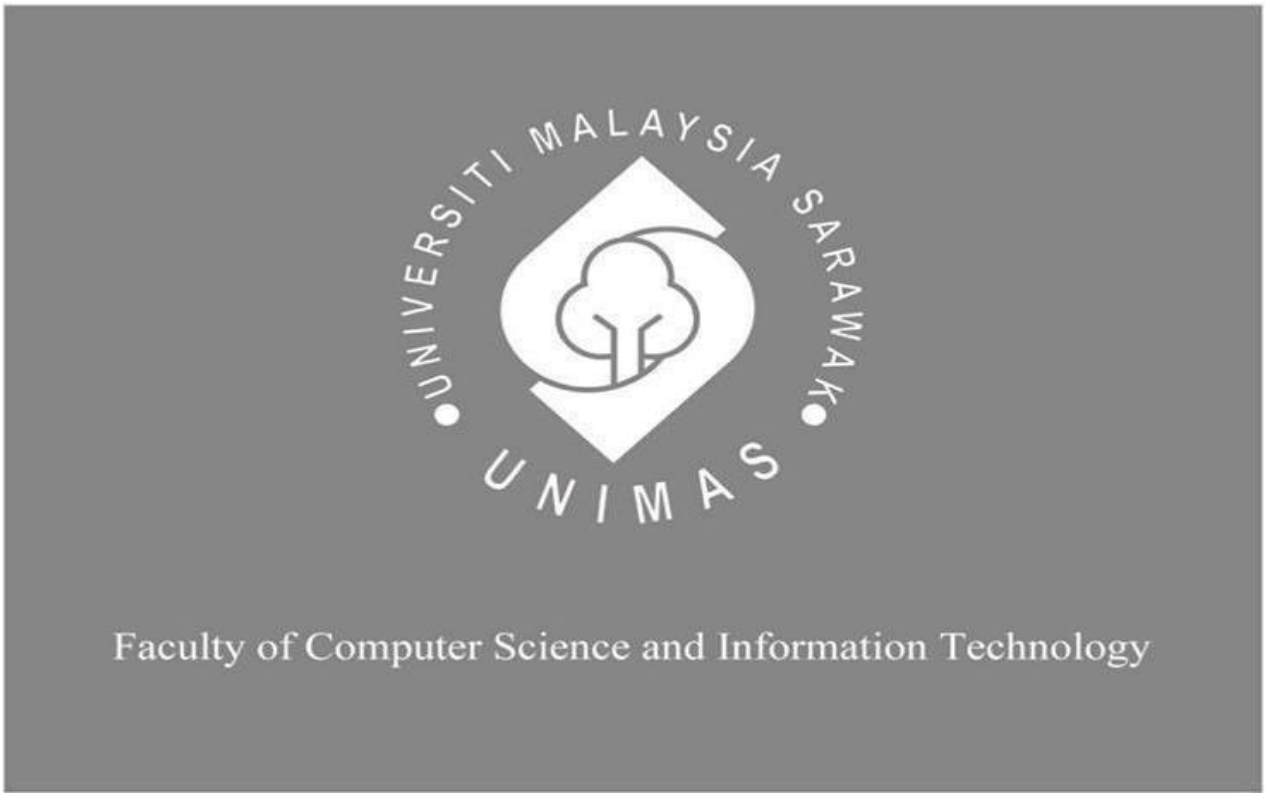

Kota Samarahan Pet Lost Using Location-Based Application

Rapheal Andar

Bachelor of Computer Science with Honours (Multimedia Computing)

2019

Kota Samarahan Pet Lost Using Location-Based Application

RAPHEAL ANDAR

This project is submitted in partial fulfilment of the

requirements for the degree of

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(Multimedia Computing)

Faculty of Computer Science and Information Technology

UNIVERSITI MALAYSIA SARAWAK

2019

Kota Samarahan Haiwan Peliharaan Hilang Menggunakan Aplikasi Berdasarkan Lokasi

RAPHEAL ANDAR

Projek ini merupakan salah satu keperluan untuk

Ijazah Sarjana Muda Sains Komputer dan Teknologi Maklumat dengan Kepujian

(Pengkomputeran Multimedia)

Fakulti Sains Komputer dan Teknologi Maklumat

UNIVERSITI MALAYSIA SARAWAK

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Next, I wish to acknowledge the help from my fellow friends and colleagues who are taking along the final year project with me in the final year. I am thankful for their willingness to share useful information and essential knowledge about the final year project.

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ABSTRACT

Kota Samarahan Pet Lost is a mobile application that will help any pet owner to find their lost pet. Furthermore, this mobile application will let the users to post about any pet that they found near their area. Based on the studies that I had conducted, 100% of 27 respondents supported the objective of this project which is to develop a mobile application that will help users to post about their lost pet or any pet that they found near their area inside that application as well as to Facebook. Furthermore, geolocation will be applied in the development of this application as it allows the implementation of Global Positioning System (GPS). This mobile application will be developed in an android development. This project implementation will adopt the Waterfall Methodology. The main outcome of this location-based mobile application project is to help any pet owner to reunite with their lost pet and by helping to inform to the other pet owners about their lost pet that had been found nearby with a faster and efficient way possible. Hence, this mobile application will be most beneficial for the pet owner that really love their pet so much and wanted to reunite with their beloved lost pet as soon as possible with the help of their friends and the people that happens to be nearby their area at that moment.

ABSTRAK

Aplikasi Kota Samarahan Haiwan Peliharaan yang Hilang ialah aplikasi mudah alih yang dapat membantu pengguna sistem tersebut untuk mencari haiwan peliharaan mereka yang hilang. Selain itu, aplikasi ini dapat membenarkan pengguna sistem tersebut untuk membuat laporan mengenai haiwan peliharaan yang mereka jumpai berdekatan dengan kawasan tersebut. Berdasarkan soal selidik yang saya telah edarkan, 100% daripada 27 reponden telah menyokong idea projek ini untuk membangunkan aplikasi mudah alih yang dapat membenarkan pengguna sistem untuk membuat laporan mengani haiwan peliharaan mereka yang telah hilang atau mengenai haiwan peliharaan yang mereka jumpai berdekatan kawasan tersebut melalui aplikasi ini dan juga melalui aplikasi Facebook. Tambahan pula, teknologi geolokasi akan digunakan bagi membenarkan penggunaan Sistem Pnentududukan Global atau lebih dikenali sebagai "Global Positioning System (GPS)". Aplikasi mudah alih ini akan dibina berasaskan telefon bimbit Android. Kaedah Waterfall akan digunakan dalam proses menjayakan projek ini. Justeru itu, aplikasi Kota Samarahan Haiwan Peliharaan yang Hilang ini akan dapat membantu pemilik haiwan peliharaan untuk bersatu dengan haiwan peliharaan mereka yang telah hilang dan dapat juga membantu pemilik haiwan peliharaan yang lain dengan memberitahu status terkini haiwan peliharaan mereka yang hilang, telah dijumpai di sekitar kawasan yang berdekatan dengan menggunakan cara yang lebih mudah dan cekap. Natijahnya, aplikasi mudah alih ini akan bermanfaat bagi pengguna yang sangat menyayangi haiwan peliharaan mereka dan ingin bersatu kembali dengan haiwan peliharaan mereka yang telah hilang tersebut secepat yang mungkin dengan pertolongan kawan mereka dan orang yang kebetulan berada di kawasan berdekatan pada masa tersebut.

CHAPTER 1: INTRODUCTION

1.1 Introduction

Nowadays, most of the people tend to have their own pet especially in Kota Samarahan, Sarawak. Some of the people are willing to buy expensive cats and dogs just to get the feeling to own a cute pet that their children can play with and can cause no harm to the family. There will be a family where they like keep a lot of pets just because they like to take care of it. When these family have a lot of pets need to take care of, they tend to lose count the number of pets they have. Some of the owner will lost their pets due to many pets need to take care of especially if the pets are not being kept inside a cage. The pet will also eventually be giving birth not only one or two offspring but more than three. When the family can't handle too much of the offspring, they will just cast out some of them. Sometimes they just left the mother and the offspring by the roadside or even at the bus station. Pets that do not have any owner tend to live anywhere and eat anything for them to live. Eventually this pet will turn into a stray cats and dogs. They will be hanging around near a place where they can easily find food.

1.2 Problem Statement

When there is a lot of stray cats and dogs hanging around, people tend to get uneasy as the number keeps on increasing day by day. The stray cats and dogs tend to be hanging around near the area where there is a food court. Customer that went to the food court will get disturb as the stray animal will go fromtable to table to ask for food. When the stray animal didn't get enough food from the customer such as the bones, they will tend to eat the leftover food that the customer just left at their plate on the table. When the stray animal turns to a little bit aggressive after they didn't eat for a few days, they will find the leftover food inside the people's garbage bin. They will tear off the garbage plastic and eat any food that they found inside it. There is no source to contact easily with to make a report direct to the district council to take care of the cases at the area of Kota Samarahan. Thus, there is a need to develop an application for the people to easily report where is the area that the stray animal always causing chaos and where is the area that there is a lot of cases of pets lost.

1.3 Objectives

a) To develop a mobile app where people can reduce the number of lost pets by capturing the picture of the lost pets and find the location

b) To design a post section inside the mobile app where and when the cases of pet lost occurred

c) To increase the efficiency of the people by helping each other to find their lost pets through social media

d) To increase the awareness of the people by receiving a notification alert about the lost/found pet near their area

1.4 Brief Methodology

The methodology model used for this project is Waterfall Methodology. Waterfall model consist of five phases which are Planning, Requirement analysis, Design, Implementation and Testing as shown Figure 1.1. This model has several advantages which include easy to keep track of the project, suitable for small projects and overall project risk decreases. Waterfall model is designed such that until the preceding phase is complete, cannot move on to the next phase of development. It is a sequential process. The progress flows in a downward fashion. The reasons for choosing a waterfall model are as follows:

- It is a problem-solving process through which a series of phases helps to produce a system.
- It completely caters to the need of the end user.
- It focuses on realizing the system requirements and the requirements are very well documented, clear and fixed.
- Efficient work and timely completion.
- Planned information infrastructure.
- It improves quality of systems.

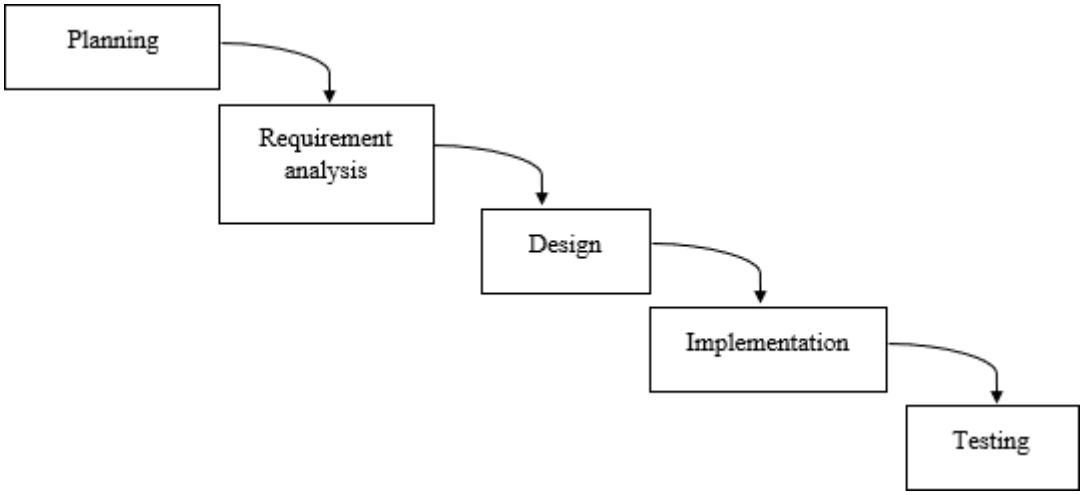


Figure 1.1 Waterfall Methodology

1.5 Scope

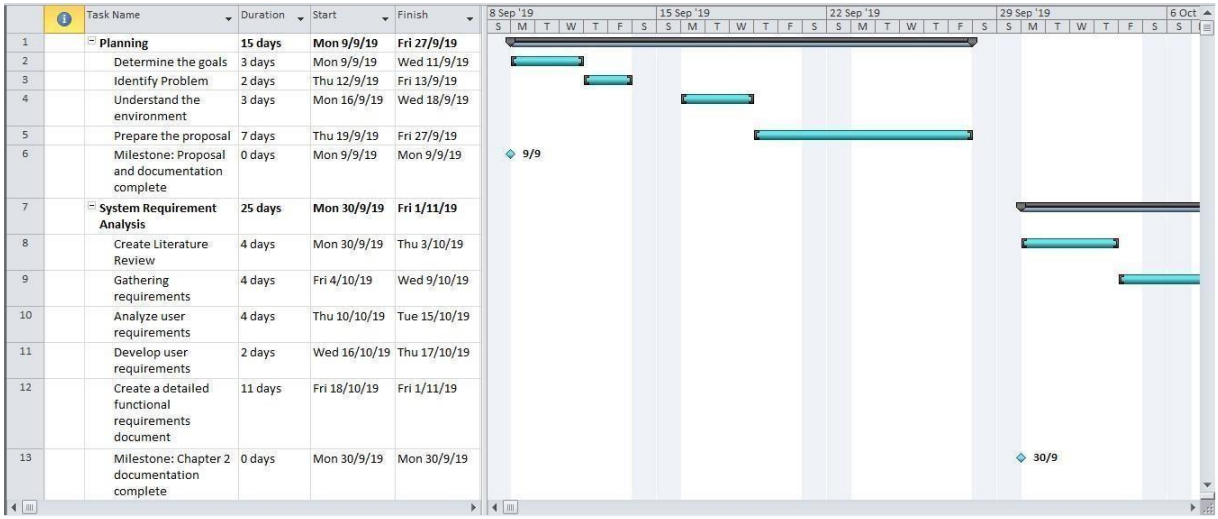
The pet lost using location-based application should be able to help reducing stray cats and dogs in Kota Samarahan area. At the same time, it can help the people to get in touch with each other regarding their pet lost nearby their neighbourhood. The limitation for this mobile application is that, the people can't keep track of the latest location of the pet when they are running from the people as soon as the pet start to run awayusing a small hidden route or through the bushes.

1.6 Significance of Project

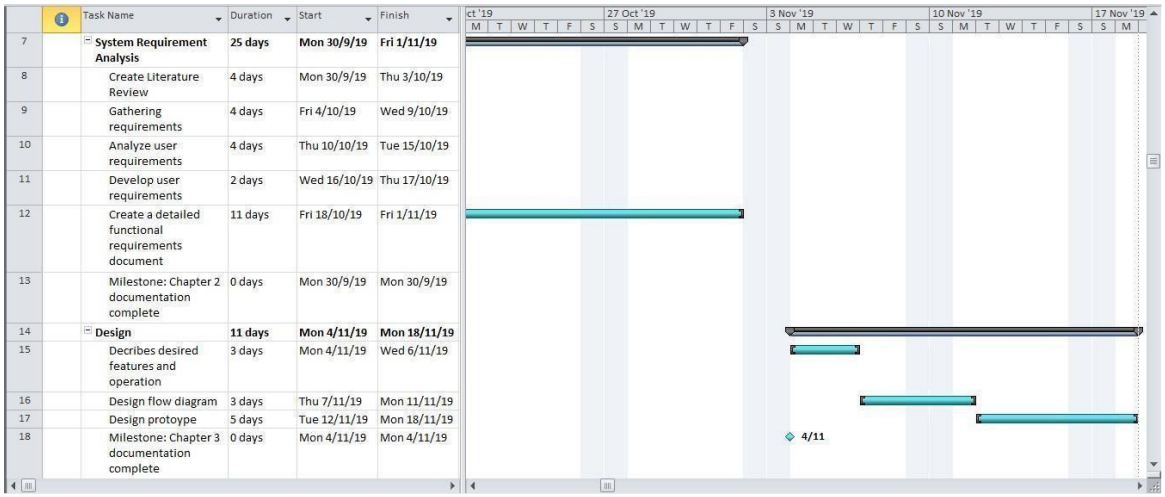
The significant of this project is that it can help to create a harmony living place and maintain a clean healthy environment. The owner of the pet can find their lost pet easily and fast when there is a connection of network among themselves. It also can prevent the owner from buying any new pet to replace the ones that had been lost and can't be found. When the people using this application, it still can give them hope on finding their pet without any doubt.

1.7 Project Schedule

Project scheduled is consists of a list of a project's terminal elements with intended start and finish dates. The development and maintenance of a project schedule is important as a guide for the developer or the researcher to finish the tasks on time and develops the project in consistent way. A project schedule has been created by using Microsoft Project as the software tools to complete the Gantt chart in order to bring the project to be delivered successfully.



	Task Name	Duration	Start	Finish
1	**Planning**	**15 days**	**Mon 9/9/19**	**Fri 27/9/19**
2	Determine the goals	3 days	Mon 9/9/19	Wed 11/9/19
3	Identify Problem	2 days	Thu 12/9/19	Fri 13/9/19
4	Understand the environment	3 days	Mon 16/9/19	Wed 18/9/19
5	Prepare the proposal	7 days	Thu 19/9/19	Fri 27/9/19
6	Milestone: Proposal and documentation complete	0 days	Mon 9/9/19	Mon 9/9/19
7	**System Requirement Analysis**	**25 days**	**Mon 30/9/19**	**Fri 1/11/19**
8	Create Literature Review	4 days	Mon 30/9/19	Thu 3/10/19
9	Gathering requirements	4 days	Fri 4/10/19	Wed 9/10/19
10	Analyze user requirements	4 days	Thu 10/10/19	Tue 15/10/19
11	Develop user requirements	2 days	Wed 16/10/19	Thu 17/10/19
12	Create a detailed functional requirements document	11 days	Fri 18/10/19	Fri 1/11/19
13	Milestone: Chapter 2 documentation complete	0 days	Mon 30/9/19	Mon 30/9/19



	Task Name	Duration	Start	Finish
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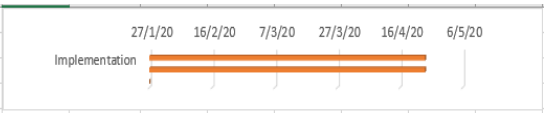
11	Develop user requirements	2 days	Wed 16/10/19	Thu 17/10/19
12	Create a detailed functional requirements document	11 days	Fri 18/10/19	Fri 1/11/19
13	Milestone: Chapter 2 documentation complete	0 days	Mon 30/9/19	Mon 30/9/19
14	**Design**	**11 days**	**Mon 4/11/19**	**Mon 18/11/19**
15	Decribes desired features and operation	3 days	Mon 4/11/19	Wed 6/11/19
16	Design flow diagram	3 days	Thu 7/11/19	Mon 11/11/19
17	Design protoype	5 days	Tue 12/11/19	Mon 18/11/19
18	Milestone: Chapter 3 documentation complete	0 days	Mon 4/11/19	Mon 4/11/19

Task Name	Duration	Start	Finish
Implementation	**88**	27/1/20	24/4/20
Write the code and implementation	88	27/1/20	24/4/20
Milestone: System complete	0	27/1/20	27/1/20



Testing	**18**	27/4/20	15/5/20
Debug error	2	27/4/20	28/4/20
Fix error	5	29/4/20	5/5/20
Analyse test scenarios	3	6/5/20	8/5/20
Review and make improvement	4	11/5/20	14/5/20
Milestone: System finish testing	0	27/4/20	27/4/20
Submission of full report FYP2	1	15/5/20	15/5/20

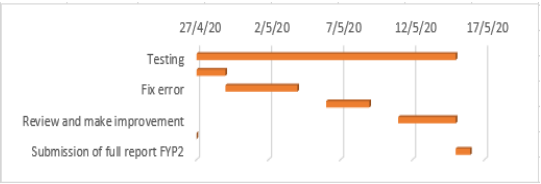


Figure 1.2 Gantt chart of the proposed project

1.8 Project Outcome

By using this app, the number of cases of lost pets and stray animals will decline. The district council can assure the harmony and cleanliness of the place when they can manage the stray animals well by reducing the number of stray animals.

1.9 Project Report Outline

1.10.1 Chapter 1: Introduction

Chapter 1 explains about the introduction of the proposed system. Introduction describes the background and some useful information about the proposed system. First of all, this chapter include problem statement, objectives of the proposed system, methodology used, scope, significance of project, project schedule and the expected outcome of the proposed system. For the problem statement, it describes the problem or difficulty that faced by the people that stay in the Kota Samarahan area, when there is no such system exist to help them to reduce the number of pets lost and the stray animals. In overall, problem statement covers the reason why the proposed system should be developed and how it can help the people and Kota Samarahan council to reduce the number of pets lost and stray animals. Whereas the objective is list out what is the aim of the proposed system and how it can be accomplished. It should be precise, in detail and be realistic which need to be related to the system. Methodology is important as it shows the method and cycles that we used to develop the proposed system. The scope illustrates the limitation of the proposed system to be developed. While the significance of the project is explained about how the proposed system can help the society to achieve a better life. Project schedule is for the planning purposes to arrange a time to let us do a list of tasks. Lastly, the expected outcome of the proposed system is explaining that the achievement and the final result when the proposed system come out in the future.

1.10.2 Chapter 2: Literature Review

In chapter 2, review is done on the existing system and techniques that based on researched journal, online resources or any available printed resources. It involves with the background study of the proposed system. Besides that, it required comparing the proposed system with the current system that is already exists or any related system. Furthermore, it also includes the techniques, technology tools, skills, and software that are used to develop the proposed system.

1.10.3 Chapter 3: Requirement Analysis and Design

Chapter 3 explains briefly the methodology that implements on the proposed system in order to develop proposed system smoothly and effectively. Apart from that, requirement is obtained from the end user in order to be used in the design of the proposed system. After collecting the requirements, database is design which is supported by prototype, Data Dictionary, Data Flow Diagram (DFD) and Entity Relationship Diagram (ERD).

CHAPTER 2: Literature Review

2.1 Introduction

In this chapter, it includes the study of existing system that are related to the proposed system. The functionality of the existing systems is analysed and compared with the proposed system for further improvements. A study on the weaknesses or possible functions improvements of the existing systems. The review is useful in terms of interface design as the graphical user interface will affect the user's intention and their understanding in the flow of the system. The three existing systems that have been chosen for the Literature Review are Lost Pet, Runaway Pets and PetMissing. All these existing systems provide on how to save and reunite back with the lost pet which the functions are almost the same as the proposed system.

Besides that, this chapter also covers reviews on software development tools used throughout the development. The software review states the brief introduction of the software tools and the main functions provided by the tools that are useful for the later development.

2.2 Review on Similar Existing Systems

The society nowadays is coping with the rapid use of modern computing technology resulting in the existing of various mobile applications in Google Play Store that provide similar safe the pet lost services. These applications have the same purpose but not every function is provided equally, and the design of the interface is different from each other which result in user interest towards the application. A study of comparison to these applications is conducted to analyse improvements of the proposed system.