

Universiti Teknologi MARA

QR Code-Based Herb Plant Information System

At Shah Alam Botanical Park

NOR ATIKAH BT ADANAN

**Thesis submitted in fulfillment of the requirements for
Bachelor of Science (Hons) Data Communications and Networking
Faculty of Computer and Mathematical Sciences**

JULY 2019

ACKNOWLEDGEMENT

In the name of Allah, the Most Gracious and the Most Merciful. Alhamdulillah, praise and thanks to Allah SWT, for all the graces and blessings and also Selawat and Salam to the Prophet Rasulullah SAW, hopefully His syafa'at will be abundant in days later. I was able to finish this research within the time duration given.

First of all, I would like to express my highest gratitude to my supervisor, Puan Zarina Bt Zainol whose contribution in stimulating suggestions and encouragement, helped me to coordinate my project especially in writing this final year project.

Thanks also to all the lecturers in the course of Bachelor of Science (Hons) Networking & Data Communications at UiTM Shah Alam for their patience and kind advice during the process of completing the project.

Special appreciation also goes to my beloved parent. My mother
. My father Adanan B. Abdul Hamid and my inspiring brother and sister, that always motivated me to carry on.

Last but not least I would like to give my gratitude to my dearest friend whose who supporting me in any way during the completions of this proposal report by discussing, sharing or exchanging ideas and everyone who are directly or indirectly involved in writing this report.

Thank you so much.

ABSTRACT

Quick Response (QR) Code-based information retrieval has been used widely nowadays, regardless in any fields, as one of the methods to reduce the usage of paper. Currently, Taman Botani Shah Alam is using laminated paper-based plant information as a plant signage. This plant information is very limited in term of information richness and durability since it is made from an A4 paper. Therefore, a QR codes should be replaced the current laminated A4 plant information, as this technology is very flexible and can lead the users for richer information. The Taman Botani's administrator needs to generate the QR code based on the plant information in the system. This QR code will be a new plant signage. Whereas, the user or visitor will use any QR code scanner to scan the QR code and the plant information will be displayed on the phone. More information can be retrieved from the server, if needed by the visitor. The development of the system needs MySQL as a platform to store all the plant information, 000webhost for the website management. The system has been successfully developed, and it is hoped to be implemented in Taman Botani Shah Alam one day.

TABLE OF CONTENTS

CONTENTS	PAGE
SUPERVISOR'S APPROVAL	I
DECLARATION	II
ACKNOWLEDGEMENT	III
ABSTRACT	IV
TABLE OF CONTENTS	V
LIST OF TABLES	VI
LIST OF FIGURES	VIII
LIST OF ABBREVIATIONS	IX
CHAPTER 1 : INTRODUCTION	
1.1 Background Study	1
1.2 Problem Statement	2
1.3 Project Aim and Objective	4
1.4 Scope of Project	
1.5 Significant of Project	6
CHAPTER 2 : LITERATURE REVIEW	
Introduction	7
2.1 Plant Information Database Software	7
2.1.1 My SQLite	7
2.1.2 Realm	8
2.1.3 MySQL	9

CHAPTER 1

INTRODUCTION

This chapter fundamentally sets the background for the research, portraying the role of an introduction to the study. It also provides an overview of the following points of the chapter such as the project background, problems statements, the objectives of the project, the scopes and the significance of the project.

1.1 BACKGROUND STUDY

A botanical garden or botanic garden is a garden with the aim to collect, cultivate, preserve and display the plants labelled with their botanical names. Specialist plant collections such as cacti, as well as herbs garden is normally available in the botanical garden. Shade house and greenhouses, with special collections like alpine plants, tropical plants or other exotic plants also can be found in a botanical garden. The services provided at a botanical garden may include tours, educational displays and other entertainments.

Hyvärinen (2014) defines the plants in a botanic garden are not there just to look pretty on display but they come with information that visible in the form of labels. In certain botanical garden, Peter (2018) state that they use two types of labels for plant tagging where the first is a very small, rectangular label known as an accession tag that includes both the botanical name of the plant as well as the accession number, providing the essential link of the plant to the database and the second the type is a larger display label that used to convey information to the public. In addition to them Hyvärinen (2014) said that a botanic garden maintains a database of information on when and from where each plant accession was acquired, as well as plenty of other data on each accession. The plants are identified carefully and also the nomenclature is scientific. All herb plantations are mapped, their condition is monitored, and every one changes frequently recorded in the database.