UNIVERSITI TEKNIKAL MALAYSIA MELAKA

TOUR APPS TO PROMOTE LANGKAWI IN SMARTPHONE

This report is submitted in accordance with requirement of the Universiti Teknikal Malaysia Melaka (UTeM) for the Bachelor of Computer Engineering Technology (Computer Systems) with Honours

by

NURUL AMIRA BT ABDULLAH
B071210406
890530-07-5514

FACULTY OF ENGINEERING TECHNOLOGY
2016
BORANG PENGESAHAN STATUS LAPORAN PROJEK SARJANA MUDA

TAJUK: Tour Apps to Promote Langkawi in Smartphone

SESUAI PENGAJIAN: 2015/16 Semester 1

Saya NURUL AMIRA BINTI ABDULLAH

mengaku membenarkan Laporan PSM ini disimpan di Perpustakaan Universiti Teknikal Malaysia Melaka (UTeM) dengan syarat-syarat kegunaan seperti berikut:

1. Laporan PSM adalah hak milik Universiti Teknikal Malaysia Melaka dan penulis.
2. Perpustakaan Universiti Teknikal Malaysia Melaka dibenarkan membuat salinan untuk tujuan pengajian sahaja dengan izin penulis.
3. Perpustakaan dibenarkan membuat salinan laporan PSM ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. **Sila tandakan ( ✓ )

☐ SULIT  (Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)

☐ TERHAD  (Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia sebagaimana yang termaktub dalam AKTA RAHSIA RASMI 1972)

☐ TIDAK TERHAD  Disahkan oleh:

(TANDATANGAN PENULIS)  (TANDATANGAN PENYELIA)

Alamat Tetap:

JKR (L) 4011 Balai Polis Kuala Teriang
Jalan Kuala Teriang
07100 Langkawi, Kedah.

Disahkan oleh:

Cop Rasmi:

** Jika Laporan PSM ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa/organisasi berkenaan dengan menyatakan sekali sebab dan tempoh laporan PSM ini perlu dikelaskan sebagai SULIT atau TERHAD.
DECLARATION

I hereby, declared this report entitled “Tour Apps to Promote Langkawi in Smartphone” is the results of my own research except as cited in references.

Signature  : ............................

Name  : ............................

Date  : ............................
APPROVAL

This report is submitted to the Faculty of Engineering Technology of UTeM as a partial fulfillment of the requirements for the degree Bachelor of Computer Engineering Technology (Computer Systems) with Honours. The member of the supervisory is as follow:

..............................................
(Project Supervisor)
ABSTRACT

This project is to provide application-based tourism information for Langkawi. If the Langkawi tourists are new to a place and unfamiliar with the surrounding environment, normally they will face problems in getting rental cars and comfortable accommodation from legitimate agency especially during peak hours (school holidays). In current technological changes, an applications based on Android system is increasing popular for users in Malaysia, regardless of age, occupation and gender. Apps for Android "Langkawi Journey" specially developed to help travelers get information about accommodation, car rental and attractions place to visit using Android smartphones. At the same time, residents of Langkawi which has business especially in the tourism sector could promote holiday packages and business travelers as well as assist tourists to get an accurate and update information. The proposed project is used Integrated Development Environment (IDE) name as Basic 4 Android to form an interactive application. SQLite database software is used to form entities and attributes that user can access without an internet connection. In addition, this application allows users to share comment and information with other users regardless of tourists and residents of Langkawi. The addition of rating features stored in MySQL server can also attract other users to find out more about a place that receives a high rating.
ABSTRAK

DEDICATIONS

Alhamdulillah, praise to the Almighty Allah S.W.T

This project is dedicated to:

My parents,
My beloved family,
My Supervisor,
My lecturers,
And all my friends

Thanks for their encouragement and never end support.
ACKNOWLEDGMENTS

I would like to express my gratitude towards the following groups of people which not only given me continuous support and guidance throughout the entire course of this project. First and foremost, I would like to thank Allah SWT for the great health and ability in completing this paper. I would extend my deepest appreciation to my beloved parents and my sisters who have never fail to support me from the beginning. Thus, my sisters really help me to find information of places and picture of Langkawi for my project. To Mr. Mohd Saad Bin Hamid, my supervisor who not only guided me but also provided me the knowledge about coding, teach me how to use each of software and experience that help in this research project. To my supporters which include friends, cousin, classmate and housemate who assisted me with care plus giving me a link to refer with to insert in database project. Last but not least, to my fiancé that gives an idea to develop an application and never ending support to complete this project.
# TABLE OF CONTENTS

DECLARATION..............................................................................................................iv
APPROVAL...................................................................................................................... v
ABSTRACT .....................................................................................................................vi
ABSTRAK ..................................................................................................................... vii
DEDICATIONS ............................................................................................................ viii
ACKNOWLEDGMENTS .................................................................................................ix
TABLE OF CONTENTS ................................................................................................ x
LIST OF FIGURES ........................................................................................................ xii
LIST OF TABLE .......................................................................................................... xiii
LIST OF SYMBOLS AND ABBREVIATIONS ............................................................. xiv

CHAPTER 1 ...................................................................................................................... 1
  1.0 Introduction ......................................................................................................... 1
  1.1 Background ......................................................................................................... 1
  1.2 Problem Statement ............................................................................................. 3
  1.3 Objectives of Research ....................................................................................... 3
  1.4 Scope of Research .............................................................................................. 4
  1.5 Report Structure ................................................................................................ 4

CHAPTER 2 ...................................................................................................................... 6
  2.0 Introduction ......................................................................................................... 6
  2.1 Application ......................................................................................................... 6
    2.1.1 Web-Based Application .............................................................................. 11
  2.2 Android ............................................................................................................. 14
    2.2.1 Eclipse ........................................................................................................ 15
    2.2.2 Android Studio ........................................................................................... 16
    2.2.3 Basic 4 Android .......................................................................................... 17
  2.3 Database Management System (DBMS) ............................................................ 18
    2.3.1 MySQL ...................................................................................................... 19
    2.3.2 SQLite ........................................................................................................ 20
    2.3.3 Rating-Based Collaborative ........................................................................ 23
  2.4 Summary ........................................................................................................... 24
LIST OF FIGURES

Figure 1.1: Most popular Apple App Store categories in March. ......................... 2
Figure 2.1: World Travel Guides Market.......................................................... 7
Figure 2.2: Worldwide iOS vs Google Play Downloads. ..................................... 8
Figure 2.3: Example travel apps Malaysia Trip Planner (MTP) ......................... 8
Figure 2.4: Interface Malaysia Trip Planner mobile apps on tablet. .................... 9
Figure 2.5: Interface of TripAdvisor mobile apps thru tablet. ......................... 10
Figure 2.6: MTP in Web-based application. .................................................. 11
Figure 2.7: Transportation link available Tourism Malaysia web-based .......... 12
Figure 2.8: Tourism page menu.................................................................... 12
Figure 2.9: TripAdvisor homepage in Web-based ......................................... 13
Figure 2.10: Viator homepage in Web-based.................................................. 13
Figure 2.11: Java versus Dalvik ..................................................................... 15
Figure 2.12: Frontend level workflow and its relation ..................................... 20
Figure 2.13: SQLite database computing some processes. ............................. 22
Figure 2.14: Public method............................................................................ 23
Figure 3.1: System Development Life Cycle (SDLC) Phase.......................... 27
Figure 3.2: System Development Life Cycle (SDLC) Phase.......................... 28
Figure 3.3: Use Case Diagram of Main System............................................. 31
Figure 3.4: How PHP works with html and MySQL....................................... 33
LIST OF TABLE

Table 3.1: Content of Langkawi Journey ................................................................. 26
Table 3.2: Description Phase of DSLC based on phase in Figure 3.1 ................. 26
Table 3.3: Project Requirement Flow ................................................................... 28
# LIST OF SYMBOLS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>B4A</td>
<td>Basic 4 Android</td>
</tr>
<tr>
<td>DBMS</td>
<td>Database management system</td>
</tr>
<tr>
<td>DK</td>
<td>Dorling Kindersley</td>
</tr>
<tr>
<td>IDE</td>
<td>Integrated Development Environment</td>
</tr>
<tr>
<td>IP</td>
<td>Internet Protocol</td>
</tr>
<tr>
<td>JVM</td>
<td>Java Virtual Machine</td>
</tr>
<tr>
<td>LP</td>
<td>Lonely Planet</td>
</tr>
<tr>
<td>MTP</td>
<td>Malaysia Trip Planner</td>
</tr>
<tr>
<td>OS</td>
<td>Operating system</td>
</tr>
<tr>
<td>PC</td>
<td>Personal Computer</td>
</tr>
<tr>
<td>POI</td>
<td>Place of interest</td>
</tr>
<tr>
<td>POIINav</td>
<td>Points of Interactive Interest Navigator</td>
</tr>
<tr>
<td>SDLC</td>
<td>System Development Life Cycle</td>
</tr>
<tr>
<td>SQL</td>
<td>Standard Query Language</td>
</tr>
<tr>
<td>WYSIWYG</td>
<td>What You See Is What You Get</td>
</tr>
<tr>
<td>VM</td>
<td>Virtual Machine</td>
</tr>
<tr>
<td>B4A</td>
<td>Basic 4 Android</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

1.0 Introduction

This chapter discussed briefly the project flow from introduction, problem statement, objectives of project and followed by the scope and limitation that description of the methodology. Each sub-topic relates each other in order to make the readers understand about the flow of the project.

1.1 Background

In the world of smartphones, applications are the most important part of the success chain. When people talking about using an application it also known as an apps. This is a form of software that specific tasks are able to be performed. While mobile apps known used for mobile device application. When selected application open, inside an operating system (OS), it is running until system close. Any mobile apps can be access and get directly from any mobile devices such as phone, music player or tablet.

Based on the Statista portal which illustrated in Figure 1.1, travel apps category has been describe ranked 7th of most popular apps Apple App Store. Usually, users will find and download travel apps when they need to take a vacation. A tour app is the easiest way to plan visits during vacation to travel to attraction place. The plan could be included with financial preparation on behalf of budget along the vacation.
The purpose of the project is to develop an app to guide tourists about Langkawi. That includes viewing hotels or any other accommodation, finding car rental, viewing attractive and interesting places with details of location and price that will help travelers prepare their budgets. By using such applications, the travel information that users have obtained is automatically stored in the local repository of smartphones, so that users can access the same information anytime in the future even without access to the Internet. In other words, the application consists of a graphic module of travel-related open data and is designed to be compatible with both online and offline strategies.

Figure 1.1: Most popular Apple App Store categories in March (Statista, 2015).
1.2 Problem Statement

Generally, tourist will come to Langkawi for a vacation. There could be tourists from Malaysia or any other country. The problem is, not everyone knows where to find out updated and trusted information about place of interest, accommodation and car rental.

Based on observations, tourists often find anybody to ask about a place randomly without knowing the person. Possibly those people recently moved to the island or can be also a tourist. Even though they can find the information they needed in the internet, but the source might not be as reliable as the truth. It could be an old information or scam for an example, changing an address or phone numbers. Those people can be anyone who does not have a license issued by the Ministry of Tourism, Malaysia then simply get profit from travelers and that become a problem to local travel agencies to argue with those illegal companies. Then by developing the app it will help travelers to find the licensed travel agencies.

While on the side of registered travel agency companies, there have many numbers of travel companies on the island. As an example, at Langkawi International Airport have many companies at arrival hall waiting for customer and they have to compete with other companies. When there are too many travel agent companies, the sales would be probably low and the potential to get customer is worse when come to off-season. For this reason, the apps will help residents of Langkawi which has business especially in the tourism sector to promote holiday packages.

1.3 Objectives of Research

Based on the title “Tour Apps to Promoting Langkawi in Smartphone” which develop in smartphone, the objectives achieved at the end of this project as listed:

a) Developed smartphone app for tourist to familiarize with Langkawi hotel, car rental, place of interest and event through picture and information.

b) Established a platform for travel agent companies promote their tour package and car rental and place to stay.
c) Designed database by identifying entities and attributes of database for place of interest (POI) and rating features.

1.4 Scope of Research

The project work scope is to design an application which provides information for a tourist and give opportunities to company in Langkawi to promote their service and business. The Integrated Development Environment (IDE) is the main features which to develop the application by designing the interface and use to program its content with beautiful scenery and helpful information also announcement of an event. The application program provided with picture and comment once database be implemented. For this reason, operation which includes inserting and retrieving data use to perform to express the place and vacation that could help making the apps useful and interesting for all users. By addition of rating features stored in server can also attract other users to find out more about a place that receives a high rating from travelers which came to Langkawi before.

1.5 Report Structure

Basic of this report consist 5 chapters overall that surrounds and detailed in topics Introduction, Literature Review, Methodology, Result and Analysis, Conclusion.

Chapter 1: Introduction of the project. The clarification of the project will be elaborated in a general phrase. The objective record of the project will be highly structured. It is related to clarification in problem statements, scope of the project and also the project requirement.

Chapter 2: Literature Review for the progress of travel application. This section illustrates the literature review of the task detailed. Justification will be take attention on Integrated Development Environment (IDE) and database software and related study and based on theory and conceptual
ideas. Some literature reviews of current existing projects based on mobile applications are also be discussed here.

Chapter 3: Methodology use in the project. This chapter describe the whole methodology of the on the task. Basically on selected software that can apply to the project. This chapter describes about the design and architecture that consists of application design and the software implementation plus point the organization of the project.

Chapter 4: Analysis Result and Discussion. That give details the result achieved regarding the presentation of the application in general term and application function and use.

Chapter 5: Conclusion. To finish off and further improvement or prospect recommendation that can be relevant in this project are being detailed in this last chapter.
CHAPTER 2
LITERATURE REVIEW

2.0 Introduction

In this chapter, there will be some discussion of the research background related to the project. The overall result in the concept literature framework shows that the link between research projects with the theory and concepts in the figure or an appropriate model about this project.

2.1 Application

Generally, once a while people need some place to take a rest and release their stress. Either go somewhere familiar or not even once been there. Occasionally, vacation is an excitement to go to some new place. Due to that, several people being tourist in a place prefer to have a guide and obtain extra enjoyment make the vacation will not be a squander. Travel guide can be in a guide book to facilitate of information about a place and designed for the use of visitors or tourists. However, this present day, printable guide book such as product from Lonely Planet (LP), Dorling Kindersley (DK), Frommer’s, Fodor’s, and Avalon’s Moon/Rick Steves soon fall out of their business. Sales figures from Stephen Mesquita’s “World Travel Guides Market” illustrate statistic with numbers are the millions during 2006 to 2012 that report for Nielsen BookScan (Figure 2.1).
In the age of technology, mobile devices are widely used to access information through the internet, for example, TripAdvisor, HomeAway, TripIt, and others. Several travel guides have web-based applications while some have mobile applications, and there are also travel guides that create both applications. These applications usually provide a reference about accommodation, places of interest, restaurants, and others, along with beautiful pictures to attract people to have a vacation.

Frequently, a mobile application referred to as an app, is one form of application software designed to describe internet applications that run on a mobile device, such as a smartphone or tablet computer. Normally, small sizes of apps are individual software units with limited purpose.

The trend to develop and market mobile apps has been set by Apple Inc. and its App Store, which sells thousands of applications for the iPhone, iPad, and iPod Touch. Apple products have great graphics and have more apps than any other phone platform. While any other non-Android and non-Apple mobile devices such as Windows phones, BlackBerry, WebOS phones also have a market in this business because their benefit lies in having a one without belonging to the crowd. Then, for an Android...
phone it’s using a popular platform with dominant market and a lot of support by industry. Based on website (Cohen H., 2015) title “15 Mobile Facts That Should Change Your 2015 Marketing” shows some statistics about mobile application facts and one of it demonstrate in Figure 2.2 that note Worldwide iOS vs Google Play Downloads.

![Worldwide iOS vs Google Play Downloads](image)

Figure 2.2 : Worldwide iOS vs Google Play Downloads (Cohan, 2015).

![Example travel apps Malaysia Trip Planner](image)

Figure 2.3 : Example travel apps Malaysia Trip Planner (MTP) (Tourism.gov.my, 2015).

Generally, there have many travel application in the market can be used as a guide during vacation. As example, Malaysia Trip Planner (MTP) is product of Tourism Malaysia that provides description of interesting place in Malaysia (Figure 2.3) and the apps also have itinerary that user can use with ease to plan the vacation. Beautiful picture and information of places can be explored thru it (Figure 2.4).
Other than that, international travel application such as TripAdvisor is one of popular apps. Menu listed on the left side are easier for user and there have rates and review for each places which good for other people to know of those places rather than just looking at beautiful scenery on the mobile. Those reviews help other people choose the best vacation later.

Generally, when go through to both travel apps, there have a comparison can be made between MTP and TripAdvisor. From local travel apps, MTP have provided maps of places and same goes to TripAdvisor. Besides both apps can find place nearby but MTP only trace attraction places. For TripAdvisor can sort by hotel, restaurant or things to do. Then, for MTP did not have any review of those places but TripAdvisor do have it with forum that talk about the places (Figure 2.5).
Figure 2.5: Interface of TripAdvisor mobile apps thru tablet (TripAdvisor, 2015).
2.1.1 Web-Based Application

Web-based are considered to be gateway for World Wide Web. It can be Government web, cultural, corporate, stock, general web etc. A large number of access providers are present for providing in web-based. Web apps can be used via a network connection and it runs on HTTP Web Browser. Web-based applications often run inside a Web browser. However, Web-based applications also may be client-based, where a small part of the program is downloaded to a user’s desktop, but processing is done over the Internet on an external server.

![Figure 2.6: MTP in Web-based application (Tourism.gov.my, 2015).](image)

Travel mobile apps content almost have same content in Malaysia Trip planner (Tourism.gov.my, 2015). However, this web-based is easy to search and from there can simply find any place to view details. This website present travel package in Malaysia with price and promotion, travel agent contact information, accommodation and also transportation link (Figure 2.7). It is easy for tourist to check the date and book online.