Homestay.My Mobile Application for Android Platform

By

Erman Fitri bin Mohd Yasin

16151

Dissertation submitted in partial fulfillment of

the requirements for the

Bachelor of Technology (Hons)

(Information and Communication Technology)

MAY 2015

Universiti Teknologi PETRONAS

Bandar Seri Iskandar

31750 Tronoh

Perak Darul Ridzuan

CERTIFICATION OF APPROVAL

Homestay.My Mobile Application for Android Platform

By

Erman Fitri bin Mohd Yasin

16151

A project dissertation submitted to the

Information and Communication Technology Program

Universiti Teknologi PETRONAS

In partial fulfillment of the requirement for the

BACHELOR OF TECHNOLOGY (Hons)

INFORMATION AND COMMUNICATION TECHNOLOGY

Approved by,

_____

(Mr Faizal Bin Ahmad Fadzil)

UNIVERSITI TEKNOLOGI PETRONAS

TRONOH, PERAK

May 2015

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

_____

ERMAN FITRI BIN MOHD YASIN

ABSTRACT

With the booming of homestay around Malaysia, it has become a profitable sector under tourism. However, tourist have a difficulty to find and booking homestay as there are not many homestays that have an online booking. Hence, the main objective of this project is to develop a mobile application to become a hub for all homestay in Malaysia. The application will provide a searching homestay function, booking homestay and help navigate function for tourist to the particular homestay selected. This application will help users to save time and cost of travel to get information of homestay that they want to book. The research will cover some of the homestay around Umbai, Melaka and more areas will be cover later. Android operating system has been chosen as the platform for this application because Android's users are potentially big in numbers. With reference to Technology Acceptance Model and using Rapid Application Development (RAD) as primary method, this study provides a more solid reason to come up with a mobile application using Android. An Android mobile application has become the outcome for this project.

ACKNOWLEDGEMENT

First and foremost, I would like to express my gratitude to Allah S.W.T for His blessings and mercy that He instills in myself to face many challenges and thus complete this work for my Final Year Project (FYP).

I would particularly like to thank to my supervisor, Mr Faizal Ahamd Fazil, for his guidance, assistance and his willingness to help me out and spend a lot of time guiding me towards this project completion.

I would also like to express my gratitude and thanks towards my friends for all the support given to me during my time as developing this project. I would like to than my dear friend Muhammad Zulhilmi Md Salahan, for his advice, teachings and assistance to me as a learning developer or programmer. I also would like to give tokens of appreciation also to the Final Year project Coordinator, for his commitment making this year's FYP course a success.

Endless thank to my parents and my family who constantly were concern on the progress of my project as well as my wellbeing. Without their endless guidance and moral support this project would not have been successfully completed.

Last but not least, I would also like to thank other personnel not mentioned above whom gave me such a great support in completing this project. I would also like to apologize for all the wrong doings or problems arise. All of your kindness and cooperation are highly appreciated and will be fondly remembered.

TABLE OF CONTENT

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1: INTRODUCTION

1.1   Background

Homestay is a form of tourism that allows visitors to rent house from local families [1]. Method homestay for the shortage of hotel rooms in some places or where people that come in a big group and want to rent a house instead of rooms in hotels. Homestay concept creates opportunities for local people in villages to get lucrative side incomes. Local tourist attractions areas where accommodation such as hotels have always fully booked during school break season are the areas where homestay concept would be an advantage to accommodate to fills the gaps hence the knowledge of the whereabouts of the homestays is crucial.

At each entrance of the hotel there will be a sign 'full', and the homestay will be the only savior for the accommodation. If not, tourist that come for a vacation need to cancel their plans to stay overnight or they only have one day visit. With the development of this application, it will help tourist that come for a vacation to find a homestay around the city so that they can stay overnight and stick to their vacation plans.

Homestay might be defined differently by different people. In this project, homestay would mean a house for tourist to rent. It is not like homestay program where people live with the hosted family.

The rest of this chapter will be organized as follows: the next section will put forward the problem statement of this project. This will be followed with the objectives section and scope of study.

1.2 Problem Statement

i. **Tourists have difficulties to find homestays.** Application to find a homestay is not very available in the apps store nowadays and if there is an app, those apps is not provide real time information where the tourist did not know if the homestay have been occupied for that particular night or not. Besides, if tourists search for a homestay in the internet, only popular homestay will come out in the search engine. So if there is a mobile app that acts as a hub to gather all available homestay in Malaysia, it will ease the tourist to choice homestays and also it will help homestay owners to promote their homestay. From the experience of the homestay owner, tourists have difficulties to find the direction from their current place to the homestay. Only tourists that are familiar with that place did not have those difficulties.

ii. **Most homestay owners do not have proper online booking functions and procedure.** Nowadays, tourists that want to book a homestay, they need to call the homestay owners and made a booking and the owners have to write the booking. For the tourist, it is costly and time consuming where they have to call the owners to know if their homestay still available for booking or not and sometimes it will takes time as tourist have to call every owner to made a booking. While for the owner it is hard to manage the booking if there are many people call to book the homestay and as we know that, homestay is just the side income for the owners and they have their main job also. So if every time they get call for booking, it will disturb them to do their main jobs.

iii. **New Homestays owners do not have proper online portal that will make their new homestays to be known to a large communities of people that would prefer homestay rather than hotels.** It will make this new homestay difficult to get customers. This list of new homestay have to be updated so the tourist will know about this new homestay and can make a comparison and find the homestay that meet their criteria.

1.3   Objectives

In conjunction with above problem statement, this project is aimed to:

1.   Ease user to search the available homestays that meet their criteria and also to find direction to the homestay. So in this app, all location of the homestays should link with maps so that tourist can find direction to the homestays.

2.   Make an app that has online booking where user can book the homestay via online without have to call the homestay owners. Can save cost. It also help homestay owner easy to manage the booking

3.   Build an app that becomes a hub of all homestay in Malaysia so that new homestay can promote their homestay. With this homestay hub, new homestays can compete fairly with the popular homestays and it will make tourists have many choices to choose.

1.4   Scope of Study

This study aims at producing a mobile application for searching and booking homestays and it is mainly focus to the tourist. Since the mobile technology is now available, very useful and affordable so, the project is aim to develop on Android tablet instead of using the PC or computer. Since Android operating system is an open source and Google releases the code under the Apache License, it is the most common used operating system for smart phones rather than iOs (apple operating system). Due to its infancy stage, the project will focuses only homestay in Umbai, Melaka covering four homestay.

1.5   Relevancy of Project

The implementation of Homestay.My is relevant as it is aimed to help tourist who need to find suitable homestay that meet their requirement and straightly can booking for that particular homestay. This would be able to help users to fully utilize their vacation and regret nothing upon departure for their vacation.

1.6   Feasibility of Project within the Scope and Time Frame

The application shall be completed on time as the author has two semesters to complete the whole project. The time span of two semesters is divided into two parts, Final Year Project I and Final Year Project II. During Final Year Project I, the author focuses more towards the research and the report while during Final Year Project II, it is the time for the project design and implementation. This is very crucial moment where the author needs to be able to come out with a working application.

CHAPTER 2: LITERATURE REVIEW

This chapter review on the crrent technologies with Homestay.My Apps that will be developed later.

2.1   The need to have Homestay.My Application

Most potential visitors or tourist want to have an ability to book homestay online. This online booking will ease the tourist as it will saves their times and money. It also will help the homestay owners to manage their booking.

In 2011, a research has been conducted and from the result, sixty percent travelers say they book online when the product is available. In Europe and North America, around seventy percent of consumer travel turnover are from online booking. According to Bookeasy Tourism Solution, online booking give several benefit to tourist and homestays owners. With the online booking system, customer will ease to view, book and pay for the accommodation. Next, online booking system can save our time and money as we do not need to make phone calls or send email to the owner to make a booking or reservation. At the same time, it also can help the owner to save their time as with the booking system will help the owner to manage all their bookings. Most of the user nowadays visit online travel websites or hotel portal site to find the best and reasonable price for their accommodation [3]. If the user can book directly, it will ease them as they can directly make the reservation.

Nowadays, due to its ability to ease the customer in transaction at the low search cost, offer discounted price and additional information about the accommodation, hotel portal site such as Agoda and Rakuten Travel has become popular for a hotel reservation (Napaporn Rianthong). With this portal, customer or tourists that come for vacation can search hotel that meet their criteria with the best deal conveniently.

But this site is limited for hotel only, so that is why we need to have Homestay.My application where the function is same with the hotel portal site but it is focus on the homestay accommodation in Malaysia. Homestay.My application will become the hub for the all homestay in Malaysia and it will have the function to search and booking

homestay based on the certain criteria that will help tourist or customer to make a choice easily. Besides help the user or tourist to easily find the accommodation. Homestay.My application also is expected to help the homestay owners to promote their homestays and increase their revenue.

2.2   Current Application in the Market

2.2.1   MyHomestay

MyHomestay application which develops by RIQ Tech is a platform for searching and promoting homestay which are available on Malaysia [4]. With this application user can search available homestay around Malaysia and the homestay owner also can register through this application where in this application the owner can register their homestay. After MyHomestay team review the registered homestay, they will update into their list. Currently, more than five thousand people have downloaded the application.
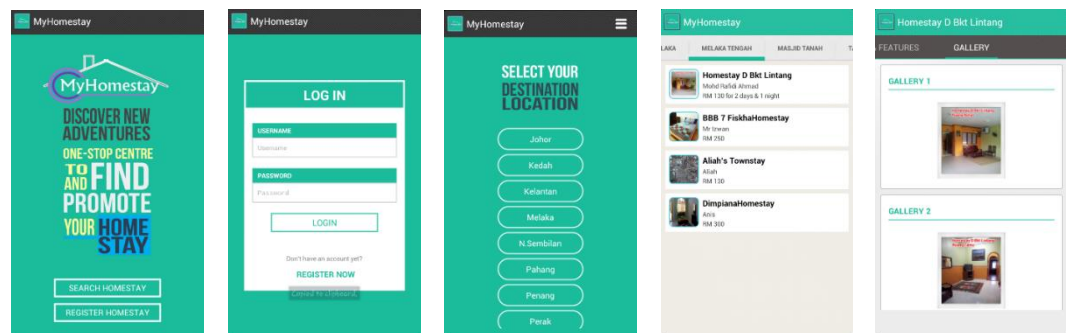
Figure 1: MyHomestay Application Interface

2.2.2 InapDesa

InapDesa application which develops by InapDesa is platform to discover beautiful homestays in Malaysia [5]. Using this application, user can search homestay around them and also user can search homestay from a specific place that they want to go like 'Melaka', 'Perak' and so on. InapDesa application also integrates with the GPS application, so user can easily navigate to their desired homestay. Currently, more than 100 people have downloaded the application.
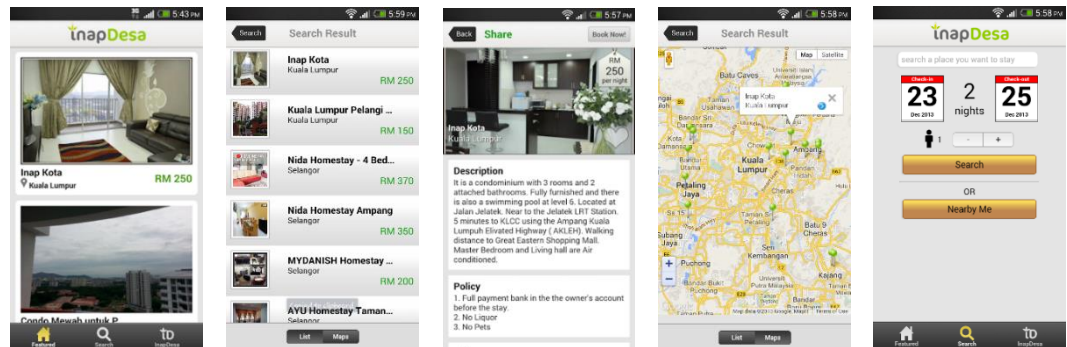
Figure 2: InapDesa Application Interface

2.2.3 MalaysiaHomestay

MalaysiaHomestay application which develops by Pepatih solution is a platform to browse and book the homestay in Malaysia [6]. With this application, user can find the desired homestay after they have selected their destination. After that, user can book the homestay and find if the homestay is available or not at the booking date. Currently, more than 100 people have downloaded this application and 464 homestays are in the list of MalaysiaHomestay application.
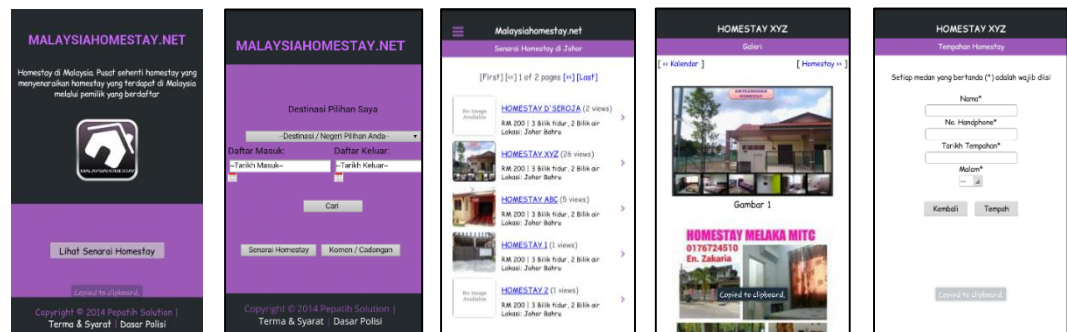
Figure 3: MalaysiaHomestay Application Interface

2.3   How Homestay.My application is different from other application

Based on the research that had been done, these three homestay applications could be the same with the Homestay.My application. Even though these applications might have some similarities with Homestay.My application, the Homestay.My application has additional features that make it different from the other three applications.

Mobile App Features	MyHomestay	InapDesa	MalaysiaHomestay
Online Booking	x	√	√
Maps	x	√	x
Register Homestay	√	x	x
Auto-suggest	x	√	√
Android Platform	√	√	√

Table 1: Comparative Study

2.3.1   Online Booking

From the three applications that have been research, InapDesa and MalaysiaHomestay only have an ability to book homestay online. Users that want to book the homestay have to key in their detail for the reservation and they can see if the homestay is available or not. While 'MyHomestay' application did not have online booking where it just only show the contact number of the homestay owner and user have to contact the owner by themselves to know if the homestay is still available or not. Homestay.My also will have the ability to book homestay online as this function is one of the main functions for Homestay.My application.

2.3.2   Maps/GPS Navigation

Based on the research, only InapDesa provide user navigation to the homestay while the other two applications did not have this function. Maps navigation is important as many homestay are in the rural area, so it is hard for the user to search the homestay if there is no navigation to the homestay. With the navigation, user did not have problem to find their way to the homestay anymore. Because of the importance of the navigation, Homestay.My application

will integrate with the GPS application, so user can easily navigate to their desired homestay

2.3.3 Register Homestay

For homestay registration, only 'MyHomestay' application has that function in the application. The other two, homestay registration is based on email where any homestay owners that want their homestay in the application have to send an email about their homestay. To make it easy, Homestay.My application will follow 'MyHomestay' application to have a function that will enable homestay owner to register their homestay in Homestay.My application. After they have register their homestay and the homestay has been added in the list, the homestay owner can easily managed their booking through Homestay.My application. Now with Homestay.My, all the homestay's owner did not have to worry about the booking, they just need to provide the best service for the homestay so that people will give a good feedback and many people will come to their homestay in the future.

2.3.4 Auto-suggest

Based on the research, only InapDesa and MalaysiaHomestay have auto-suggest function where user can input their criteria so that they can find the suitable homestay. The two applications is classify as interactive as because it is two-way flow of information between user and the mobile and it involve the action of input from the user. Interactive application will attract user to use the application. But the two applications that have auto-suggest are only based on the place. Homestay.My application auto-suggest is based on many criteria that user can input like location, price, number of people, availability of the homestay and so on.

2.3.5 Android Platform

All applications are in android platform and it is good because, currently hundreds of millions of mobile devices over 190 countries around the world are powered by Android. Google Play is an open market and it gives us control to publish our product. Google Play also did not perform filtration on the product that will publish like Apps Store, so it easy for us to publish our application or product. Choosing Android platform for the development is a huge opportunity to be accomplished. As according to comScore reports (2014), 52.1 percent platform market share is from Google Android and it make Android led as number one smartphone platform [2].

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Project Methodology

There are different development process and methodologies to build new IT systems. Each of them has certain stages to reach to requirement of new IT systems. The typical stages of a system development life cycle are Project initiation or Feasibility study, Analysis and user requirements, Design, Build, Implementation, and Post implementation review. Various software development life cycle models and designed that be used during software development process. The models are Waterfall Model, Iterative Model, Spiral Model, V-Model, Big Bang Model, Agile Model, Rapid Application Development (RAD) and Prototyping Models [7]. (Popa, 2010) stated that Rapid Application Development (RAD) is one of the modern methods to develop IT applications and RAD is end to end development life cycle. RAD is based on the premise that the most part of the IT applications are obtained in less time that the rest of the software solutions. RAD offers early functionality, quick response to business needs, risk control, documentation of the end product, and short development time.

The author has chosen Rapid Application Development (RAD) in completing this project. The reason RAD is chosen because it is applicable for developing a high interactive system. Other than that, due to the time constraints, RAD is good to use as methodology to help the author to focus on building the application in the short period of time. Rapid Application Development consists of 4 phases:
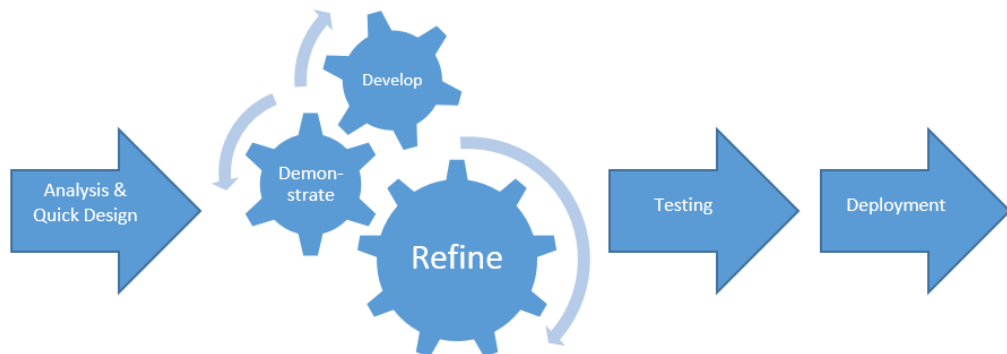
Figure 4: Rapid Application Development Methodology

This project mainly uses Rapid Application Development (RAD) methodology, therefore, the author will explain in details the project activities based on each phase in Rapid Application Development (RAD) methodology. Four phases in Rapid Application Development (RAD) will be discussed in the next section.

3.1.1 Analysis and quick design

The first phase of the project development is planning. This is where the author will analyze and discover the problem and come out with the solution that then will be the objectives for the project. This phase is to perform preliminary investigation on the current effective Android Application system design and the analysis on the method of generating user information.

At the beginning stage of the research, quantitative approach has been used as it is helpful to get feedback from people about the project and also their opinions. Survey techniques of this approach has been applied and it is assume that the respondent is capable to express their knowledge and that they are committed to investing time and effort for the feedback. Questionnaire, one of the survey techniques has been used because the author wants to get feedback from a large number of participants in a short amount of time and at low cost. The details explanation of the result will be discussed in the next section of the paper. In the survey, people need to answer several questions so that the author can gather all information requirements regarding the homestay.

In this phase also a lot of research has been done such as tourism, homestay, marketing, online booking, and Android platform. Reviews from research papers and internet site also are included in research to strengthen the scope of the research. The main resources of research papers come from UTP Electronic and Digital Intellectual Asset (UTPedia) and IEEE website. After reading and understand the research scope, a Gantt chart has been done to keep track the project timeline. This is to ensure enough time is given for specific task and project would be able to be completed in a timely manner. After all data

have been collected, the interface of Homestay.My application will then be developed.

3.1.2 Prototype cycles (Develop, Demonstrate, and Refine)

For this phase, few activities will be conduct such as designing the system flow which contain use case and activity diagram, design the system component where system architecture has been construct and identify tools and equipment, develop prototype, design user interface, and coding mobile application. To complete the prototyping phase, PhoneGap and jQuery is been used for the development. PhoneGap and jQuery helps the author to create software applications for Android operating system (OS).

3.1.3 Testing

After the prototype has been developed, the testing phase will be conduct. The application will undergo two types of test which is system test and user acceptance test. System test or functional test is conduct to make sure that all the function in Homestay.My application work properly. Meanwhile, user acceptance test is conduct to demonstrate that the application is ready for deployment. After the test been conduct, any feedback and criticism will be taken into accounts and improvements will be made immediately and then the new version of prototype will be released. The entire test is done to ensure that the application will satisfy the tourist need.

3.1.4 Deployment

After user acceptance test where user has satisfied with the application, the finalized prototyped then will be called as system and implementation to real markets by publish the application into the Google Play. The maintenance will be done to the application if there is problem after the application is already in the market.

3.2   System Architecture

Homestay.My application is a standalone application with integration of database and GPS. The database is used to store the booking that the user have make and allow it to be retrieved back by the user anytime they want to see their booking. The author use AppInventor and tinyWebDB to develop this application. The application will be integrated with the GPS so that user can navigate to their particular homestay.

GPS   Homestay.My
             Application

Homestay.My
Database
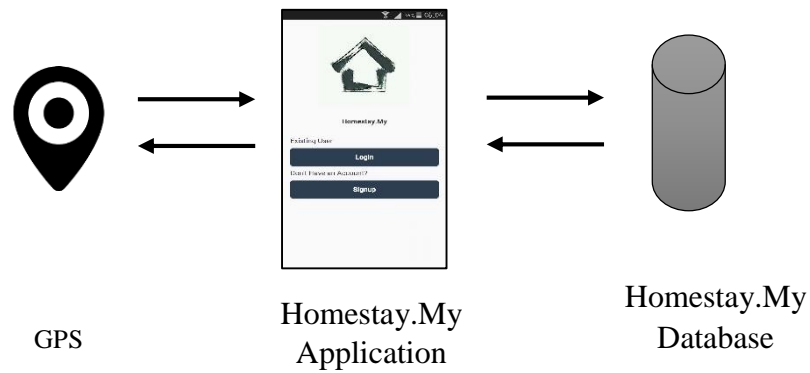
Figure 5: Homestay.My System Architecture

3.3   Gantt Chart

Activity	Week																											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Analysis & Quick Design																												
Discussion with SV	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
Selection of project topic	▓	▓																										
Identify the problem			▓																									
Define objectives of project			▓																									
Study on project background			▓																									
Preliminary research work				▓	▓																							
Literature review						▓	▓																					
Prototype Cycles																												
Draft the system flow								▓	▓																			
Design system component										▓	▓																	
Prototype development												▓	▓															
Design user interface														▓	▓	▓	▓	▓	▓	▓	▓							
Coding mobile application														▓	▓	▓	▓	▓	▓	▓	▓							
Testing																												
System test																							▓					
Acceptance test																							▓					
Improvement of prototype																							▓	▓	▓	▓		
Deployment																												
System Implementation																											▓	▓
Maintenance																											▓	▓

Important Dates																									
Submission of interim report									■																
Proposal defense										■															
Pre-SEDEX																					■				
Technical Report																						■			
Dissertation																							■		
Viva																								■	
Project submission																									■

Table 2: Gantt Chart

3.4   Key Milestones

Below are the key milestones that need to be achieved throughout FYP1 and FYP2.

FYP1

Milestone	Week
Project Proposal	Week 3
Interim Report	Week 12
Proposal Defense	Week 13

Table 3: Key milestone for FYP1

FYP2

Milestone	Week
Progress Report	Week 7
Pre-SEDEX	Week 9
Technical Report	Week 10
Dissertation	Week 11
VIVA	Week 13
Final Report	Week 14

Table 4: Key milestone for FYP2

3.5 Tools and Equipment for Development

3.5.1 Software

- PhoneGap
- Ripple Emulator
- Web Browser : Google Chrome
- Windows 8
- Microsoft Word 2013 (Documentation)
- Gmail : For survey purpose (Questionnaire)

3.5.2 Hardware

- Personal Laptop (HP 64bit)
- Smartphone

CHAPTER 4: RESULT AND DISCUSSION

4.1   Data Gathering Analysis

A survey has been conduct by the author to gather information about the project. The survey has been developed using Google Form and has been distributed to the people. Online survey is chosen due to the go green initiative while doing this project and the ease of use where larger number of respondent can be reached with just a single click within a short period.

71 respondents have participated actively by completing the survey within one weeks of circulation. The findings of the survey research are as follows:

<u>Question 1</u>

The first question is to know the age of target group who completed the survey. From the 71 respondents, 84.5% are in the age of 21 to 30, 9.9% are in the age of less than 20, and 5.6% are in the age of above 40.
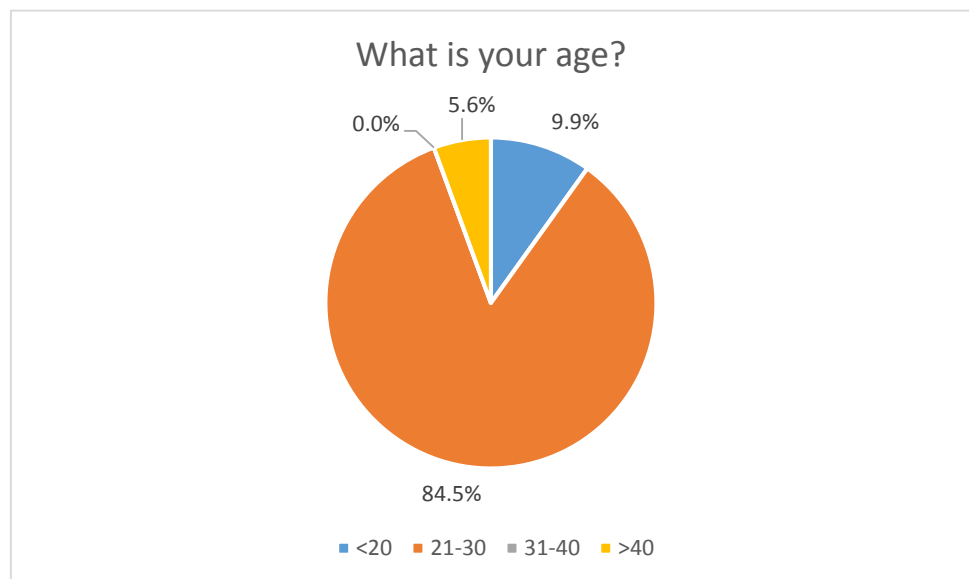
Figure 6: Age Group

Question 2

The second question is to know the type of phone that respondents use. From the 71 respondents, all are using smartphone. 71.8% respondents using Android, 35.2% using iPhone, and 1.4% using Blackberry. Through this finding, the author can conclude that the market of Android is big, so that is why Homestay.My will be built in Android platform.
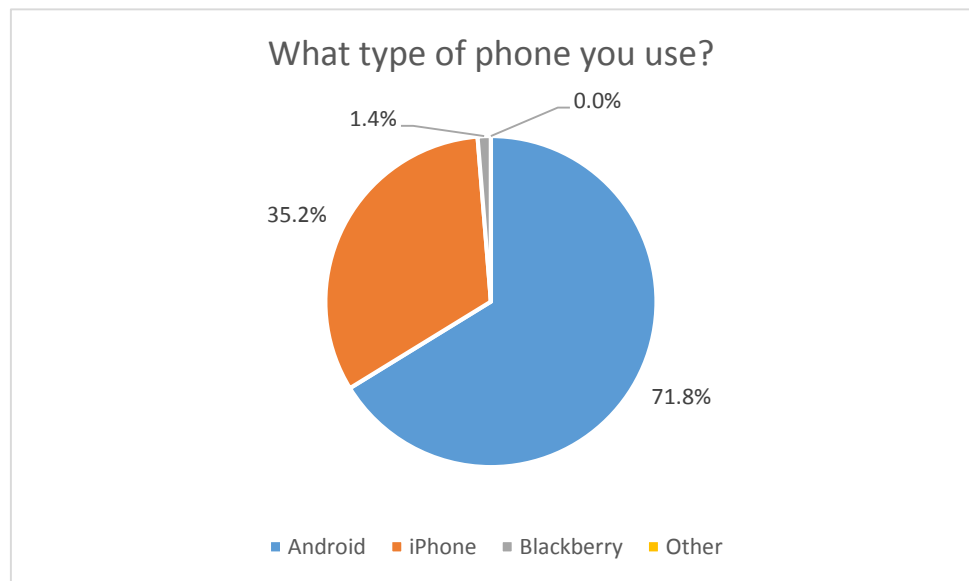

Figure 7: Smartphone ownership

Question 3

The third question is to know if the respondents ever stay in homestay. From the 71 respondents, 85.9% have stay in homestay before and 14.1% is never stay in homestay. From the finding, we can see that homestay is not new for the respondents as majority of the respondents have stay in homestay before. Respondents that never stay in homestay maybe go for a vacation in alone or in small group and they prefer to stay at hotel.
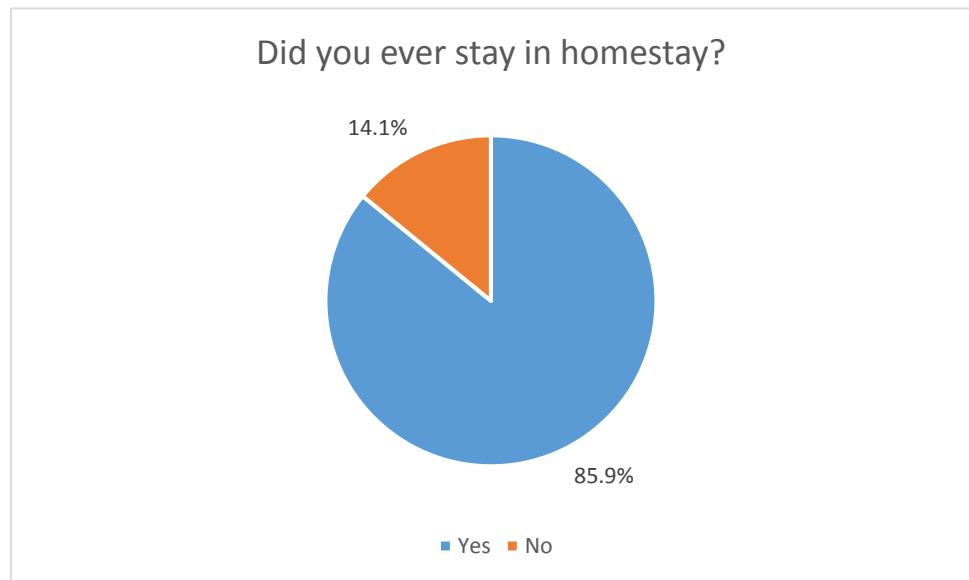
Figure 8: Homestay as accommodation

Question 4

The fourth question is to know where respondents know about homestay. From the 71 respondents, 70.4% know from family and friends, 56.3% know from websites, 12.7% know from the brochure, and 1.4% from other which is the respondent know from the advertisement in ads board.
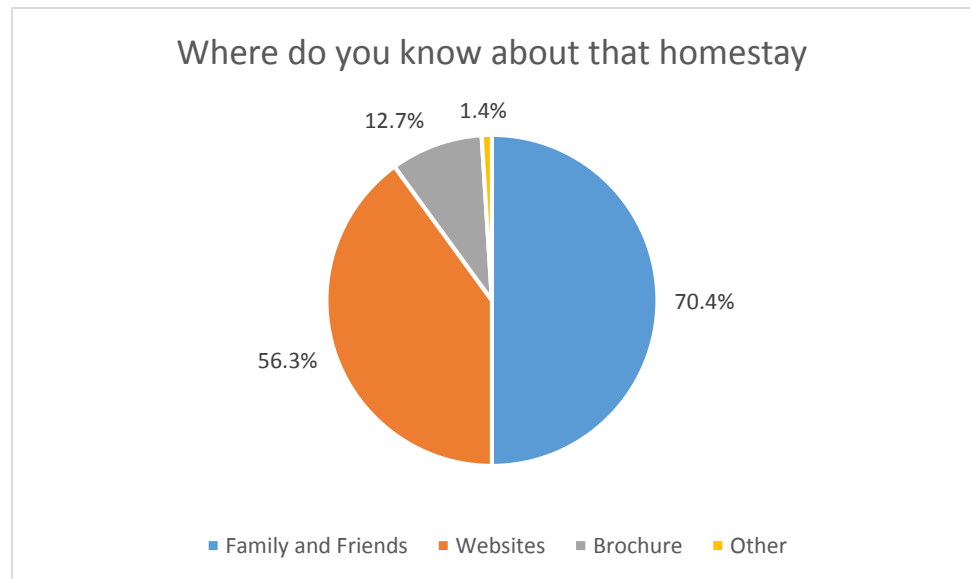
Figure 9: Knowledge about homestay

Question 5

The fifth question is to know based on what criteria that respondents see before they book the homestay. From the 71 respondents, 76.1% based on homestay price per night, 71.8% based on the location of the homestay, 36.6% based on capacity of the homestay, and 5.6% are others which are based on the owner's behavior, condition of the house, and the safety.
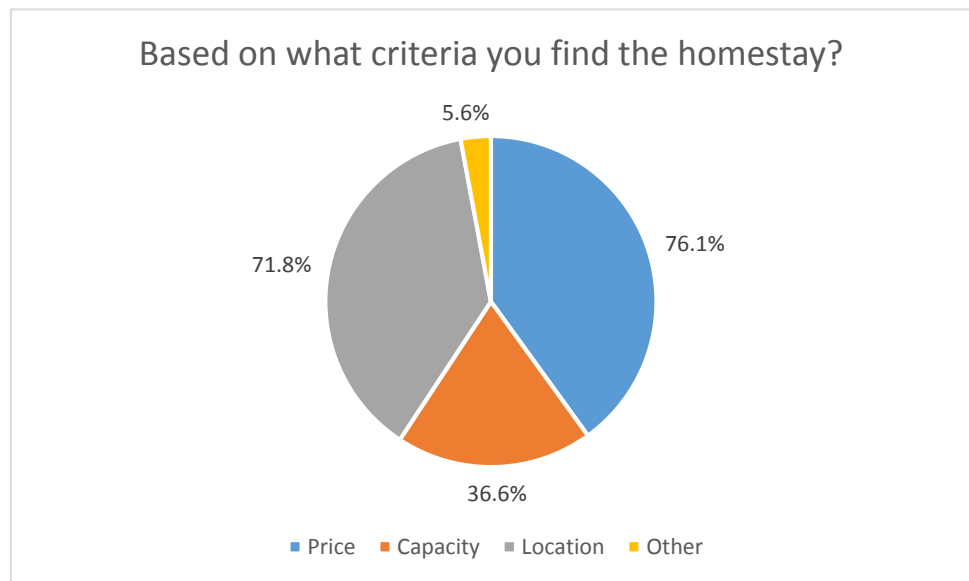
Figure 10: Criteria on finding homestay

Question 6

The sixth question is to know how the respondents book the homestay. From the 71 respondents, 88.7% book by calling the owner, 22.5% book by directly meet the owner, 9.9% book by email the owner, and 5.6% are other which are book through SMS and Whatsapp. From the finding, the author can say that majority of user use common method to book the homestay by calling the owner where this method is time consuming and costly.
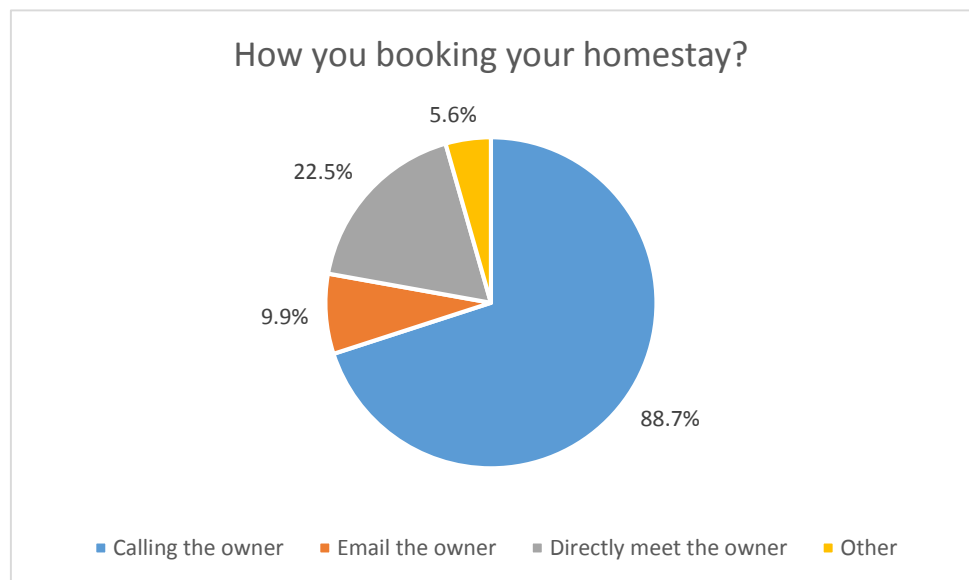

Figure 11: Method to book homestay

Question 7

The seventh questions is to know how frequent respondents book homestay in one year. From the 71 respondents, 87.3% book less than 2 times in one year, 9.9% book 3 to 5 times in one year, and 2.8% book more than 5 times. From the finding, the author can relate this question with the question before. It can be relate where because of the method in booking the homestay is time consuming and costly, it is affect the frequent of people book homestay in one year where we can see that majority of respondents booking homestay less than two times in one year.

How frequent you book homestay in one year?
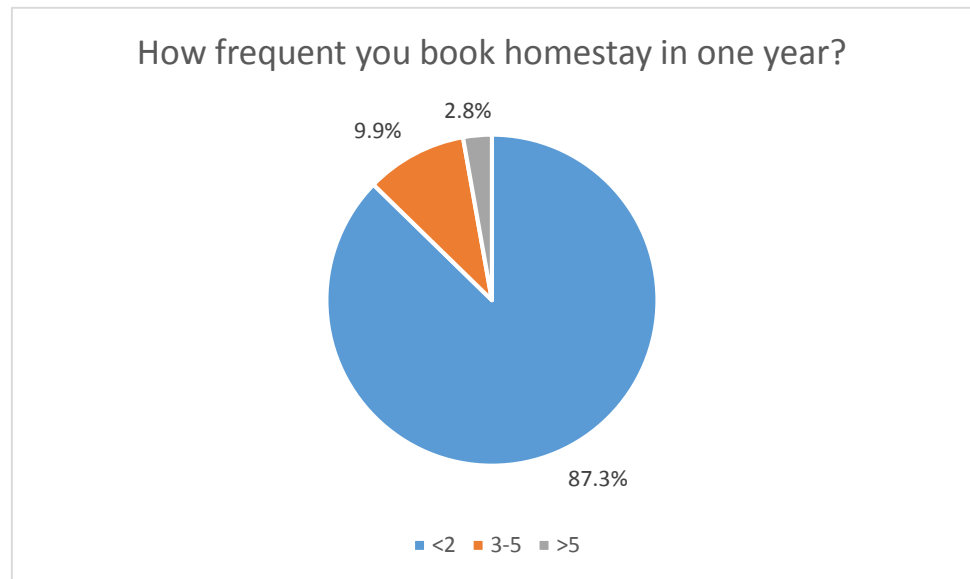
Figure 12: Frequency of booking homestay

Question 8

The eighth question is to know if the respondents have difficulty to navigate to the homestay. From the 71 respondents, 63.4% say they have difficulties to navigate to the homestay and 9.9% are not. From the finding, we can see that more than half of the respondents have difficulty to navigate to the homestay. That is why Homestay.My application is needed as in the application there is function to navigate user to the homestay.
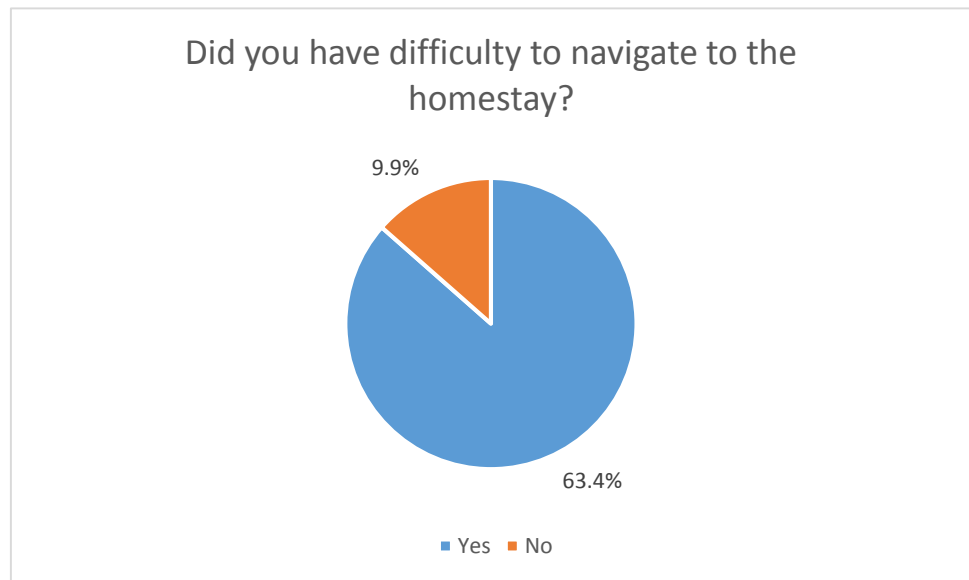
Figure 13: Difficulty to find homestay

Question 9

The ninth question is to know if there is mobile application for homestay, would the respondents download and use it. From the 71 respondents, 84.5% say they will download and use it while 15.5% are not. From the finding, we can see that majority of the respondents would use this application, so there is market for Homestay.My application.
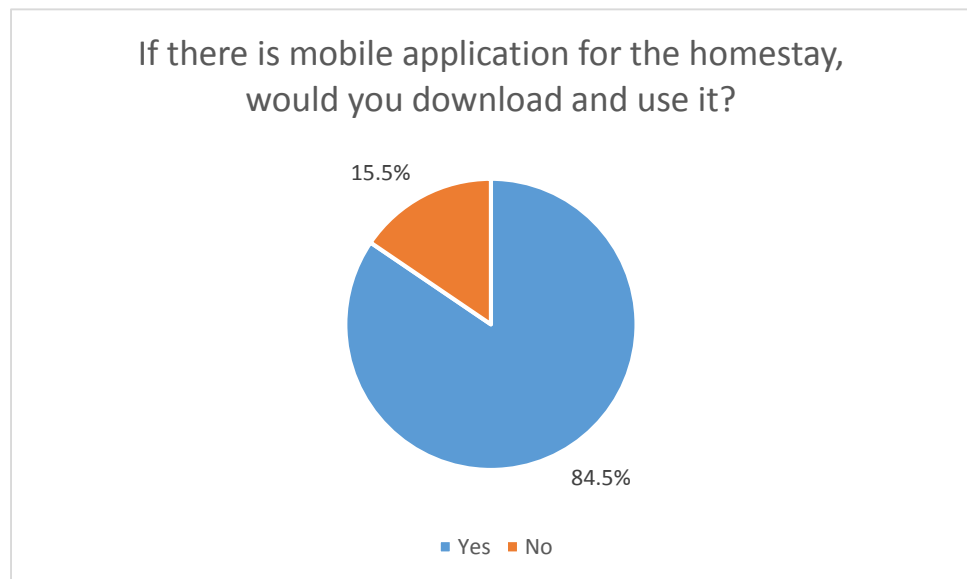
**Figure 14: Finding on the usage of mobile application if exist**

Question 10

The tenth question is to know the main features that should be in the mobile application for homestay. From the 71 respondents, 88.7% say about online booking function, 83.1% say navigation function, 81.7% say about the homestay info, 50.7% say the application need to have function to the owner to manage online booking, 42.3% say about function to register new homestay, and 8.5% others where they say that the application should have feedback, price comparison, promotion price, and the size of the application is not big and ram usage is low.
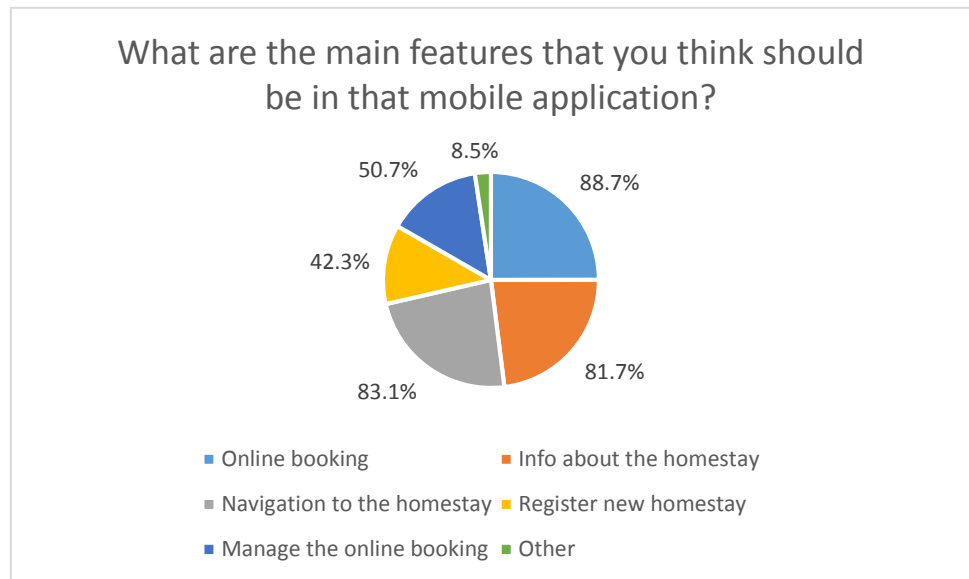
**Figure 15: Main features in the mobile application**

Question 11

The eleventh question is to know if the respondent will recommend others to use Homestay.My application. From the 71 respondents, 97.2% say yes and 2.8% say no. from the finding the author can say that the future market for this Homestay.My application is big as it will help many people.
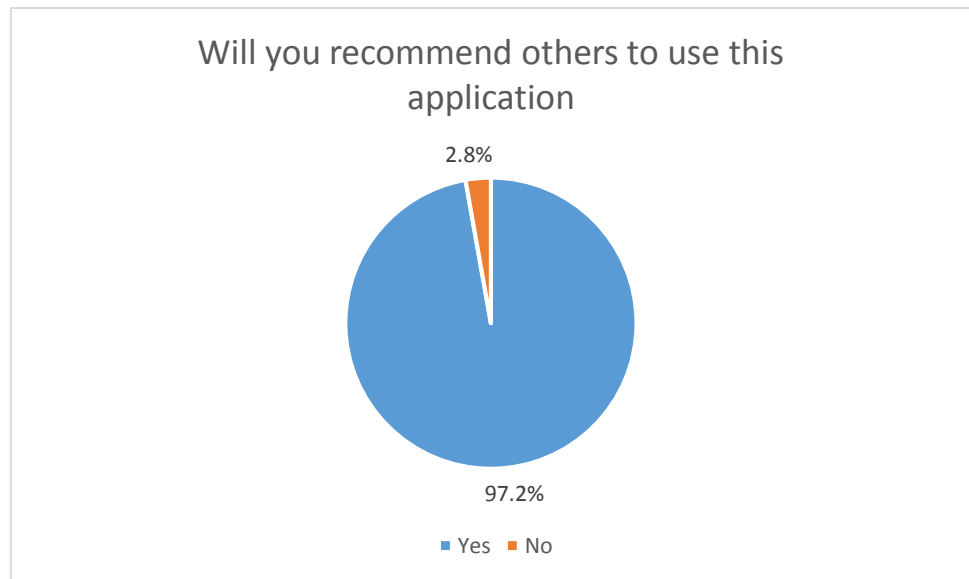
Figure 16: Recommend to others to use the mobile application

Question 12

The twelfth question is to how much respondent willing to pay to use this application. From the 71 respondents, 74.6% want the application free, 16.9% respondents willing to pay RM1 to RM2, 4.2% respondents willing to pay less than RM1 and above RM3.
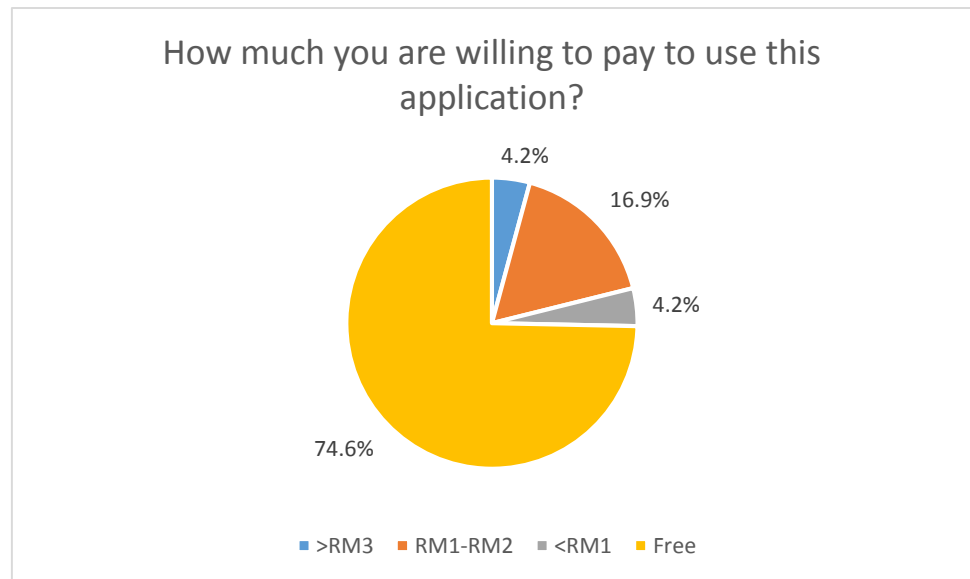

Figure 17: User willingness to pay for the mobile application

4.2   System Diagrams

4.2.1   Use Case Diagram

Figure 18 shows the use case diagram for Homestay.My Application System. Three different actors engage in this system which is the tourist, homestay owner and administrator. The tourist can login or sign up as new user. Then after that, the tourist can search homestay, book the homestay and navigate to the homestay. Meanwhile, the homestay owner can manage the booking for their homestay. Lastly, the system administration is the one that will manage the application in terms of improve the performance of the Homestay.My application.
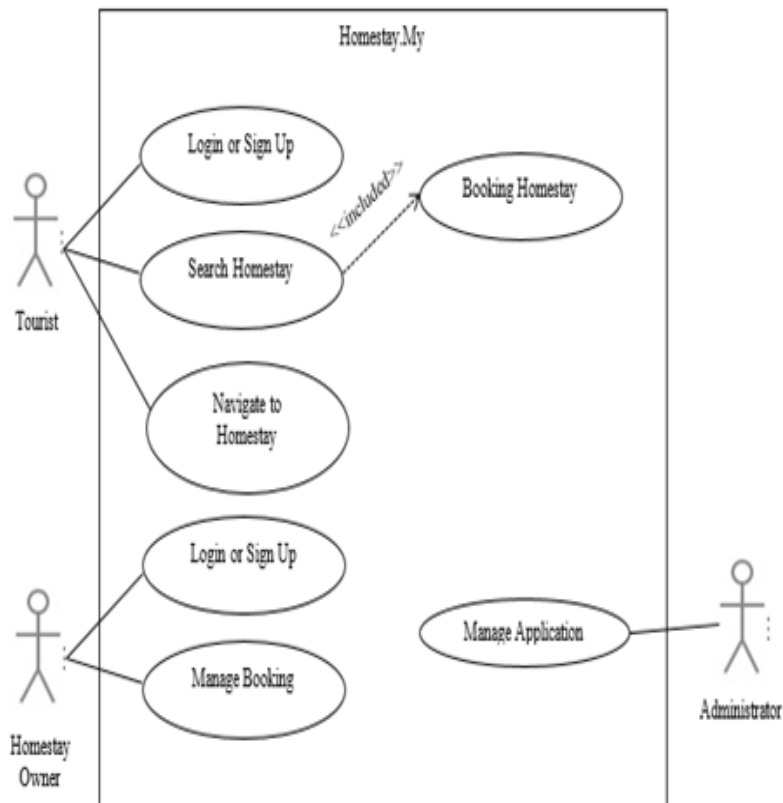
Figure 18: Use Case Diagram
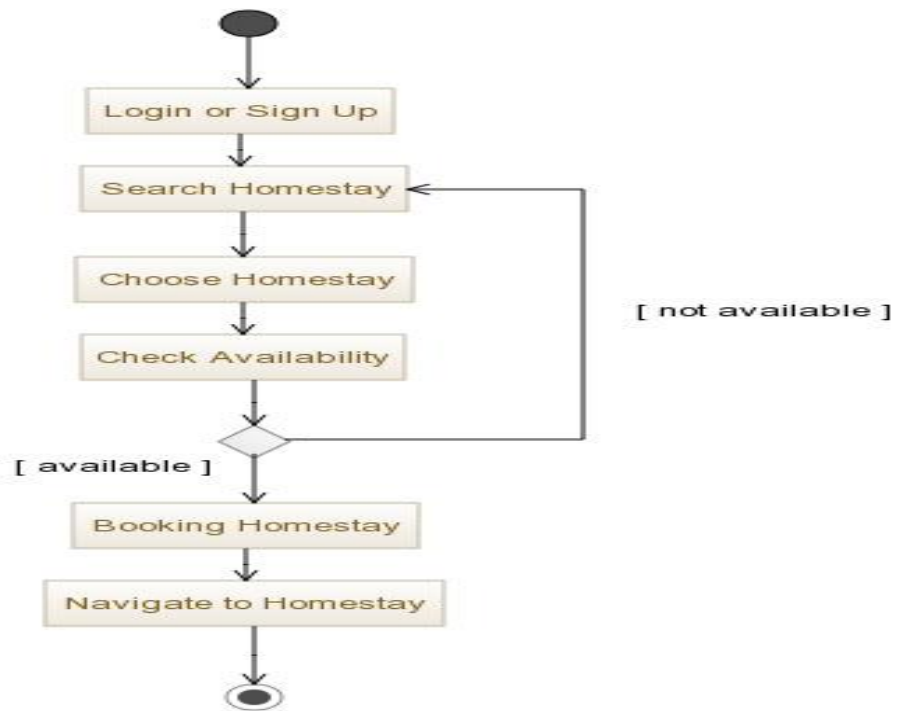
4.2.2 Activity Diagram

- **User**

Figure 19: Activity Diagram (User)

- **Homestay Owner**

**Figure 20: Activity Diagram (Homestay Owner)**

Activity diagram is a graphical representation of workflows activities and actions with support for choice, iteration and concurrency. Activity diagram above shows the overall activity in Homestay.My application. Two main actors will involve which are tourist and homestay owner. Both have their own activity flow for this application. For tourists, they will able to search homestay, booking homestay, and navigate to the homestay. For homestay owner, they need to register their homestay first before they can use this application. After they have register their homestay and the homestay has been added in the list, only then they can manage booking for their homestay.

4.3   Prototype

The prototype which is called Homestay.My will be consisting of several main components. Below are the components of the application.

4.3.1   Starter Page

This is the starter page for Homestay.My application where user can choose whether they want to search for homestay or register a homestay.
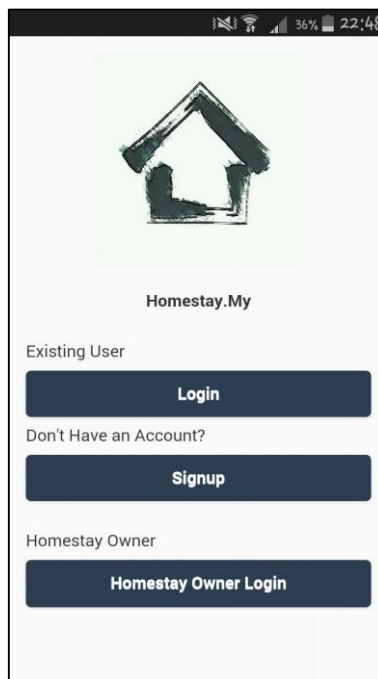
Figure 21: Starter Page

4.3.2 Sign-Up Page

New user need to sign up first before they can use this application. The purpose is to track the user that will make the booking.
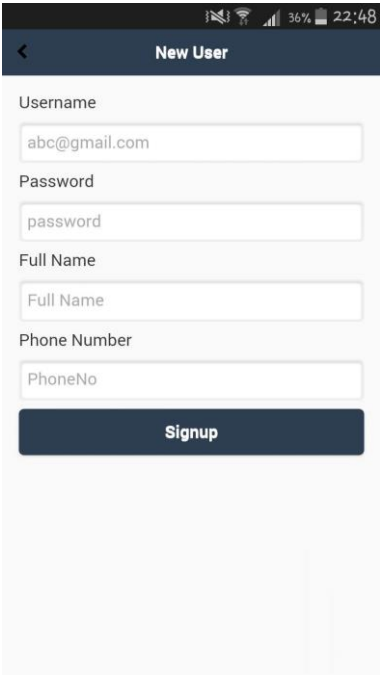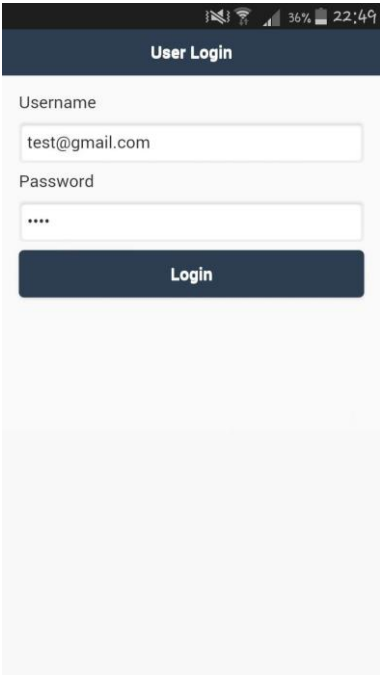

Figure 22: Sign-Up Page
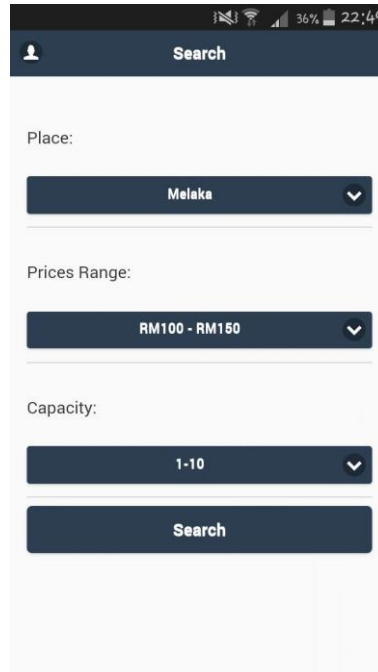
4.3.3 Login Page

For a security purpose, user needs to login first before make a booking. User need to key in their email and password.

Figure 23: Login Page

4.3.4 Searching Page

Users can search homestay based on the criteria they select which are the location (based on stated), price range, and the capacity of the homestay.

Figure 24: Searching Page

4.3.5 Result Page

Once the user click on the search button, the user will be brought to a screen where list of homestay that match with the user criteria. Then user can select homestay that they want to know more by click on the list.
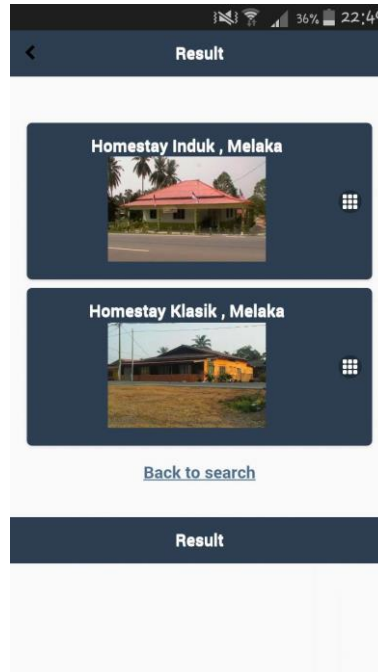
Figure 25: Result Page

4.3.6   Details Page

This where user can get brief explanation about that particular homestay, in this screen user can see more pictures of the homestay at the top of the page. User also can get information about the homestay, description for the homestay and also user can see nearby place that they can visit near the homestay. If user satisfies with the homestay, user can book the homestay directly by click the 'Booking' button. If user want to get direction to the homestay, user can click 'Maps' and it will bring user to the maps.
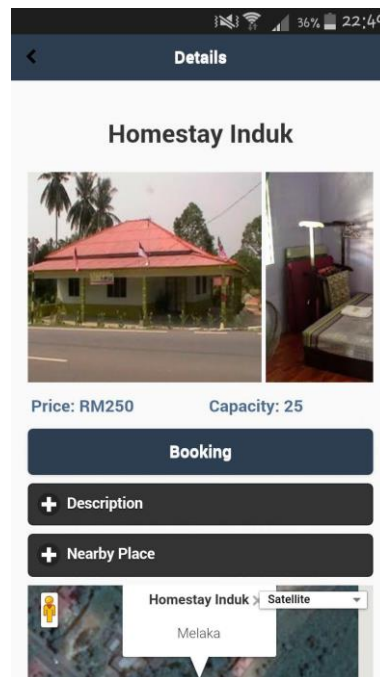

Figure 26: Details Page

4.3.7 Booking Page

After user has satisfy which the homestay and want to book the homestay, user can click the 'Book' button at the homestay page and user will be brought to the booking details page.
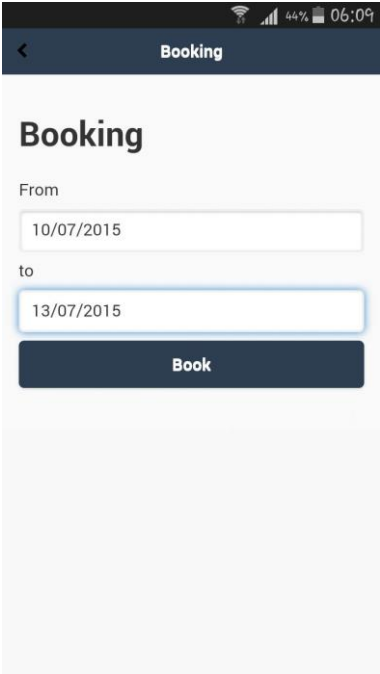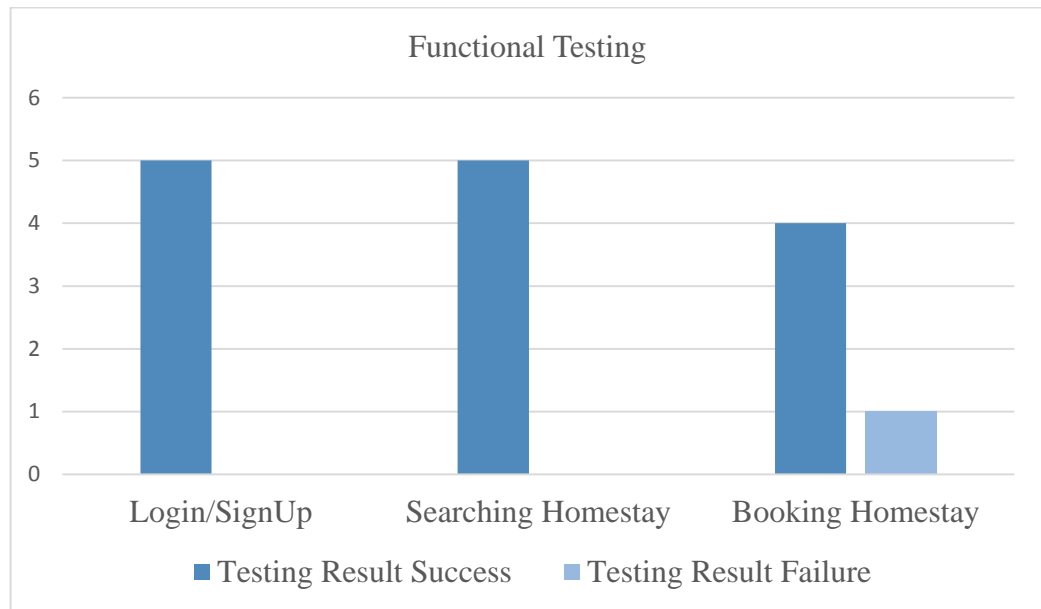

Figure 27: Booking Page

4.4 Testing

4.4.1 Functional Testing

The bar chart in Figure 6 shows the result of the functional testing for Homestay.My application. The result is get from the observation when user uses the application. Most of the function are working properly and function that are not working properly are immediately been fix.

Figure 28: Functional Testing

4.4.2 User Acceptance Test

The bar chart in Figure 7 shows the result of the user acceptance test. The rating is from 1 to 5 which rating 1 signifies strongly disagree by the users and 5 signifies strongly agree by the users. From the testing, it can be concluded that user are like to have Homestay.My Mobile Application in their phone.
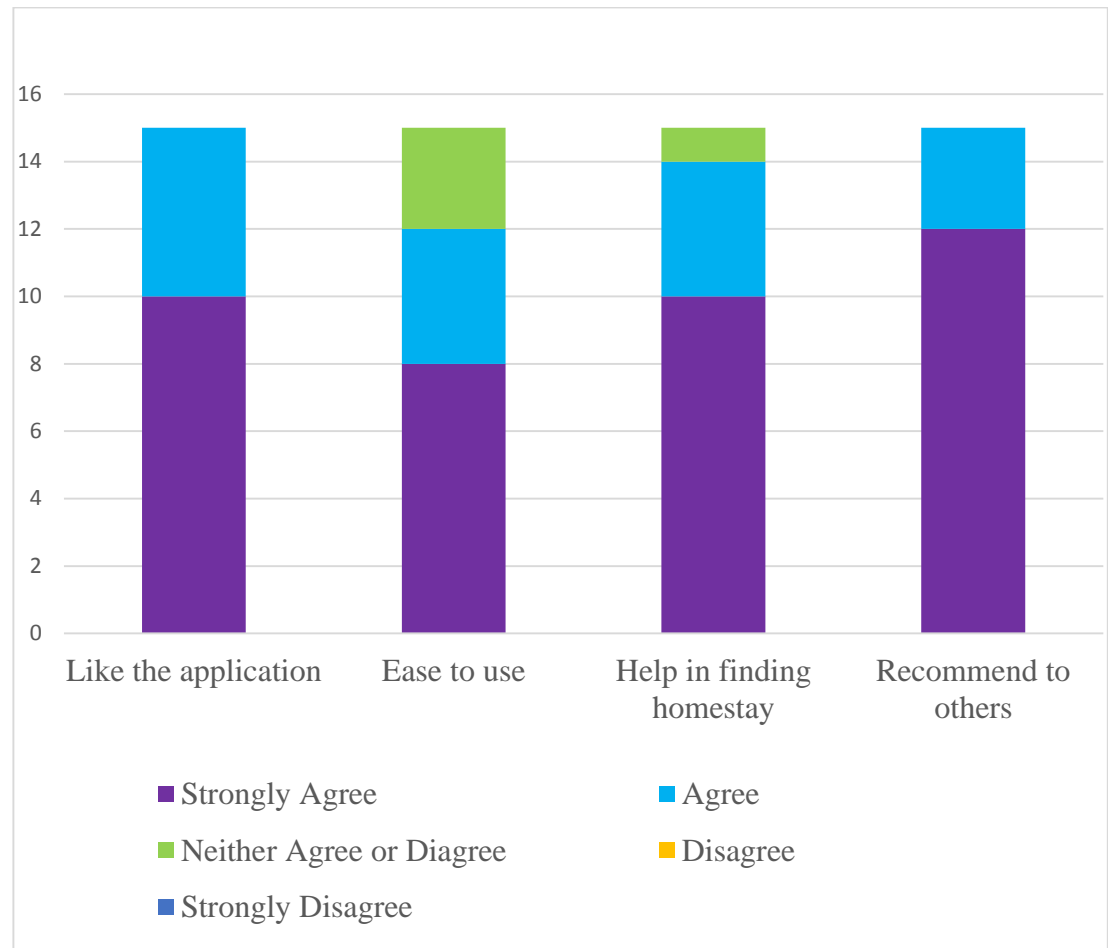
Figure 29: User Acceptance Test

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1   CONCLUSION

In a nutshell, after have done many research and survey, the author found that Homestay.My is a potential mobile application in Malaysia. It is very useful and helpful in assisting tourist to find and booking homestay and in assisting homestay owner to promote their homestay and manage the booking. Online booking or reservation is popular for the hotel, so it becomes author dream that online booking or reservation will popular for homestay also. Homestay as a develop industry should apply this concept so in the future, homestay just not to complete the inadequate room in hotel but also become the main choice of people for their accommodation when they go for a vacation.

5.2   RECOMMENDATION

The first recommendation for this application is to make rating functionality. This would benefit to the user as they can get the best homestay for them. Other than that, it is also to make sure the owners increase their service so that user can give high rating for their homestay. In addition, the application is also suggested to have nearest homestay functionality where user can easily find nearest homestay from their current location. This can help the user to save time to travel to the homestay.

For the time being, Homestay.My is only focused on homestay around Melaka as it is due to the early phase of the development and want to know the market of this application. It is expected to be replicated to the homestay in other states in Malaysia. Technological advancement especially in mobile application should be taken into serious capitalization as it would be very useful and benefits a lot to both industry and users. Perhaps, Homestay.My can also be replicated into multiple Operating Systems (OS) like iOS and Symbian, just to name a few. The market potential of Smartphone is now huge and being able to leverage on its potential would surely benefited a lot to the industry.

REFERENCES

1. (n.d.). Retrieved March 28, 2015, from https://en.wikipedia.org/wiki/Homestay

2. ComScore Reports May 2014 U.S. Smartphone Subscriber Market Share. (n.d.). Retrieved March 28, 2015, from http://www.comscore.com/Insights/Market-Rankings/comScore-Reports-May-2014-U.S.-Smartphone-Subscriber-Market-Share

3. (n.d.). Retrieved March 28, 2015, from http://www.bookeasy.com/images/.../why-should-i-offer-online-booking.pdf

4. My Homestay Malaysia. (2014, December 29). Retrieved March 28, 2015, from https://play.google.com/store/apps/details?id=com.jloser.hotelclick&hl=en

5. Inap Desa. (2013, December 2). Retrieved March 28, 2015, from https://play.google.com/store/apps/details?id=com.inapdesa&hl=en

6. Malaysiahomestay. (2014, July 13). Retrieved March 28, 2015, from https://play.google.com/store/apps/details?id=pepatih.malaysiahomestay&hl=en

7. SDLC - Quick Guide. (n.d.). Retrieved March 28, 2015, from http://www.tutorialspoint.com/sdlc/sdlc_quick_guide.htm

8. Napaporn Rianthong, A. D., Youji Kohda "Maximizing Service Value: A Case Study of Online Hotel Reservation."

9. Popa, M. (2010). Audit Process during Projects for Development of New Mobile IT Applications. Informatica Economica, 14(3).

10. Adenan, M. (2012). TourDroid: Mobile Travel Assistant A Visit Perak Year 2012 Case Study.

11. Whitten, Jeffrey L.; Lonnie D. Bentley, Kevin C. Dittman. (2003). Systems Analysis and Design Methods. 6th edition. ISBN 0-256-19906-X.

Appendix 1: Pre-Implementation survey

1. **What is your age?** *
   - ⦿ <20
   - ○ 21-30
   - ○ 31-40
   - ○ >40

2. **What type of phone you use?** *
   - ☐ Android
   - ☐ iPhone
   - ☐ Blackberry
   - ☐ Other: [____]

3. **Did you ever stay in homestay?** *
   - ○ Yes
   - ○ No

4. **Where do you know about that homestay?** *
   - ☐ Family and Friends
   - ☐ Websites
   - ☐ Brochure
   - ☐ Other: [____]

5. **Based on what criteria you find the homestay?** *
   - ☐ Price
   - ☐ Capacity
   - ☐ Location
   - ☐ Other: [____]

6. **How you booking your homestay?** *
   - ☐ Calling the owner
   - ☐ Email the owner
   - ☐ Directly meet the owner
   - ☐ Other: [____]

7. **How frequent you book homestay in one year?** *
   - ○ <2

○ 3-5

○ >5

8. Did you have difficulty to navigate to the homestay? *

○ Yes

○ No

9. If there is mobile application for the homestay, would you download and use it? *

○ Yes

○ No

10. What are the main features that you think should be in that mobile application? *

☐ Online booking

☐ Information about the homestay

☐ Navigation to the homestay (Using Maps or GPS)

☐ Register new homestay (For the owners)

☐ Manage the online booking (For the owners)

☐ Other: _____

11. Will you recommend others to use this application? *

○ Yes

○ No

12. How much you are willing to pay to use this application? *

○ >RM3

○ RM1 - RM2

○ <RM1

○ Free