UNIVERSITI TEKNOLOGI MARA

KENYIR VOYAGE: HOUSEBOAT BOOKING APPLICATION USING QR CODE

MUHAMMAD AFIQ HAKIMI BIN ASHA'ARI

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

JULY 2025

ACKNOWLEDGMENT

Praise be to Allah SWT whose overwhelming graces and wisdom have allowed me to complete this research timely and successfully. I feel deeply honored to be blessed with the power, patience and perseverance that has been provided to me during this process.

It is my heartfelt pleasure to thank my supervisor, Professor Madya DR. Zuriani binti Ahmad Zulkarnain, who guided me, remained supportive and offered constructive feedback in all stages of this project. Her knowledge and support could be seen as the key towards the execution and creation of the Kenyir Voyage: Houseboat Booking Application Using QR Code.

I would like to thank my loving parents, the most, to have provided unconditional love and prayer, and sacrificed their own time, without which I would not be where I am today. Their constant support and faith in me have stood as a strong source of support and inspiration in my studies.

Much gratitude is also given to Dr. Muhammad Firdaus Bin Mustafa who mentored and provided much advice in this project that proved to be helpful in this project. I also want to mention about my friends and classmates from CS240 that their friendship, cooperation, and support did not leave this journey less meaningful and memorable. The cooperation and the moments experienced together have been a critical aspect towards addressing the obstacles on the path. Finally, I must express my gratefulness to all people who in different ways have assisted in this study. It is due to your support that the result of this project has turned out as it is, not to mention my personal and academic development. I am fortunate to have got such a great set of inspirational and supporting souls with myself.

Thank you.

ABSTRACT

The Kenyir Voyage: Houseboat Booking Application using QR Code project overcomes tourist and houseboat operator inefficiencies in booking solutions at Tasik Kenyir, a major tourist destination in Malaysia. The usage of old fashioned methods like phone calls, emails or an actual visit is likely to result in wrong communication, twice bookings and delays, which leaves both the user and the operator dissatisfied. This project is intended to address these problems by introducing a mobile application that would simplify the process of booking, providing real-time updates, payment via internet, along with QR code support. This application is developed according to the Waterfall Model, and as such, it is developed in a systematic process with a well-planned process to deploy. The front end was created on Android Studio and backend and database were created on an environment of PHP, xampp and phpMyAdmin. The most prominent features are booking management, scanning of QR code, real-time availability check and user profile of both the tourist and the operator. The design of the application focuses on the friendly user experience, the trustworthiness of the application and the communication transparency. The testing of System Usability Scale (SUS) yielded high-satisfaction rates among the users, who stated that the application enhanced the user experience of the booking process and lowered the number of mistakes the system could make in operations. The given project shown how the concept of mobile technology can be applied into the improvement of tourism infrastructure and the digitalization of local business in Tasik Kenyir.

TABLE OF CONTENTS

Content **Page**

CHAPTER 1:

INTRODUCTION

1.1 RESEARCH BACKGROUND

Tasik Kenyir, with its spectacular landscape and the exotic houseboat facilities, has emerged as a major tourist attraction among people who want to get away with the hustles and bustles of daily life. The procedure of getting a houseboat reservation is a challenge, even though the houseboat is popular. Tourists usually use obsolete means like calling, e-mailing or visiting the place to book. Not only are these traditional methods time consuming but they are also subject to confusion and human error, often leading to problems like duplicate bookings and miscommunication. This kind of inefficiency usually causes frustration to the tourists and the houseboat operators. As an example, a group of tourists can thoroughly organize a trip, and then find out that their selected houseboat is not available anymore because of some administrative mistakes. To the operators, manual reservation process is labor intensive and exposes the operator to more operational errors that may lead to loss of a lot of revenue and customer dissatisfaction.

It is obvious that there is an increasing demand in a more effective and stable way to match tourists and houseboat operators and to simplify the whole booking process. To address this necessity, the Kenyir Voyage: Tasik Kenyir Houseboat Booking Application Using QR Code has been presented. This mobile application is created with the emphasis on convenience and ease of use so that the houseboat reservation process can be simplified with only a few clicks on a smartphone. Another interesting innovation that has been incorporated in the application is the QR code technology that has been widely embraced in many industries to improve service delivery. The use of QR codes presents an extra level of efficiency and