3.0 Introduction	28
3.1 Research Methodology Used	29
3.1.1 Analysis Phase	29
3.1.2 Design and Development Phase	30
3.1.3 Implementation and Evaluation Phase	30

3.2	Development Methodology Used	31
3.2.1	Application Creation Idea	32
3.2.2	Structure Analysis Stage	33
3.2.3	Design Process	33
3.2.3.1	System Architecture	33
3.2.4	User Interface Design	34
3.2.5	Database Design Process	35
3.2.6	Develop main function	36
3.2.7	Testing	38
3.4	Summary	39
4.	DESIGN AND DEVELOPMENT	40
4.0	Introduction	40
4.1	Field Study	40
4.2	Manual Vs Online System	41
4.3	Rule-Based	42
4.4	Advanced Searching Algorithm	42
4.4.1	Horspool Algorithm	43
4.4.2	Interactive Design	45
4.4.3	Database Design	45
4.5	Development	46
4.5.1	Database Development	46
4.5.2	Web Development	49
4.5.3	Horspool Algorithm Development	49
4.6	Summary	52
5.	TESTING AND EVALUATION	53
5.1	Introduction	53
5.2	Test Plan	53
5.2.1	Test Organization	54
5.2.2	Test Environment	55
5.2.3	Test Schedule	56
5.3	Test Evaluation	58
5.3.1	Multimedia Univervisity Melaka (Black Box Testing)	58
5.3.2	Subject Matter Expert, Dr Razul Ramli (White Box Testing)	59
5.3.3	It Expert, Eco Community (White Box Testing)	59
5.3.4	Akademi Kenegaraan, End User (Black Box Testing)	60
5.4	Summary	62
6.	CONCLUSION AND FUTURE WORK	64
6.1	Introduction	64
6.2	Contribution of this Research	64
6.2	Proposition for Improvement	65
6.3	Summary	65
	REFERENCES	67
	APPENDICES	69

LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Artificial Intelligent Concept	9
2.2	The Description of the Task Indexing Process	16
2.3	Major Components of Query Process	17
2.4	Bad-match table	20
2.5	Initialization Bad-match table	21
2.6	Development of bad-match	21
2.7	First Iteration Horspool algorithm	22
2.8	Second Iteration Horspool Algorithm	22
2.9	Third Iteration Horspool Algorithm	22
2.10	Fourth Iteration Harspool algorithm	23
3.1	Checklist	32
3.2	Content Web-Pages	34
3.3	Software Data	36
3.4	Hardware Data	37
3.5	The examples of Connection Matrix	37
4.1	Manual and Online System Comparison Table	41
4.2	Rule-Based System for database SMCL Application	42
4.3	Responsive Design; Laptop and mobile phone	45
4.4	Boothstrap and SMCL Comparison Table	49

5.1	Test Organization	55
5.2	Test Environment	56
5.3	Test Schedule; White Box Testing	57
5.4	Test Schedule; Black Box Testing	57

LIST OF FIGURES

FIGURES	TITLES	PAGE
1.1	MMCD Methodology (Sazli et al.,2011)	4
2.1	The Indexing Process	15
2.2	The Query Processes (Gurung, Chakraborty, & Sharma, 2016)	17
3.1	Research Methodology	29
3.2	MMCD Methodology (Sazli et al., 2011)	31
4.1	Searching Box	43
4.2	Entity Relational Diagram	46
4.3	Table of articles number and title.	47
4.4	The chapter number and description	47
4.5	Table of description	48
4.6	Connection table	48
4.7	Code for Data Tables	50
4.8	MYSQL code for Link Articles	50
4.9	Interface that used the code of Data Tables	51
4.10	Interface that used MYSQL code for Link Articles	51
5.1	Dr Razul Ramli, Pegawai Tadbir and Diplomatic	59
5.2	IT Expert, Eco Community Sdn Bhd, Bukit Jalil	60
5.3	Speed to finish testing	61

5.4	Accuracy of the answers	61
5.5	Percentage that Prefers using SMCL system	62

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A	Questionnaire	68
B	Questionnaire (End-User)	71
C	Letter of Agreement	72
D	Letter of Agreement (End-User)	73

LIST OF ABBREVIATIONS

MMCD	Multimedia mobile content development
ADDIE	Analyze, Design, Develop, Implementation, Evaluate
SMCL	Statute Malaysia Constitutional Law
SFCL	Statute Federal Constitutional Law
HA	Horspool Algorithm
ASA	Advanced Searching Algorithm
ERD	Entity Relational Diagram
UI	User Interface
FTMK	Fakulti Teknologi Maklumat dan Komunikasi

LIST OF PUBLICATIONS

CHAPTER 1

INTRODUCTION

1.1 Introduction

In this project entitled “Malaysia Constitutional Law System, Study on the use of Advances Searching Algorithm (Rule-Based and Horspool Algorithm) technique”, research on how to develop an intelligent web application using advance searching algorithm is being conducted. Besides, the responsiveness of the website on all types of personal computer and smart devices also being considered.

Based on "Federal Constitution (AS AT 20 TH FEBUARY 2016)" as a reference for Malaysia citizens during debates, study and others. The statute of federal constitution has 183 articles, 16 parts, 19 chapters and interrelated articles for every page. Users such as students, politician and public are difficult to know the details of constitutional law, advanced searching algorithm aspects will make the web application more user-friendly and easy to use among all users. A few advanced searching algorithms will be study and explained. Users mode website will also be introduced in this project. At the end of this project, all information and details gathered will be analyzed. An intelligent web system using advanced searching algorithm will be developed and user-friendly will be illustrated. A prototype built from the analyzed data to further support the finding in this project.

1.2 Research Background

Many users such as students and public, misunderstanding about the statute of federal constitutional law of Malaysia because they do not properly understand the details about that statute. In the preliminary study by conducting observation activities distribute by sixty, 61 respondents from Multimedia University Melaka and Biro Tatanegara, Putrajaya was support the statements. Besides that, constitutional law is very difficult to understand by ordinary people or public because it has many statutes covers about that topic and each article related to each other. Wan Syamsul Amly (n.d.) written and demonstrated "Lim Lip Eng" do not understands the rule in Parliament. To solve this problem, users must understand the concept of constitutional law. Since research has shown that many users can get the best information using the advance searching, the research on how to make website easily to find all about constitutional law topic relationship users are our pioneer consideration.

There are few currents researches about "Advance Searching Algorithms" that I make for my references. The proposed development of my project will be Multimedia Mobile Content Development Methodology (MMCD) Framework and Methodology whereby I come up with the idea of creation first, then continue with the next few phases as followed in a cycle: analyse, design, develop and test (Sazli, Saifudin, Salam, Haziq, & Abdullah, 2011). The research element in my project will be determining the suitable for advance searching that is easy and user-friendly in personal computers as well as all types of smart devices. At the end of this research, an intelligent web based system using Advanced Searching algorithm will be producing to overcome the problem mention.

1.3 Problem Statement

Users such as students and public are difficult to know the details of statute of federal constitutional, that make users are always misunderstanding about the constitutional because

they do not properly understand all the topics that relates to each other. This situation always making fights in parliament during the debates. Searching from one article to another article with different topics and parts make difficult to the users because users need to find all the related acts from the statute using manually. Besides that, the problem that encounter when users will be missed with some articles that relate with other article because using manual it is hard to handle the statute of federal constitutional. Other than that, most of users were confused and misunderstand because of many articles that related. So, misunderstanding and ignorance will make damage and harmony in Malaysia. In the next chapter, the methods in overcoming these challenges will be proposed and explained in detail.

1.4 Objectives

- a) To study the algorithm of advance searching that suitable for developing Malaysia Constitutional System.
 - Nowadays, there are a lot of algorithm that can make an advance searching. In this project, the study of Advance Searching algorithm will be conducted to build the best search engine that can relate for advance searching for the statute of constituional law in Malaysia.
- b) To develop a prototype system using recommended advance searching algorithm.
 - An evaluation and analyzation based on the study of advance searching algorithm that can relate to federal constitutional law in Malaysia will be carried out to find the best solution. A research on ways to solve that problem with develop the web application by advance searching algorithm will be conducted.
- c) To measure the effectiveness of proposed system

- After detail research and analysis, a web application will be developed. This web application will be handed over to Malaysia citizen with different background to get the feedback of effectiveness of web application.

1.5 Research Scope

Research scope for this project will consists of system scope and user scope. System scope will cover on Federal Constitutional Law System and use the Horspool Algorithm and will combine with Rule-Based. This project also covers the basic module such as user login but user must register enter in this system. This web page is using php and applied the Bootstrap framework to make sure this system responsive for multiplatform using desktop and laptop. This system focused on Statute Federal Constitutional Law (English version) web based system. User scope, basically for this system can use by all Malaysia Citizen that interest to study on the Malaysia Constitutional Law. However, for this research, the target group are from law student and government servant.

1.6 Research Methodology

The study of this research used ADDIE model consists with analysis activities, design and development, implementation and evaluation. The details of explanation will be explained in chapter three.

1.7 Project Methodology

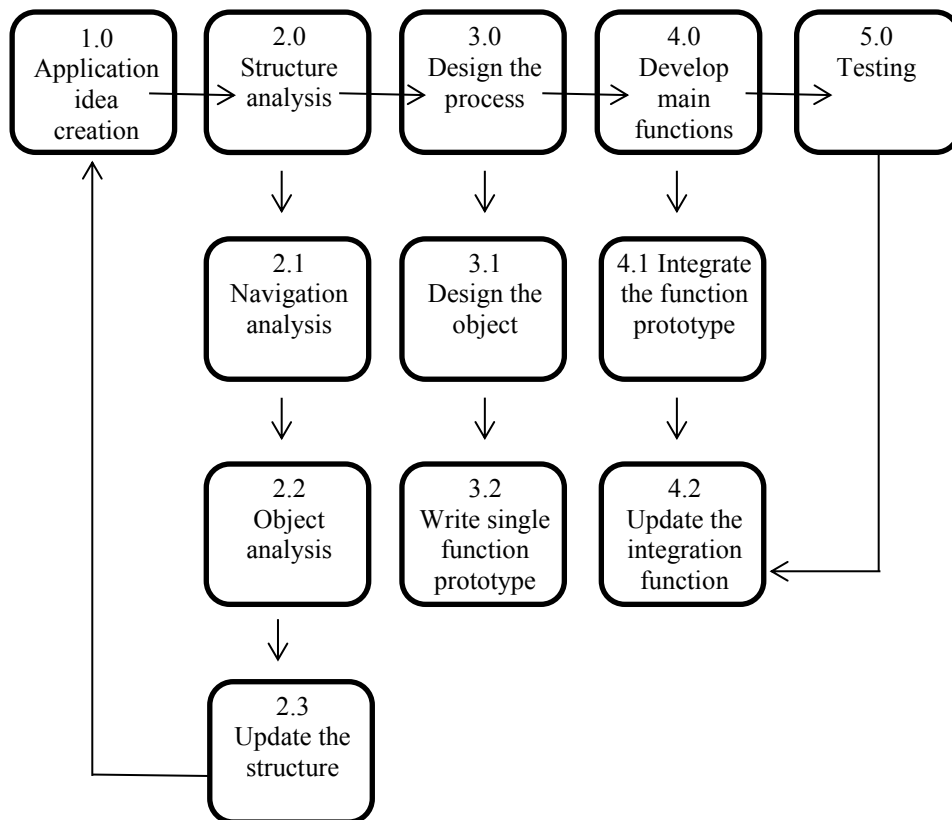


Figure 1.1: MMCD Project Methodology (Sazli et al., 2011)

The development process of this research used the MMCD (Multimedia Mobile Content Development). The process are consist of five (5) main phases (Sazli et al., 2011).

1.8 Project Significant

Statute Federal Constitutional Law are important for Malaysia Citizen need nowadays. Seeing the manual statute are more difficult, letting the user's limitation to used it because must bring every time and everywhere and make them difficult to handle because most of the article have link with another article

Many applications for this statute but it is not implement using the easy ways for the users. Among of the application only convert the manual statute become the digitalized

statute. The most important are users must understand the inter-related acts from the statute federal constitutional law.

This project will contribute to the public on how to read the constitutional law more systematically and easily.

1.9 Summary

As a conclusion, this chapter are described the background of the study that related to that advance searching algorithm implemented in Malaysia Constitutional Law. The problem statement will be highlighted in this research to improve the manually statute of Malaysia Constitutional Law. The objective of this study is to measure the effectiveness of proposed system that specify the problem of this research in the problem statement. This chapter also provides the outline of the objectives and scope of the study.