

A Tour Guide Mobile Application Development for Kudat City ('Kudat Tour')

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Bachelor of Computer Science with Honours (Computational Science)

2023

**A TOUR GUIDE MOBILE APPLICATION DEVELOPMENT FOR KUDAT
CITY ('KUDAT TOUR')**

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This project is submitted in partial fulfilment of the
requirements for the degree of
Bachelor of Computer Science with Honors
(Computational Science)

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UNIVERSITI MALAYSIA SARAWAK

2023

**PEMBANGUNAN APLIKASI MUDAH ALIH PANDUAN PELANCONGAN
UNTUK BANDAR KUDAT ('KUDAT TOUR')**

LYNDY SHENNA BINSIN

Projeck ini merupakan salah satu keperluan untuk Ijazah Sarajana Muda Sains

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LIST OF ABBREVIATIONS

API	Application Programming Interface
JDK	Java Development Kit
GPS	Global Positioning System
KM	Kilometer
IDE	Integrated Development Environment
SDK	Software Development Kit
RAM	Random-access Memory

ABSTRACT

Kudat is one of the most popular tourist destinations in Malaysia. It is a city located in the upper north of the Malaysian state of Sabah. The tourism sector has a wide range of applications that assist individuals in planning their travel, transportation, accommodations, leisure, and any other needs they may have when traveling. The purpose of this study is to develop a tour guide mobile application named "Kudat Tour" for tourists that want to explore the city by providing them with all the information they need. The application will use GPS technology to locate the user's location and will provide information about tourist attractions, hotels, restaurants, historical stories, and shopping so that they may make the most of their time in the city. This study will focus on industry trends and changing tourist needs, with a focus on the effects on tourists. The outcomes will offer a mobile application tour guide for users to locate distinct places to visit.

ABSTRAK

Kudat adalah salah satu destinasi pelancongan terkenal di Malaysia. Ia adalah sebuah bandar yang terletak di bahagian atas utara negeri Sabah di Malaysia. Sektor pelancongan mempunyai pelbagai aplikasi yang membantu individu dalam merancang perjalanan, pengangkutan, penginapan, masa lapang dan sebarang keperluan lain semasa melancong. Tujuan kajian ini adalah untuk membangunkan aplikasi mudah alih pemandu pelancong yang diberi nama "Kudat Tour" untuk pelancong yang ingin menerokai bandar dengan menyediakan semua maklumat yang mereka perlukan. Aplikasi ini akan menggunakan teknologi GPS untuk mengesan lokasi pengguna dan akan memberikan maklumat tentang tarikan pelancong, hotel, restoran, cerita sejarah, dan tempat membeli-belah supaya mereka dapat memanfaatkan masa mereka di bandar ini. Kajian ini akan memfokuskan kepada trend industri dan keperluan pelancong. Hasilnya akan menawarkan panduan pelancongan aplikasi mudah alih untuk pengguna mencari tempat yang berbeza untuk dilawati.

CHAPTER 1: INTRODUCTION

1.1 Introduction

A travel guide is a person who is committed to leading a group of people through a touristic environment, showing them the most amazing sights, they are seeing. A travel guide provides travelers with information on their visits, such as hotels, rooms, food, transportation, and destinations. Today, the environment has evolved greatly because of advancements in technology. It has made life more convenient and easier. The travel industry has already become digital and mobile because of global modernity and technology (Kholin & Diachenko, 2022). The biggest benefit of using a mobile travel guide is that a traveler no longer must rely on a tour group and can instead personalize a tour based on personal interests and with more schedule flexibility.

Kudat, commonly known as the "Tip of Borneo," is situated in Malaysia's Sabah state's upper north. Kudat is well known for its beaches, which are among Sabah's most pristine. When hiring a tour guide, Kudat has faced some difficulties, such as a lack of tour guides that offer packages for other tourist attractions apart from The Tip of Borneo and Rungus Longhouse, a lack of information about tourism, and expensive tour guides. Therefore, the purpose of this study is to develop a tour guide mobile application named "Kudat Tour" for tourists that want to explore Kudat by providing them with the information they need.

1.2 Problem Statement

There are three (3) main difficulties faced by people that want to travel to Kudat such as:

- Higher cost of hiring a tour guide.
- Hiring a tour guide will be bounded by their schedule which causes tiredness and less excitement.
- Less information or a review about the place

The northern town in Sabah, dubbed "Bali of Borneo," has significant rural tourist potential thanks to its gorgeous scenery and islands with fascinating stories. The true reason to travel to Kudat is to explore the city's beautiful and calm beaches, as well as its mountainous coastline. There are some excellent diving and snorkeling areas on the beaches. However, Kudat has faced some difficulties, such as a lack of tour guides that offer packages for other tourist attractions apart from the Tip of Borneo and Rungus Longhouse. Moreover, the tour guide fee is considerably expensive because the range price starts at RM500 to RM1700 for one or two places only ("TripAdvisor," n.d.). Therefore, hiring a tour guide can be costly, especially if the tourists have a small group, because the fee is normally charged by the day or trip, not per person. The cost of guided tours varies; however, some might be quite pricey depending on the destination. In certain circumstances, tour guides may not be worth the time or money. It is more cost-effective to get a high-quality mobile guide application and study as much information on the destination as possible ahead of time. Also, when hiring a tour guide, the tourist must stick to their schedule. Many trips are designed to show the tourist as many sights as possible in the time available. Exhaustion and travel burnout can occur in a couple of days if they travel too hastily. Plus, the tourist cannot really experience a place, and there is so much the tourist misses by travelling at that speed. Tours may also follow a predetermined path or visit only the key attractions of a location. Allowing for spontaneity and flexibility when travelling may lead to amazing experiences. Additionally, there is no review for the Kudat Tourism Information Center on Google. Thus, the traveller did not have enough information about tourism in Kudat.

1.3 Objectives

The objectives of this project are as follows:

1. To develop a mobile application that can help tourists explore interesting places in Kudat.
2. To allow users to provide feedback and express concerns about the areas surrounding Kudat.
3. To evaluate the usability of this mobile application to the end-users.

The Kudat Tour is aimed at tourists and will provide them with a wide range of information and services. The goal of this initiative is to deliver a better travel experience for tourists using mobile technologies. It provides the user with personalization that is more tailored to personal interests than a traditional guidebook. The system will use GPS to locate the user's location and will provide information about nearby restaurants. The reviews feature allows users to provide feedback and express concerns about Kudat's locations. The third objective can be achieved by testing the proposed app with the users and distributing the questionnaire to receive their feedback after using the proposed app. Thus, the proposed app can be gradually updated to understand how real users interact with it and make changes based on the feedback.

1.4 Methodology

The iterative development lifecycle, which is an agile model, is the methodology suggested for the Kudat Tour mobile application. To design the application, this methodology requires data gathering, flowchart design, a case diagram, and a Gantt chart. According to the iterative development methodology, one should start by testing the app's fundamental features on actual users because it is more effective to understand what users need and want from the app through user research and testing and then add these features in the following iteration.

1.5 Scopes

This project will focus on the tourism sector and the attractive location of Kudat. The target audience is primarily Malaysians or travelers from another country who can utilize the application to find interesting places and activities in Kudat. The application has supporting functions such as rating and commenting on the food or services of the places. By using the data provided in the application, they will be able to make a well-informed decision regarding their needs.

1.6 Significant of Project

Kudat Tour is a mobile application specifically designed to help possible users or anyone explore interesting places in Kudat without having a tour guide. By having the Kudat Tour mobile application, the economy in Kudat will grow, and Kudat will be widely known. Tourism increases economic revenue, provides thousands of employment opportunities, improves a country's infrastructure, and fosters a sense of cultural interaction between outsiders and natives. In addition, the main goal outlined for creating this project is to provide thorough and current information to both tourists and city locals. In addition, the users can get fundamental information about Kudat city because the Kudat Tour mobile application is a one-stop solution for all travel-related services such as tourist attractions, places of sightseeing, restaurant details, shopping areas, leisure activities, accommodation booking, and culture introduction.

1.7 Project Schedule

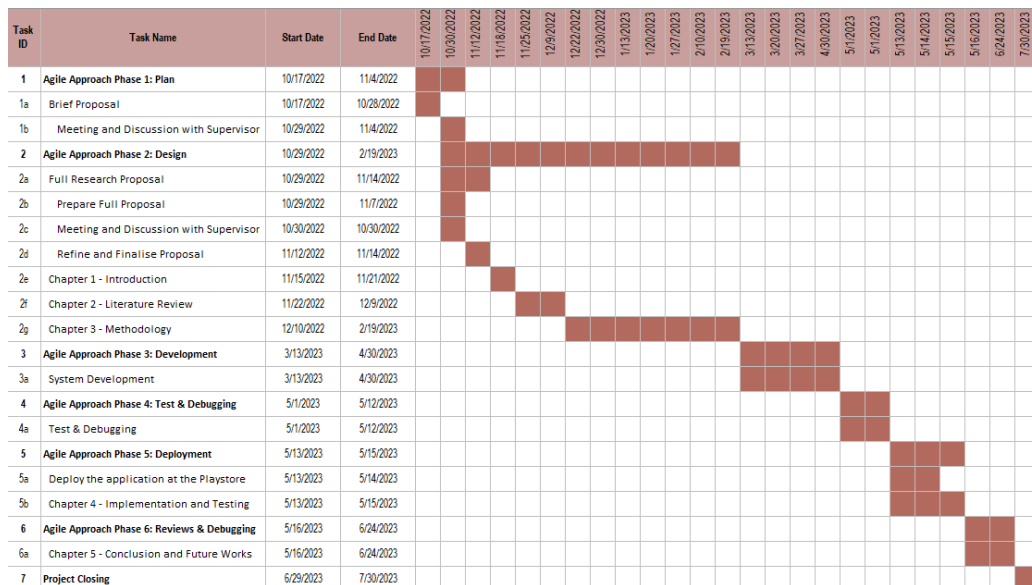


Figure 1.1 Gantt Chart FYP Schedule

1.8 Expected Outcome

The outcomes will offer a mobile application tour guide for users to locate distinct places to visit. The users are given a full overview of the location as well as directions to nearby attractions. The users can also learn about the culture of Kudat by accessing the history segment in the application. The design of the Kudat Tour is fully interactive and smooth, allowing the user to figure out everything fast. The users are allowed to give feedback and express concerns about places around Kudat that will influence other users' decisions. Other than that, the owners of the places can improve their services by reading the feedback from the reviews.

1.9 Summary

Lastly, Chapter 1 outlines the overall project, the problem, and the proposed solution, using the mentioned objective as a guideline. The expected outcome, a visualization of how the project is expected to be presented at the end of the project, and methodology as a strategy to prepare the project, as well as a progress schedule.

CHAPTER 2: LITERATURE REVIEW

2.1 Background Literature

According to Long & Zhang (2016), because of their usefulness, cell phones have developed from a basic medium of communication into an operational tool that is now the core of many companies. Due to advancements in mobile technology, quick information access, and more responsive cell phone interfaces, users may have a completely new and rich navigational experience. Nowadays, the most efficient application for easing travelers' journeys is the mobile tourism application (M. Sabou et al., 2012). Because a mobile phone or tablet is accessible and always in hand, it can be used at any moment. Users of the mobile travel application may quickly find directions to unfamiliar locations. The information provided about tourist attractions is useful and important for travelers.

Derwing et al. (2016) said that most people choose and place a stronger focus on a fresh and attractive user interface. Depending on their design and feature set, mobile applications can be either sophisticated or basic. The travel guide mobile application can help tourists look up the attractions around specific locations, such as entertainment, restaurants, and other nearby attractions. Compared to paper maps, which were mostly used by travelers in the past, a mobile application may be handier. It will help travelers plan their schedule in advance and provide them with peace of mind while they are on vacation since they will be more organized.

This part will focus on the existing and proposed mobile travel guides.

2.2 Review and Research Application

Reviews on other related current app features are necessary to understand the app's functionality as well as how that app runs and performs. This is a vital step in generating fresh ideas and avoiding app deficiencies. In this project, reviews will be conducted on three similar apps, Kuala Lumpur Travel Guide, Tripadvisor, and Cuti-Cuti Langkawi, to compare functionality.

2.3 Existing Application

This section shows the results of a focus review conducted on a variety of mobile applications designed to provide information to travelers. Several flaws that could potentially lead to user disappointment could be identified through a detailed review of these apps.

2.3.1 Kuala Lumpur Travel Guide

Figure 2.1 shows the interfaces of the Kuala Lumpur Travel Guide application. According to the application, the users can find all of Kuala Lumpur's major tourist attractions, get the lowdown on them, locate them on the map, and read reviews left by locals and fellow travelers. Other than that, it can get access to two interactive maps, which are Google or offline OSM (OpenStreetMap). With OSM, map data for the whole of Kuala Lumpur can be downloaded and used completely offline. Users can find out which restaurants suit their taste by reading the customer reviews, pricing, and location information. Also, this application uses a unique AR (augmented reality) feature to find landmarks and places of interest. Also, this application offers the best-rated active sports clubs and recreational areas, weather forecasts, a currency converter, and hotels. Moreover, the users can create their wish lists and receive online arrival and departure flight information. This application requires Android 5.0 and above and is only available for Android devices.

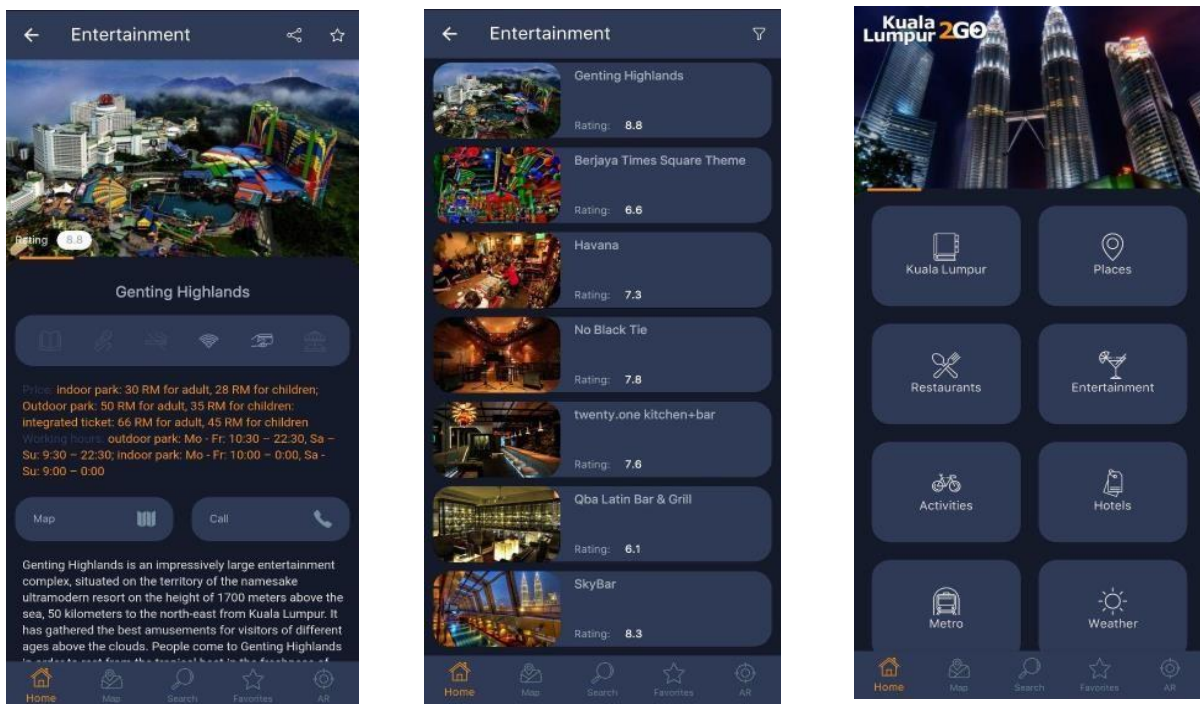


Figure 2.1 Kuala Lumpur Travel Guide User Interface