APPLICATION OF MOBILE TOURISM FOR KEDAH

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ABSTRACT

Tourism sector is one of the most important economic sectors in Malaysia and it attracts large numbers of tourists around the world. Tourists face problem of helping access in some remote area in Malaysia. However, Mobile coverage in Malaysia is very help and extensive. This study proposes a mobile application for tourism to serve tourist in Kedah. This study will contribute to support this sector, so this application will provide information, pictures and videos of tourist attractions in Malaysia in state of Kedah, that help the tourists to retrieve information in places that lacks Internet. In addition, this study has use the (Vaishnavi & Kuechler) methodology to develop application. Furthermore, this application will be built on the basis of advanced search to achieve the speed and ease of use, such as coding to filter and count the words.

ACKNOWLEDGEMENTS

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

The fast development in the field of information technology has made it easier for user's mobility (Andrews, et al., 2003). In addition the huge development in the area of telecommunications, and makes it easy to browse and use information through the mobile phone such as, Mobile phones and PDAs. This technology is the formation of a new industry with a focus on information technology and mobility (Abowd, 1997). Mobile technologies are growing speedily, as well as it helps to facilitate the activities of in our life. Moreover, it has played a significant role in the management of relationships between nation, whether economic or social event, or daily life (Goh, Kim, Lavanya, Kim, & Soh, 2006; Muller, Lenhart, Henrici, Hillenbrand, & Muller, 2004).

With the progress of wireless technology, mobile data exchange the information to the phone technology has become easier with the proliferation of networks of telecommunications in the world. It can also, connect to any place any time to obtain the information easily (Stuckman, 2001).

Use of information technology became a key strategy to enhance and improve benefits of competitions in all parts of the world. In addition, the information technology are very important in the development of hospitality services in order to cope with the wishes and needs of tourists (Lam and Cho, 2007; Wang and Qualls, 2007; Duffy, and Donegal, 2010).

The purpose of this research is to allow the tourist to know more details about tourist places in Malaysia without need connect to the internet, because there are many tourism places that do not have internet to enable the tourists to retrieve information easily. The mobile tourism application help the tourist to know more about tourism place by assistant via telecommunication company such as (MyMaxis, DiGi, celcom), to employ this application as service. More explanation when the tourist arrive Malaysia he will operate the phone card, that next the company will send for the tourist SMS to provide the service. In this way tourists can obtain information, such as description which is include (the name of places, direction of location and places features), and pictures and videos for each place. The use of mobile application plays an essential role to achieve the tourism operations in tourism sector.

1.2 Problem Statement

The mobile technology is very important in our life because it help to improve many sectors such as tourism sector. Unfortunately, the mobile usage for tourism purposes is still at infancy stage (Sreenivasan & Noor, 2010). Very few applications have been created in order to guide tourists to landscapes and parks in the destination country such as Malaysia (Sreenivasan & Noor, 2010). Therefore the application for tourism services is greatly needed to help the tourist to get many type of information. In addition, that 20.5% of the companies in the Malaysian tourism industry are involved in mobile commerce. This can be an indication on the need of further research works to understand the potential of mobile commerce implementation on the performance of tourism companies in Malaysia (Intan & Salwani, 2009). On other hand, the existing mobile tourist information systems typically do not provide users' interests that such systems should provide user oriented contextual tourism information (Hinze

& Buchanan, 2009). Furthermore, not all part of Malaysia can connect to internet because there are no coverage for the internet in some rural area and many tourism places. So, based on (report on Broadband Growth and policies, 2011) in Malaysia number of people who can access to the internet is only 16.9 million that mean (60%), so there is lack of information available because the internet does not cover all places in Malaysia. Thus, this study help to provide application to enable the tourists to get information without use the internet anywhere anytime.

1.3 Research Objectives

The main objective of this study is to develop the mobile tourism application to provide information about tourism places in Malaysia without use internet.

Specific objectives are:

i. To identify the system requirements of designing mobile application for tourists in Malaysia.
ii. To design the mobile application to provide tourism information in the context of Malaysia.
iii. To test and evaluate functionality and usability of m-Tourism application.

1.4 Research Scope

This study focuses on the design of the application that are used by tourists who seek information about tourism places of Malaysia, the tourists will be able to key in specific word, the mobile application will be able to search for relevant places with the key word. In other hand, the scope of this study will be focus on the tourist places in Kedah state .

1.5 Significance of study

1.5.1 Social Significance: This study is considered as a starting point in mobile tourism applications to implement tourism process, which could open the way for everyone to use these services anywhere and anytime. The significance of this research is to design a prototype to provide detailed information, pictures, and videos, to help the tourist to know more about the places in Malaysia ***without use the Internet but though telecommunication companies***. This application developed to make information easier and effective for the tourists. On other side, this application can bring revenue to the Telecommunication Companies, by providing this service for tourists.

1.5.2 Knowledge Significance: this study provided contribution for researchers, such as mechanism to search for places depend on text words also repeating and count the words in the paragraph for each place, then retrieve the places that has a biggest repetition for the word Respectively by writ the C# coding to filter and count the words.

1.6 Conclusion

This chapter provide abstract about the study and explains the problem, objectives, scope, significant of this study, as well as indications of the state of the real world. These elements are important because they will support the implementation of the project. The next chapter deals with the review of literature that expands on the relevant work and put in the same area.

1.7 Organization Project

In this research can classify the task to six chapters which begin with the introduction section as the first chapter. An overview of the content of the following chapters is as follows:

- Chapter one: This chapter is to gives an introduction, necessary for the understanding of concept used in later chapters and overview of the research.
- Chapter two: This chapter discusses about literature reviews, previous related work and challenges, and more information to understanding the research.
- Chapter three: This chapter discusses methodology that has been used in this project, this methodology will contain the major steps Awareness the Problem, Suggestion, Development, Evaluation and conclusion.
- Chapter four: This chapter discusses analysis design by rational rose and develop prototype.
- Chapter five: This chapter discusses discussion and evaluation the prototype by using (SPSS).
- Chapter six: This chapter discusses conclusion and recommendations and future works.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The present chapter discusses the relevant literature concerning the research. The argument of the present chapter is related to mobile application and mobile phone services technologies utilized in the creation of mobile phone application that can assist tourists to easily acquire various types of information regarding touristic places in Malaysia. Literature is abundant with examples of experimental as well as commercial mobile tourism services.

2.2 Tourism e-Commerce Overview

Al-Adeileh (2008), defines IS (Information Systems) as a set of linked and interconnected elements, collecting, storing, processing and reporting data and information that are utilized in the enhancement of decision-making process. Additionally, an information system is also considered to collect, process, store, analyze and distribute information for a particular purpose.

According to CNN network there are over 170,000 developments of tourist facilities including professional and integrated ones in addition to various characteristics of travel services online. Consequently, 85 million people around the globe are making use of these services provided through the travel website. International Tourism has developed over 350% in the past 5 consecutive years. Based on the United States Statistics (CRG), as of 2002, international tourism e-Commerce raked over U.S. $63 billion in sales, amounting to more than 20% of the aggregate global e-Commerce

value. The Internet has evolved into the main tourist information source particularly in the developed countries.

In the context of China, since the inception of China Huaxia Travel Network in 1997, there has been a marked decrease in tourism and e-commerce characterized by a difficult cycle. There was a high initial prosperity followed by a steep decline in the second part of the year 2000 when various travel sites surveyed once successful, almost completely disappeared after the second half of 2000 until 2001. After the decline was analyzed, Web sites and China's tourism intervened in the mature and stable stage of the market which was gradually developed with the help of integration and differentiation strategy and business re-exploration. Currently, tourism in China presents strong vitality as the manufacturing sector and it represents tourism e-commerce itself (Liu & Yang, 2009).

2.3 Mobile technologies

The mobile has entered the mainstream in 2002, when the number of global mobile phone networks increase sharply then the number of fixed lines. In January 2007, the number of mobile phones, ended up at 2.6 billion dollars. Eighty per cent of people in the world living under or close to the mobile signal. Almost of citizen on this world has a mobile device. In the developed world, mobile technology still exists between IT and other communications, but in developing countries, mobile technology may be just the people can access it, and bear (Tiainen et al, 2009).

According to (Teng & Helps, 2010) Mobile technologies such as Smartphone are enable the new customers to know any information about the products and accomplish their tasks with the mobile devices.

Based on (Mohamed.et.al, 2008) the mobile technology is the application that are developed to aid personal digital, mobile phone or enterprise digital, they can be installed to the phone from the plant or download the application by the user from the website or from other networks.

There are many kinds of mobile applications. Mobile Marketing Association Team spilt these types to many categories like MMS/SMS client music players and browsers. These types mentioned as follows:

- Communication: such as E-mail clients, mobile Internet and web browser.
- Game: such as Cards/Casino like black jack, poker; actions, sport and others.
- Multimedia: such as audio player, video players, and pictures viewers.
- Travel: such as Google translators, GPS map, and city guides.
- Utilities: such as call manager, Task manager, Address book and profile (Mobile MA, 2008).

Furthermore, Microsoft Corporation has explained, there are two types of mobile applications, file-based for web like " e-mail clients, mobile internet, and web browsers" . in addition non, file-based for non web application like " games, travel, and productivity" (Micro Soft, 2010).

2.3.1 Mobile Services

Karlsson (2004) states that the Board of Mayor Mark local tourism, located to the south-east of Göteborg, plans to introduce a new mobile service for visitors having a particular focus on nature-based tourism and interior design. The region is well known for its textile and furniture companies with Mark leading them as the "fabric center" in Sweden. The Tourism Board desires for the tourists to buy the fabrics and

avail the services of an Interior decorator. Accordingly, a mobile service is made as a part of the Virtual Office of Tourism to support the process. This mobile service can be downloaded from the mobile phone by the tourists with an option to use multiple languages. According to the Director of Tourism in Sweden, Gunilla Malmén, it is possible to create a mobile service to provide this type of service, but it is relatively pricey. He thinks that Mark, as a tourist destination is the cutting edge of tourism industry as it provides a unique service through the mobile phone. Since competition is tight, companies should be able to offer something one of a kind in order to attract tourists. Moreover, Malmén stresses that tourism is a condition for survival for Sweden as in other countries as employees are searching for jobs overseas particularly in the textile industry. This goes to show that a thorough analysis of different societal trends and industry may be taken as a basis for the development of novel ideas (Karlsson, 2004).

2.3.1.1 Mobile guide service

Schmidt, Barbara & nick (2001), referred to the mobile users such as tourists require mobile services, to do many purposes: on business, for recreation, education, and entertainment, while travelling. Such as, booking with the help of travel agents, buying guidebooks and maps. On the other hand, the travel section includes information on flight schedules from the official Airline Guide database, travel-related phone numbers, currency conversion for 164 currencies that are tracked and updated daily, hotel search using Hotel.com, and flight status. Flight status delivers up-to-the-minute arrival and departure information. But today new technologies allow more flexible access to information, booking services, and other tourist support. Therefore, on-the-spot services become feasible and travelling becomes more flexible.

For example, the services of mobile phone uses as a guide and, handheld devices such as WAP enabled phones or PDAs; allow unhampered movement and wireless connection to the required services.

The study by (Carlsson et al, 2008), a mobile service allows users to gather travel-related information through social interactions and to share experiences with other tourists who are collocated at a given destination. Users can generate content in the form of posts containing text, hyperlinks, or multimedia content. Also local businesses and local tourist offices can produce posts (respectively "sponsored posts" and "announcement posts").

Another example of mobile guide service is the mobile banking. In recent years, the mobile and wireless market has been one of the fastest growing markets in the world with over 3 billion mobile customers globally. According to a study by financial consultancy Celent, 35% of online banking households will be using mobile banking by 2010, up from less than 1% today. The mobile banking is a popular form of mobile commerce because it allows consumers to check their bank account balances wherever they are. Many banks provide a free service that allows customers to check their balance via text message. Applications for smart phones provide alerts when money starts to run low and allow depositors to transfer money without a visit to the bank (Foster, 2010). The Figure 2.1 shows mobile banking guide information. Figure 2.1, shows cell phone users can check their bank account balances through text messaging.

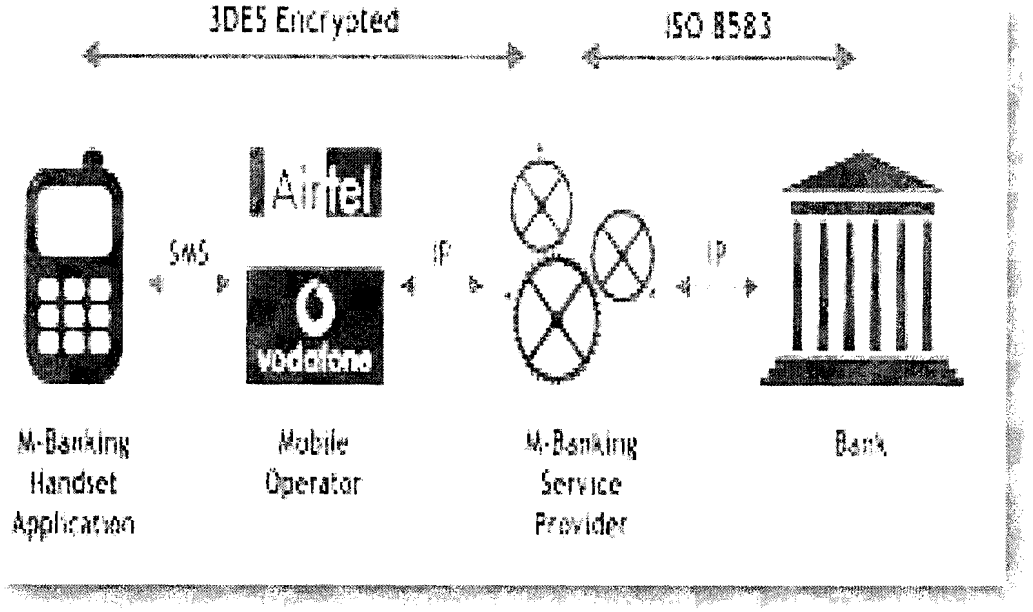


Figure 2.1: Shows mobile banking guide information (Foster, 2010)

2.4 Mobile Tourism

Solomy (1999), defines referendum as the solution to provide e-views of the public regarding various services. E-service is the integration of modern technologies facilitating an easier and simpler voting process based on the Internet and mobile phone. It is notable that mobile devices have been integrated in most universities and government environments providing flexible services to the user like meters for marketing, m-learning and m-voting. Mobile applications enable voting on a large scale as they are provided to users and majority of them make use of it.

Moreover, mobile applications are gradually influencing commercial activity and distribution of information. This is a widely accepted opinion of the dire need to support and improve the mobile workforce fast wireless communications devices and

technologies. Majority of the applications enable the user to send and view e-mail, surf the World Wide Web, and view traffic reports and weather, and even watch movies (Elalfy, 2005).

The mobile phones significant progress of affordability and access in various societies of the world has become familiar and hence, its use in the tourism sector and rural areas has become possible. Several facts that have to be determined regarding increased use of mobile devices in tourism sector are as follows: (Petra, 2005)

- **Flexibility**: Mobile devices can be used in various facilities supporting the user to do activities such as, sending messages, watching videos and enabling the application of WAP.

- **Low barriers to entry**: Currently, the mobile devices have become more effective and easily accessible to internal and external use even in rural areas. The lower cost of these devices leads to the flexibility of use in these areas (Bhavnani, et al., 2008).

Sheldon (1997) elaborates on the relation among tourism industry, new technology use and the huge amount of information to be conveyed to tourism companies in all different parts of the world. For each traveler, messages and exchanges of information need to be listed and recorded for the creation of valuable experience for all the individuals privy to the transaction.

Moreover, Sheldon (1997) asserts that owing to the demands in the tourism sector, demand for faster tools to process an immense amount of information is called for.

Similarly, according to Lev-Ram (2005), mobile phones and tourism in the United States is now a big industry. Currently, it is considered as a part of the growing market for location-based travel information valuing approximately $500 million. According to the author, this type of industry is expected to increase seven times by 2010. In addition to audio features, other multimedia features like video and GPS services, may be incorporated in the future (Lev-Ram, 2005).

Slice Wireless, an Australian company, has developed a mobile marketing service catering to tourism industry (Nguyen, 2005). Accordingly, mobile telephone users worldwide are able to watch a video tour of their holiday destination prior to their arrival and they can access local information upon landing through their mobile telephone screen. The main aim of this service is to attract tourists having video and multimedia through their personal handsets. Nguyen (2005) claims that this mobile marketing service can be considered as a more efficient version of the mobile directory tour which is made available for tourists in their places of destination which includes information regarding housing, restaurants and activity options. To avail the service, the tourist is required to pay a small fee after which an application will be downloaded to the tourist's mobile phone.

The following section will elaborate on some other services related to mobile tourism. According to (Fodness and Murray, 1997), almost of the works had focused on the effects of tourism sector. Fodness and Murray comment that "the detailed knowledge on the basis of the actual behavior "of tourism is lacking. In addition, (Aramberri, 2001): discuss that research in tourism does not help much to give details about the nature of the modern mass tourism, system to provide more then type of information.

The work that has looked in most detail at tourist practice has been the " tourist information seeking" (Snepenger et al, 1990; Moore et al, 1995). have turned these writings to avoid qualitative description detailed, focusing more on the rankings and wide range of tourism practices and the questionnaire on the basis of studies (Riley and Love, 1999). this lack of detailed observations and displays a number of problems for the design of technologies. specifically, there is a lack in understanding tourists methods used to retrieve information.

2.4.1 Mobile challenges

Majority of mobile applicants complain of challenges when using mobile Tourism, a part of these challenges is the dire need for interoperability among information systems, and organizations allowing a smooth exchange of information. Another challenge is the use of the "ontology" allowing market players to data share without going through the hassle of changing the data systems structure (Thangaraj & Manikandan, 2011).

Based on Thangaraj & Manikandan's (2011) study, the exchange among information systems and organizations can be facilitated through a combination of techniques such as Semantic Web, ontologies and mediators on a single electronic information platform, in which there is no need for market participants to change the data in the systems structure. The tourism industry has a key role in trade and is a viable candidate for the Semantic Web technology providing semantic brokering system for the expression of the needs and preferences of multi-agent as well as comparing different types of information and marketing tourism (Thangaraj & Manikandan, 2011).

Tourists are faced with challenges to acquire information regarding touristic places. The first challenge is related to the internet access because there are many places that are not covered by the Internet. Consequently, tourists are unable to acquire the needed information sans Internet. On the other hand, through the assistance of the telecommunication company, this application can be employed to provide tourists with the service and enable them to acquire the much needed information. The other challenge lies from the limited capacity of the mobile phone to provide various types of information. In Malaysia, this can be avoided by increasing the capacity of the telecommunication companies.

2.5 Related Work

2.5.1 Personalized Location-Based Services

Tourism plays a key role in modern societies and economies. Owing to the industry's diversity, it influences a great many sectors which in turn affect social, cultural and economic life. The entire travel and tourism-related economic activity has been measured and identified to be the industry's largest money making sector in the world based on gross domestic product. In addition, Travel and Tourism Council (WTTC) expects the tourism industry to account for 10.6% of the world's GDP by 2012. By that year, tourism industry will be employing over 249 million people (WTTC, 2002). These figures support the statement regarding travel and tourisms' lead above all the industries in the next century, along with information technology as well as telecommunications (Paajarvl, 2004).

Services such as location-based services are phenomenal applications of mobile computing (Oertel & Steinmüller, 2002) which include interactive maps, provision of directions to a destination, or tour recommendation. In addition, this may include facilitating interaction. The system's awareness of the current location of the user can contribute to the ease of use through several ways:

- The user's request can be automatically completed through the system's knowledge of his location. For instance, if a user requests for a restaurant "nearby", it can be geographical concluded what the closest restaurants are in the region.
- The user can simply ask, "How to get there", if the system has knowledge of the destination and the user's current location; the system will then proceed to provide directions.
- The system is also able to track the user's tour progress and equip him with information regarding selected locations and directions.

Various researches have shown that a guide adds to the benefit of the site as tourism awareness is promoted. When location-based personal services are combined with awareness of the site through user models, this leads to new horizons regarding location-based services with added values to the user (Schmidt-Belz, et al, 2002).

The following sections provide a detailed view of these mobile services including an overview of the technical background.

2.5.2 Mobile ticketing

In the mobile ticketing development of bus services, passengers are enabled to book tickets through WAP application on their mobile phones anywhere, anytime. The current study aims to design a portable system for booking bus tickets. In Malaysian context, MBTS was created to facilitate the passengers of bus liner MARA, and provide them with an alternative option of booking a ticket or checking their tickets wherever they are whenever they want to, using their mobile phones via Internet through WAP interfaces. The methodology of the development of a prototype used in the present research follows a system of Research Methodology (SDRM), (Abkda, 2009).

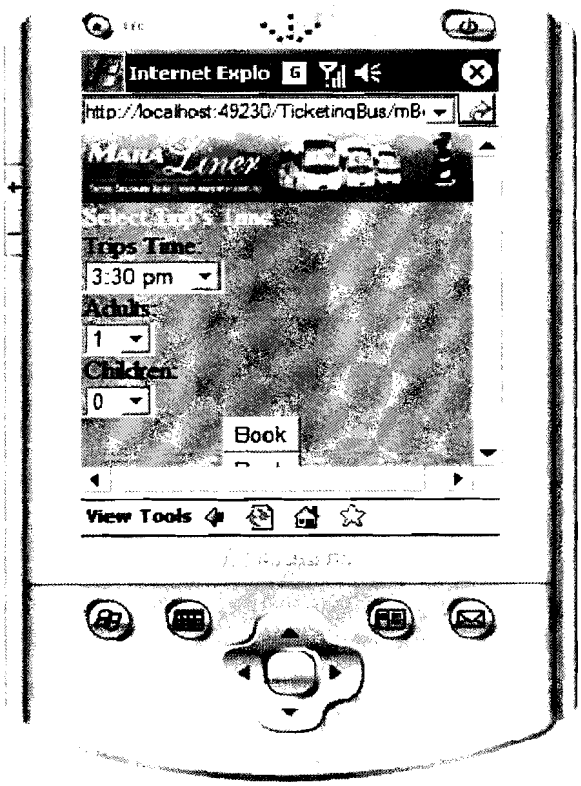


Figure 2.2: Mobile-base Application for Bus Ticketing Services

2.5.3 Customizing Hotel Services by Mobile Application

Reservation through Mobile is developed as an alternative to the traditional way of reservation. Through mobile reservation, the customer is enabled to reserve rooms and inquire further information regarding the room, room availability and room level. The aim of this type of service is to conserve the customer's time and effort through the development of a WAP application that can be utilized in mobile devices. This provides customizing hotel services by reservation anywhere at any time (Boraq, 2009).

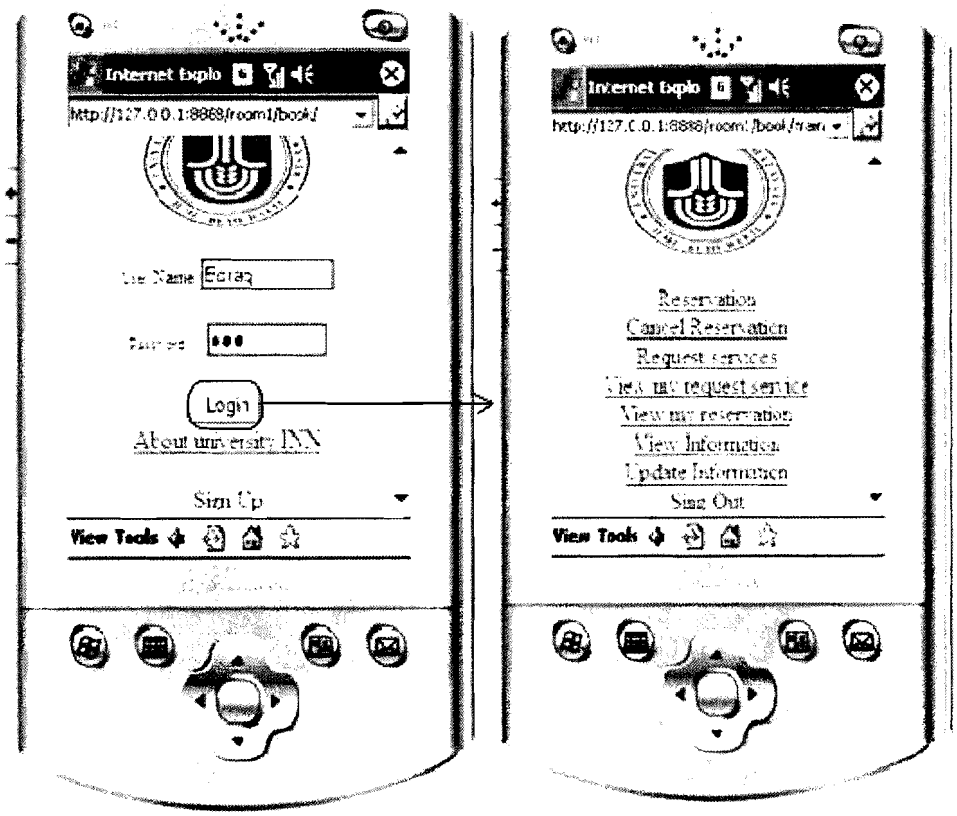


Figure 2.3: Customizing Hotel Services by Mobile Application

2.6 Definition of Terms

2.6.1 e-Commerce

Based on a communication perspective, E-commerce can be defined as the delivery of information, products/services, or payments via telephone lines, computer networks, or any other means (Kalakota & Whinston, 1997).

Based on a service perspective, E-commerce can be defined as a tool that caters to the desire of firms, consumers, and management to conserve on service costs while simultaneously enhancing the quality of goods and speeding up the delivery service (Kalakota & Whinston, 1997).

2.6.2 Mobile application

With the current era of advanced technology, new models are created every year. Mobile technology is also used in various areas such as education and medical services. As such, services via cell phones are convenient and effective and can facilitate communication and access to any user information even on a daily large scale (Kalakota & Whinston, 1997).

2.6.3 Mobile Computing and Mobile Device

Any kind of information can be accessed by the user at any place at any time through mobile computing. Owing to widespread use of wireless devices and control like the innovative mobile phones and PDAs (personal digital assistants), most people take advantage of the latest technology to make their work and personal life easier. Currently, some developments are being carried out particularly in the mobile computing applications to incorporate applications to suit the environment. This is

done through the utilization of component-based software engineering for the development of mobile applications (Tang & Cao, 2006).

2.7 Overview of C# language

C# "is a simple, modern, object-oriented, and type-safe programming language. C# has its roots in the C family of languages and will be immediately familiar to C, C++, and Java programmers". C# is standardized by ISO/IEC as the ***ISO/IEC 23270*** standard. In addition, by ECMA International. Microsoft's C# compiler for the .NET Framework is a compliant implemented of both of these standards.

C# is an object-oriented language, but C# added a feature to support the ***oriented-component*** programming. modern software design increasingly depend on software mechanism in the structure of self-contained of functionality. furthermore, self-describing packagesThe key to these ingredients is that they provide a model of programming with properties, methods, and events, they have attributes that provide information about the component of induction, and they include their own documentation. C # provides language constructs to directly support these concepts, making the C # language is very normal in any establishment and use of program components. Several C # features that help in building a strong and durable applications: Garbage collection automatically recover memory occupied by objects that are not used; "***exception handling***" Provides a structured approach and the extended error detection and recovery, and "**type safe**" design language makes it impossible to read from uninitialized variables, the index arrays exceed their own borders, or to perform unchecked type casts. C # and type of unified system. All kinds of # C, including the primitive types like Int, Double, inherits from the root type of a single object. Thus, all types share a common set of processes, and can store values of

any kind, and transfer, and working to a coordinated manner. Moreover, C # supports both types of knowledge and value reference types, which allows dynamic allocation of objects. In addition, in-line storage of lightweight structures. To make sure that C # programs and libraries can evolve over time in a manner compatible and has developed a lot of focus on the issues in the design of C # 's. Many programming languages pay little attention to this issue, and as a result, programs written in those languages in the break more often than necessary when the latest versions of the libraries. Aspects of the design of C # 's, which directly affected versions of the considerations include separate rates of virtual and override, and rules for settling excess method, and clear support and interface declarations Member.

2.8 Summary

The literature discussed in the present chapter an overview of the goal of the research, and related studies regarding the issue of mobile application in Malaysian context and in other countries providing Mobile commerce services for tourists and clients.

CHAPTER THREE

METHODOLOGY

3.1. Introduction

This chapter is divided into the following sub-headings: research design, data collection, suggestion, development, evaluation, conclusion and summary.

The following research questions will guide the study:

Kothari (1985) claimed that research methodology is a systematic way to solve the research problem. Furthermore, other ways to refer to the methods and techniques used by researchers in conducting research, such as, collect technical data, data processing techniques and instruments.

The methodology for this research was adopted from Vaishnavi and Kuechler (2004). This methodology consists of five phases which are awareness of the problem, suggestion, development, evaluation, and conclusion. The researcher adopted Vaishnavi and Kuechler methodology because it contains the rational phases which will be used to solve the problem and develop application. In addition, Vaishnavi and Kuechler (2004) methodology is a flexible in implementation. Most of the research also is adopted Vaishnavi and Kuechler (2004) methodology to enhance their result of the research.

The research methodology which made by Vaishnavi & Kuechle(2004) contains five steps are seen as stages. These steps are Identify in Figure 3.1.

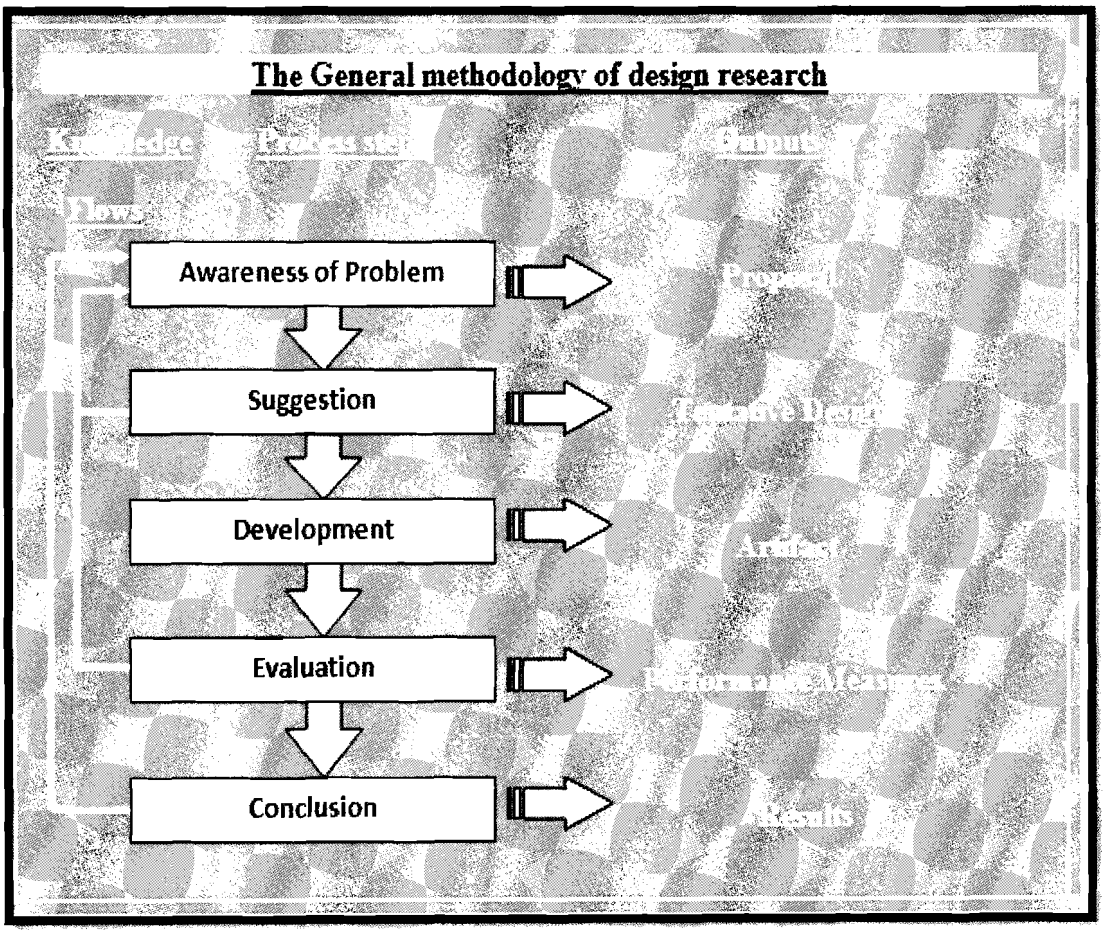


Figure 3.1: The General Methodology of Design Research (Vaishnavi & Kuechler, 2004).

3.2 Awareness of Problem

Awareness of the problem is the first step in general methodology (Vaishnavi & Kuechler, 2004). They also explained that, information about problem come from many sources: new developments in industry or in a reference discipline, such as: various applications that using Internet to help a tourists to know information about tourism places, but they those application do not operate without internet as a guide. So, those applications are not active in areas which is not covered by the Internet, and do not provide Sufficient information about the places. For this study, the awareness of the challenges that face the developer to provide type of information to serve a tourists without use internet because not all parts of Malaysia cover by the internet. In

addition, this application is invented to help tourists to know more about Malaysia in the rapid way. Several tourists and international students were approached to identify the information requirements.

3.2.1.1 Data collection

Data collection is a section that helps to awareness of the problem. Based on the objectives of this study, the researcher needs to cover and understand the research domain. The researcher needs also to know the requirements of the tourists that need to provide them in the application. So, this study will achieve that by the interview way to gather the information with the tourists.

3.2.1.2 Interview.

Interviews known as one of the most important ways to collect the information and decide what the requirement and the problem that need to solve by application of mobile tourism. However, the participants were eight tourists in deferent places such as langkawi, alor stear. In other hand, the interview consist of eight questions made as a dissection with the international tourists, each interview was taking about thirty minutes Table 3.1 interview questions.

Table 3.1: Interview Questions

statement
(1) I have a trouble in the tourist information when I arrive Malaysia International Airport.
(2) I find problem when I access to the internet in some places in Malaysia.

(3) I need to use M- application on tourism places in Malaysia without access to the Internet.

(4) I need to use m-application to provide discretion about tourism places in Malaysia.

(5) When I arrive Malaysia is better to use application that provides tourist information through download it by telecommunications companies.

(6) I require mobile application to provide pictures about tourism places.

(7) I require mobile application to provide videos about tourism places.

(8) I likely to use mobile application that provide advance search to retrieve information about any place without use the places names.

3.2.1.3 Result of the interview.

According to Mr. Ibrahem, Ms. Linda, Mr. Ahmad, Mr. Daniel, Ms. Dania, Mr. Adel, Mr. Sharas and Mr.Ather.

- **Results question one**: *six* of them accepted that face trouble in the tourist information when he/she arrives to Malaysia International airport.
- **Results question two**: *all* of them experience a problem when they access to the internet in some places in Malaysia.
- **Results question three**: *five* of them likely to use mobile tourism application on tourism places in Malaysia without access to the Internet.
- **Results question four**: *three* of them need to use mobile tourism application to provide discretion about tourism places in Malaysia.

- **Result question five**: *six* of them impressed by provide application that has tourist information through download it by telecommunications companies when they reach Malaysia.
- **Results question six**: *five* of them require mobile tourism application to provide pictures about tourism places.
- **Results question seven**: *all* of them need mobile tourism application to provide videos about tourism places.
- **Results question eight**: *all* of them want mobile tourism application that provide advance search to retrieve information about any place without use the places name's. On the other side, base on place features.

3.3 Suggestion:

The second phase of the methodology suggested the application of mobile tourism with assistant by telecommunication companies. It provides the tourists about the tourism places in Kedah. It also solves the problem that faces by the tourists to find a good way to retrieve information without use internet.

3.4 Development:

This phase shows that the development stage of mobile tourism application contains three levels which are developing mobile tourism application comes in the first level. Interface design and database structure comes in the second and third phases respectively. This application consists of two types of search. Firstly, searching by name of places secondly, search base on favorites of the tourists such as (beaches, mountains, cable car, Waterfalls, Top of walk) and others that mean search by the words. Furthermore, the application provides coding in order to support second type of search, because it helps to count the needed word inside the text, and check all the

files and retrieve files that contain the largest number of repetition of the word, so it helps to get the optimization result.

The main tools that will use to design and develop the proposed application are:

- ✓ C# program language.
- ✓ Visual studio 2008.
- ✓ Windows 7.
- ✓ SPSS equation, to analyze the results .
- ✓ Media player classic.
- ✓ Notepad text.

3.4.1 System Development

Mobile tourism application will be develop by using C# as a programming to write the code. In addition, notepad text will be used to store the text of the places. Furthermore, using video player to play the video, also, using Visual studio2008 to use virtual mobile as platform.

3.4.1 Interface and Database Design

The design of the interface was carefully chosen to be simple and easy to use, because the end users (tourist) prefer to deal with simple interface. So, the application design will be built as a blueprint for the application and supports to detect the problem or errors before built a final application or real application. System design helps in determining the system requirements and hardware. In addition, it helps in determining the structure of the application. The database is consisted of three files, which are: describing about each place, pictures and videos. The researcher chose file to be as data base because

this file make it easy process to scan, search and retrieve result when it need. Furthermore, it has the ability to store vast amount of information as a text.

3.5 Evaluation

In the evaluation level, the system will evaluate after developing level. The user will test the system and evaluate it by observing the performance of the final stage in the system development. In addition, evaluation consists of three sections to get background about performance of the application, (i) the first section is to measure the perceived usefulness (PU) of the system; (ii) the second section is to measure the perceived ease of use (PEOU) the system; (iii) the third section is to measure the functionality (F) of the system. Perceived usefulness and perceived ease of use were adopted from Davis (1989), functionality was adopted from Lewis (1995).

The researchers will analyze the result of the questionnaire by using the statistical package for social program (SPSS) science. The data is analyzed in the form of descriptive statistics. The results will discuss in the chapter five.

3.6 Conclusion:

This phase is the last step in the research methodology. This phase provides a result for the application and lead to the future works of the application use to be a part of the system. Mobile application for m-tourism will be build up in order to enhance the tourism sectors by provide prototype, and implementing this application will give in many benefits for users such as save time and effort and keep them a Empowered about tourist information and details anywhere anytime.

3.7 Summary

This chapter introduces the research design methodology of this study, which is suggested for continue works to resolve problems for this study and approaches. The findings, results and the development of the system will be presented in the next chapters.

CHAPTER FOUR

SYSTEM ANALYSIS AND DESIGN

4.1 Introduction

This chapter provide the system analysis and design for steps of the Mobile-Tourism application.

4.2 Lists of Requirements

4.2.1 Functional Requirements

Mobile tourism application aims to determine the requirements of the system and identify those that should display system. This model can serve as a contract between the developer and the client, therefore sample requirements will govern the development of all other models, so this centralized model at all stages of development of the system as a whole. Will be organized by the analysis model, is achieved through the design model, and implemented by the execution and tested by test mobile tourism application.

Depending on the objectives of the system, the Use Case will describe the requirements and functionality of the M-tourism application. The list of the functional requirements is shown in Table 4.1, and Non-functional Requirement Table 4.2.

The Table consists of 4 columns:

- ✓ Number of Requirements.
- ✓ Requirement ID.
- ✓ Requirement Description.
- ✓ Priority: M – Mandatory requirements (something the system must do).

A. Functional Requirements

Table 4.1: Functional Requirement.

NO.	Requirement ID	Requirement Description	Priority
		SEARCH BY THE SYSTEM	
1.	MTIM_01	**Search by the name of places.**	M
2.	MTIM_01_01	The tourist must press the search button search to enable them to find information about Tourism places.	M
3.	MTIM_01_02	The tourists must select the type of search: search by name of places.	M
4.	MTIM_01_03	The tourist must write the name of place if he selects the search by place name then press the search button.	M
5.	MTIM_02	**Search by the favorite words.**	M
6.	MTIM_02_01	The tourists must select the type of search: search by favorite words.	M
7.	MTIM_02_02	The tourist must write the favorite word, that want to retrieve information about it. Then press search button.	

VIEW THE INFORMATION PLACES

8.	**MTIM_03**	**View the information places by Appear three buttons**	**M**
9.	**MTIM_03_01**	First button that provide discretion for the selected place that has all information about it.	M
10.	**MTIM_03_02**	Second button that provide pictures for the selected place that has different pictures about the place.	M
11.	**MTIM_03_03**	Last button provides videos about the same place.	M
12.	**MTIM_04_01**	**BACK TO THE SEARCH SCREEN.**	**M**
13.	**MTIM_04_02**	The tourist can go back to the main screen by click **ok** button.	M

4.2.2 Non-Functional Requirements:

Non-functional requirements are important to describe the characteristics of the application form the reliability, usability, efficiency, maintainability and availability. This requirement will assist the system to achieve its target quickly and easily.

Table 4.2: Non-Functional Requirement.

No.	ID Requirement	Description	Priority
1.	MTIM_01	**Reliability issues**	
2.	MTIM_01_01	if any type of problems happened for the system such as crash, it able to reload again.	M
3.	MTIM_02	**Usability**	
4.	MTIM_02-01	Improve the application screen.	M
5.	MTIM_02-02	Simple to use and does not need training.	M
6.	MTIM_02-03	Classification depends on this topic.	M
7.	MTIM_03	**Efficiency**	
8.	MTIM_03-01	Performance.	D
9.	MTIM_03-02	A powerful also searchable to retrieval information.	M
10.	MTIM_03-03	Support the application with a simple files bases	M
11.	MTIM_04	**Maintainability**	
12.	MTIM_04_01	Ability to increase the new features to the system.	D
13.	MTIM_05	**Availability**	
14.	MTIM_05_01	Highly available anytime	M

anywhere for the user.

4.2.3 Software Requirements

To apply the system actually needs the software that appear in the Table 4.3.

Table 4.3: Software Requirements

No	Requirement ID	Requirement	Description	Priority
10.	MTIM_10	Operating System	Windows 7.	M
11.	MTIM_11	Visual studio 2008.	Use mobile platform	M
12.	MTIM_12	Media player classic.	Important to operate the videos for each place.	M
13.	MTIM_13	Notepad text	The file woke as database to store the text, pictures and videos.	M
14.	MTIM_14	C#	As programming language to develop the system.	M

4.3 System Analysis and Design

This section display the UML modal Diagram to analysis the application requirements and draw class diagram and use-case diagram, sequences diagram by using the Rational Rose (2000) software.

4.4 Use Case diagram

The System functions from the user view, Use Case Diagram are use to display the functionality that the application will offer and to show which user will connected with the system in some way to make use of the functions Booch (2005). In addition, the **Use-Case** is one type form the many diagrams that provide by Unified Modeling Language (UML). The important of UML is to provide a graphical overview about the action of the system in terms of **ACTOR**. furthermore, the goal of use a **Use-Case** is to explain the relationship between the many use cases.

These concepts are simply an help to clearing what exists outside the system (Actors) and what should be accomplish by the system Use-cases. (Jacobson, 1999)

ACTORS: is the human or company or system that deal with our system to exchanging the essential information. In addition, to do action using the system.

USE-CASE: after Know what is outside of the system, we will determine what is the main functionality inside the system figure 4.2 is the Use Case for the application .

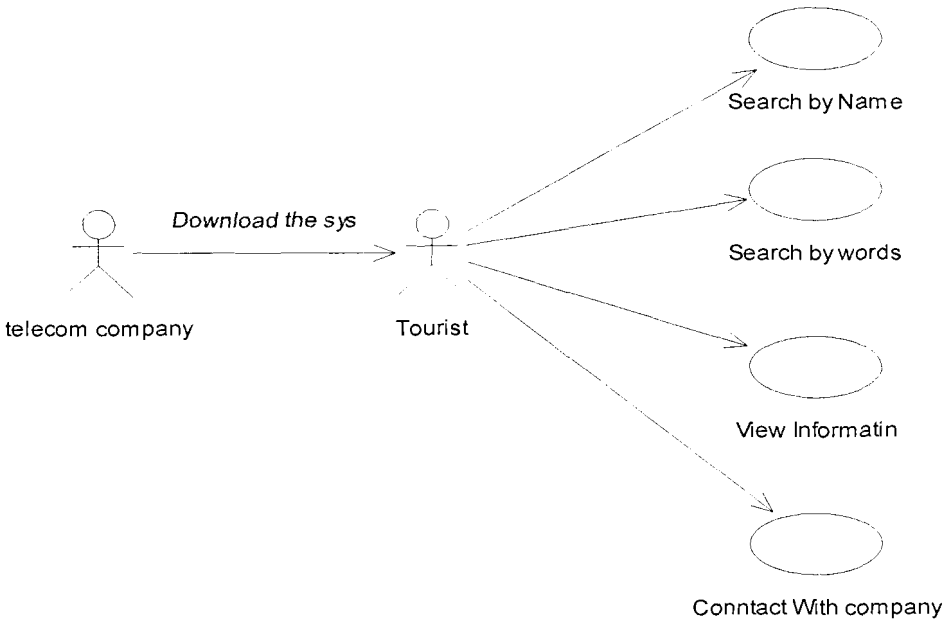


Figure 4.1: Use case diagram for the proposed system

4.5 Use Case specification

4.5.1 Use Case specification for search by name

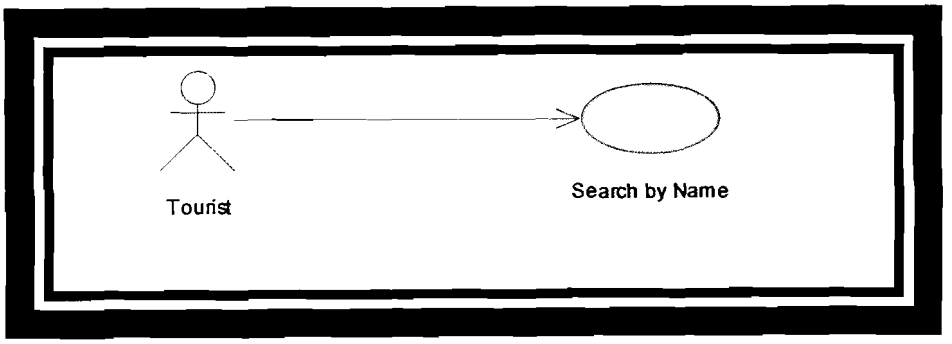


Figure 4.2: Search by Name

1.1 Brief description of search by name

This use case enable the tourist to get the name of place that he want to visit it.

1.2 Pre-condition

The tourist must writ the name of tourist place.

1.3 Characteristic of activation

Activate by tourist.

1.4 Flow of event

1.4.1 Basic flow

- The tourist select search option from the main page interface.
- Then the name of places will by appear by the new page.
- This case end when the customer returns to the search page.

1.4.2 Alternative flow

No Alternative flow.

1.4.3 Exceptional flow

No exceptional flow.

1.5 Post -Conditions

The name of places must been viewed.

1.6 Limitations

No limitation.

4.5.2 Use Case specification for search by words

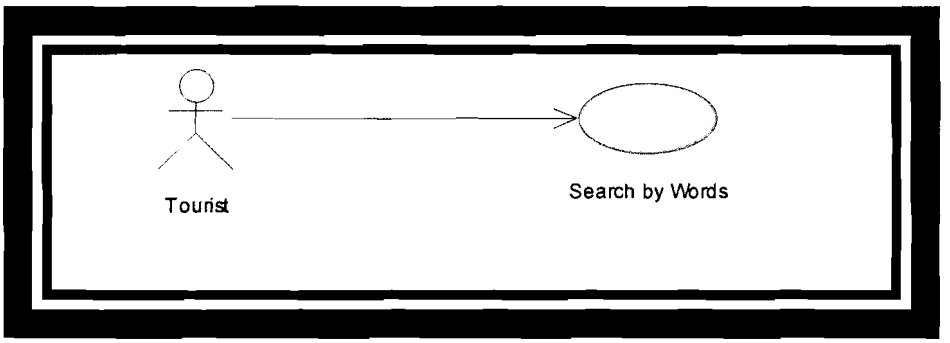


Figure 4.3: Search by words

2.1 Brief description of search by words

This use case enables the tourist to get the name of places that contain the word that used in the search field, this word act as a feature of place which is the tourist briefer.

2.2 Pre-condition

The tourist must writ the search word.

2.3 Characteristic of activation

Activate by tourist.

2.4 Flow of events

2.4.1 Basic flow

- The tourist select search option from the main page interface.

- Then the word that will help to appear the name of places based on favorite of the tourists.
- This case end when the customer returns to the search page.

2.4.2 Alternative flow

No Alternative flow.

2.4.3 Exceptional flow

No exceptional flow.

2.5 Post -Conditions

The name of places must been viewed.

2.6 Limitations

No limitation.

4.5.3 Use Case specification for view information

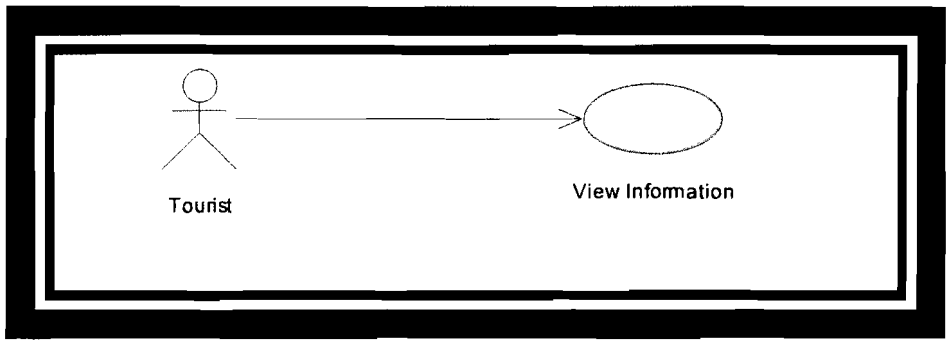


Figure 4.4: View information

3.1 Brief description of view information

This use case will be used to show information the about the tourism places that consist of description, pictures, and videos.

3.2 Pre-condition

Select the place.

3.3 Characteristic of activation

Activate by tourist.

3.4 Flow of event

3.4.1 Basic flow

- The tourist press on the name of place page interface.
- Then will be displayed three button first one for description, second for pictures and third for videos.
- Press on any button to show the types of any information as a mention before.

- This case end when the customer returns the main page.

3.4.2 Alternative flow

No Alternative flow.

3.4.3 Exceptional flow

No exceptional flow.

3.5 Post -Conditions

The detail of the information has been viewed.

3.6 Limitations

No limitation.

4.6 Sequence Diagram

In this section explains the using of sequence diagram to represent all the action in the system, sequence diagram is type of UML diagrams that very helpful because it describe the stricture of the steps and implement the behavior of the system, arranged in time. In addition, it display the control flow with many objects to achieve the task. Furthermore sequence diagram are steps for each use case separately to provide more details for the structure of the system.

4.6.1 Sequence diagram / Search by Name

This diagram enable the tourist to retrieve the name of places that he want to visit. So, this task achieve by type the place name in the search area.

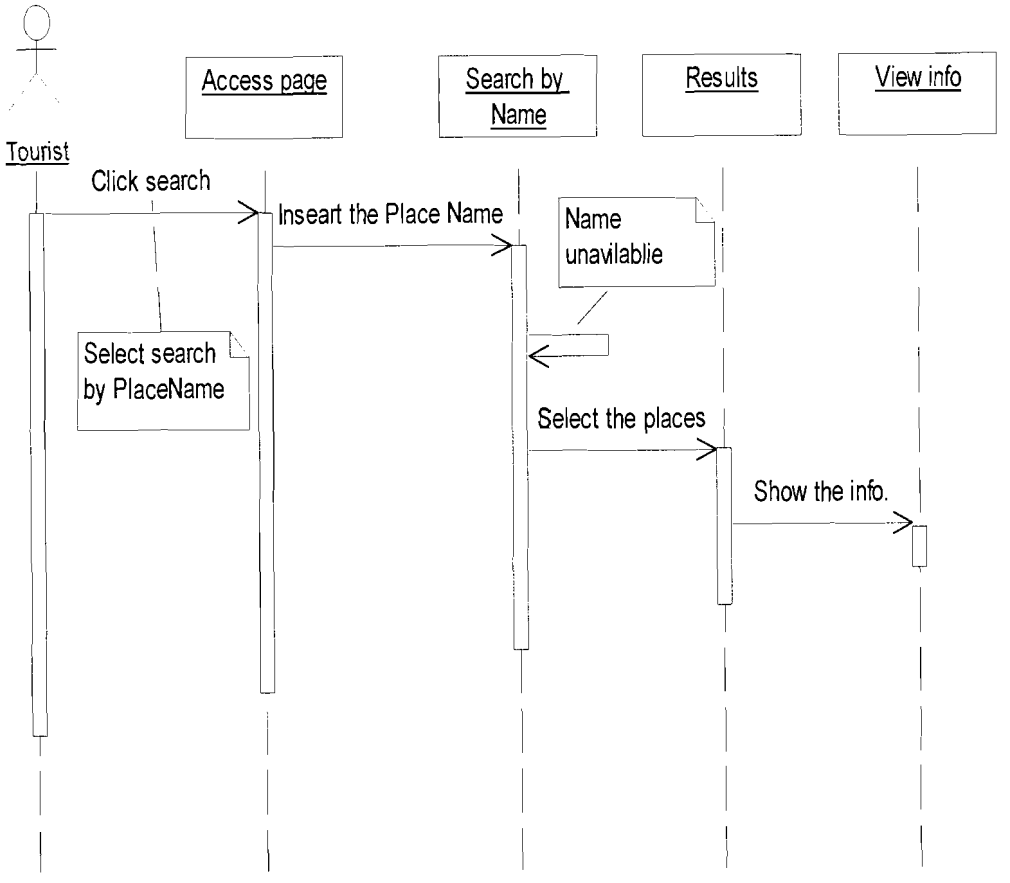


Figure 4.5: Describe Search by Name Steps

4.6.2 Collaboration Diagram / Search by Name

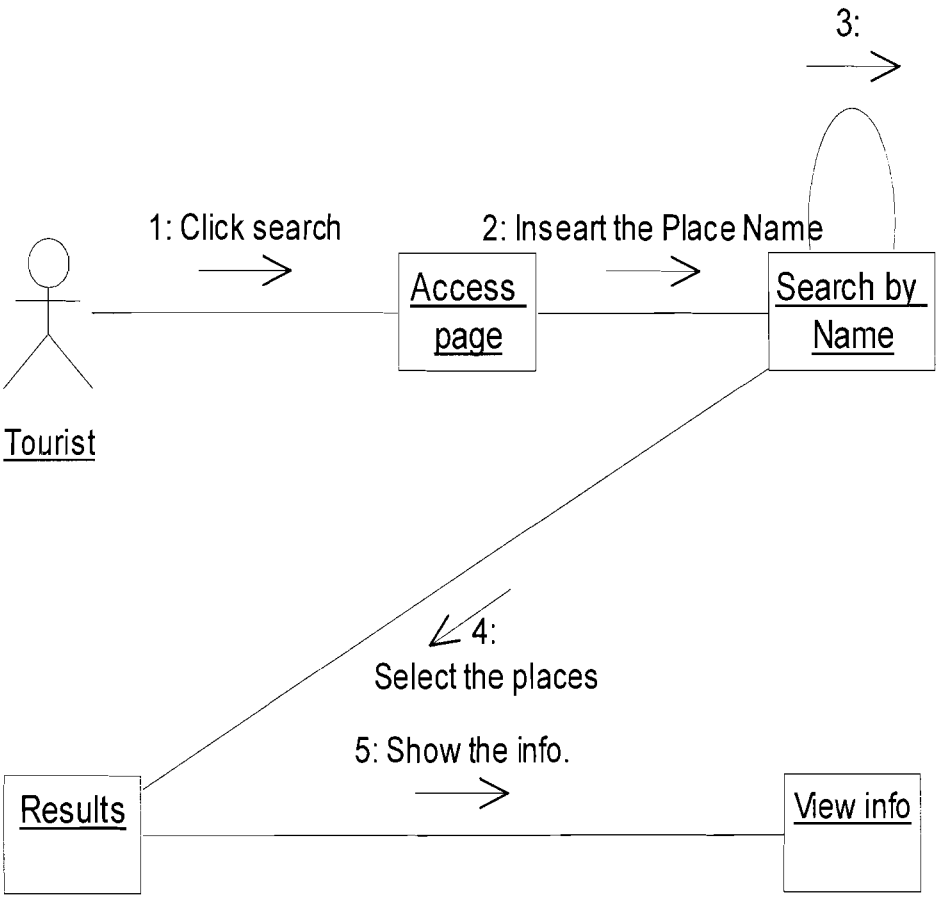


Figure 4.6: Describe Search by Name Steps

4.6.3 Sequence diagram / Search by Words

This diagram enables the tourist to retrieve the name of places based on the special words in the search area that will decide the type of the result and the type of tourist favorites.

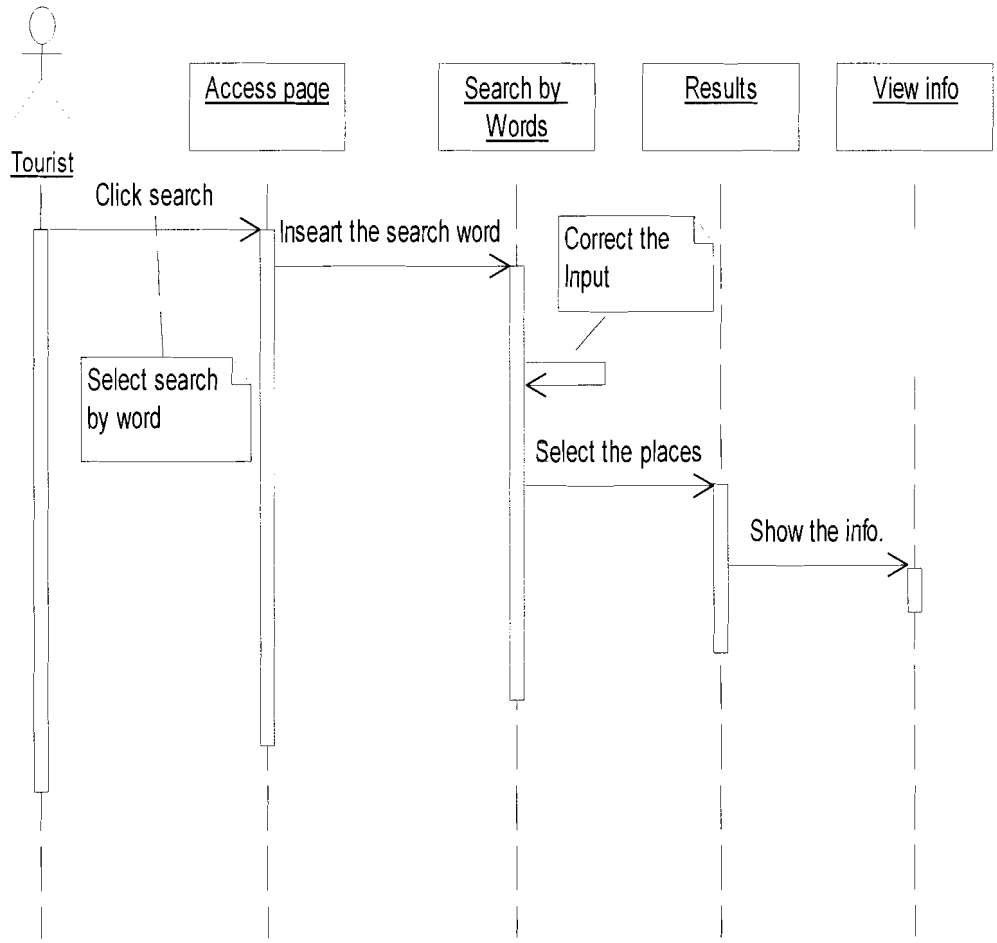


Figure 4.7: Describe Search by Words Steps

4.6.4 Collaboration Diagram / Search by words

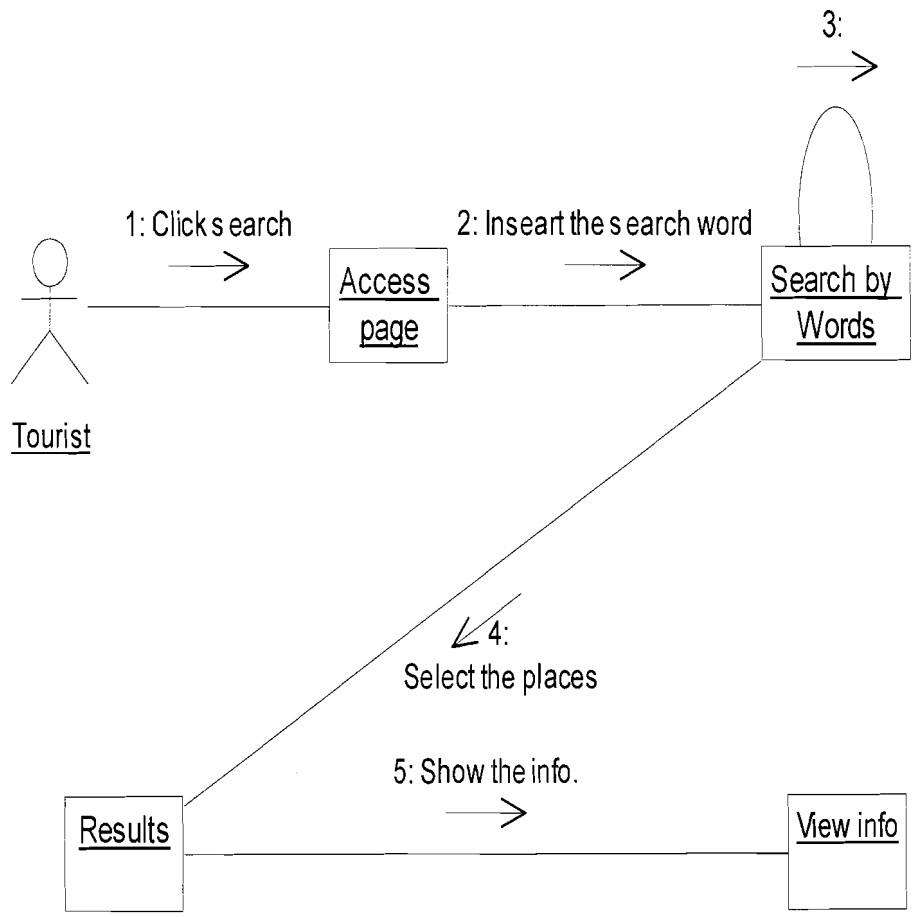


Figure 4.8: Describe Search by Words Steps

4.6.5 Sequence diagram / View Information

This diagram explains how the tourists will get the many type of information that related with each places, this information divided to three types like: text, pictures and videos.

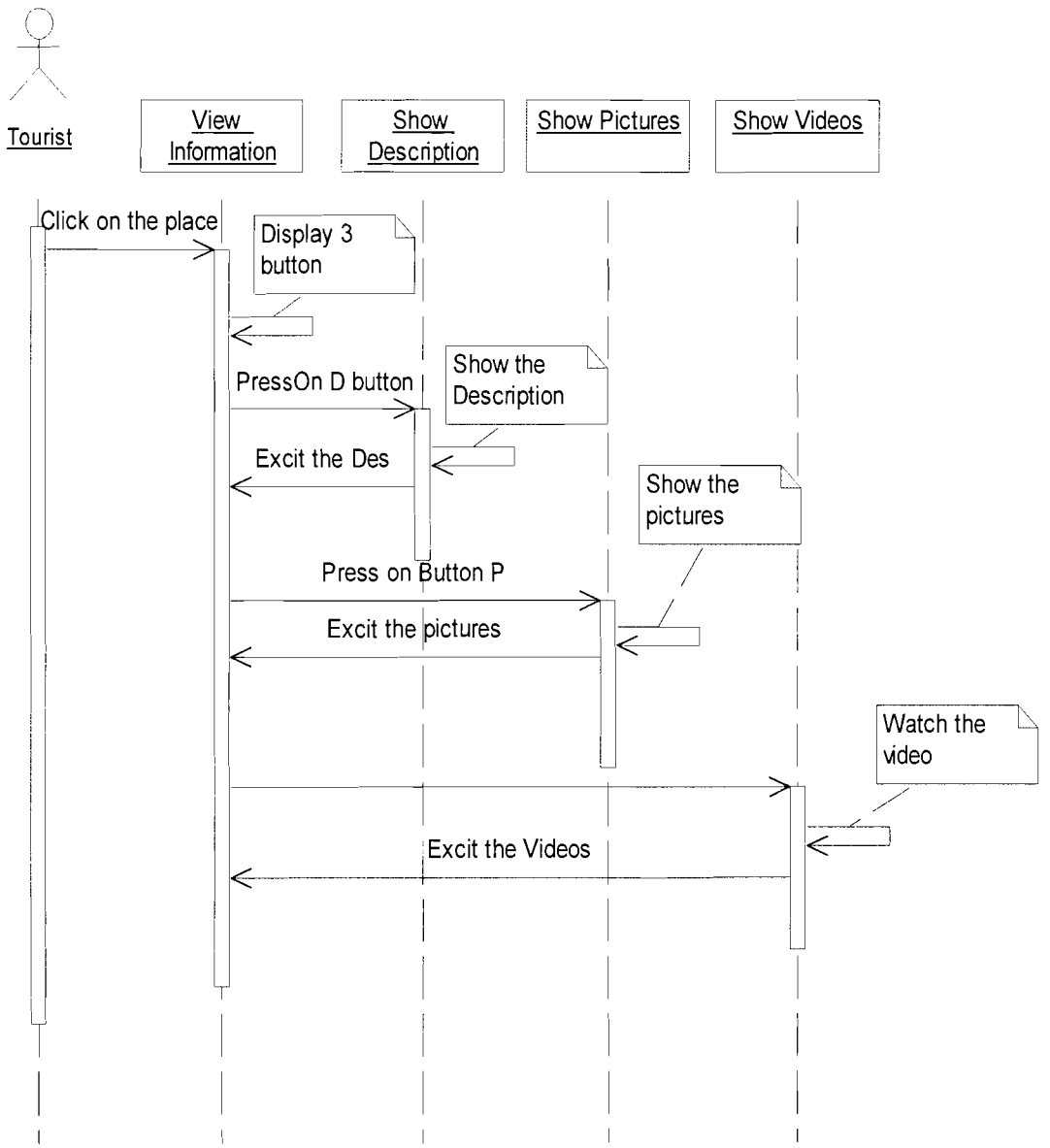


Figure 4.9: Describe View information Steps

4.6.6 Collaboration Diagram / view Information

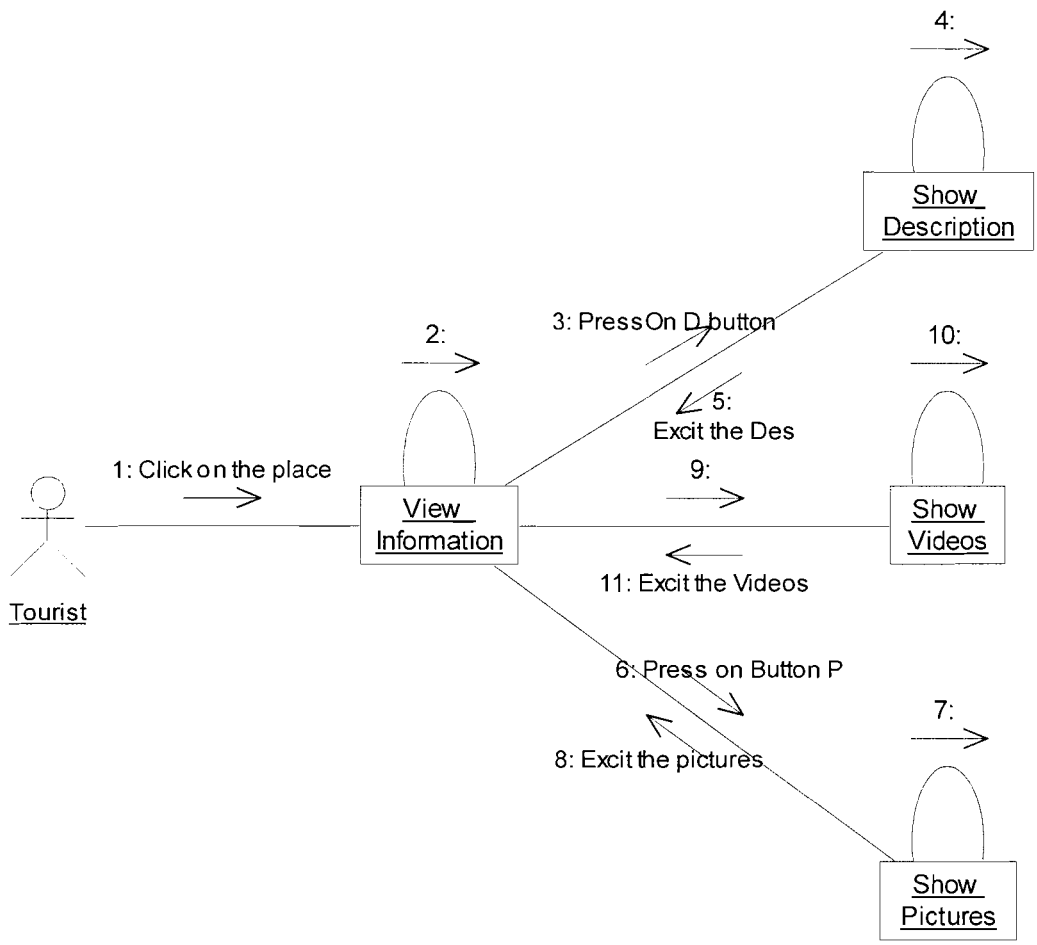


Figure 4.10: Describe view information Steps

4.7 Class diagram

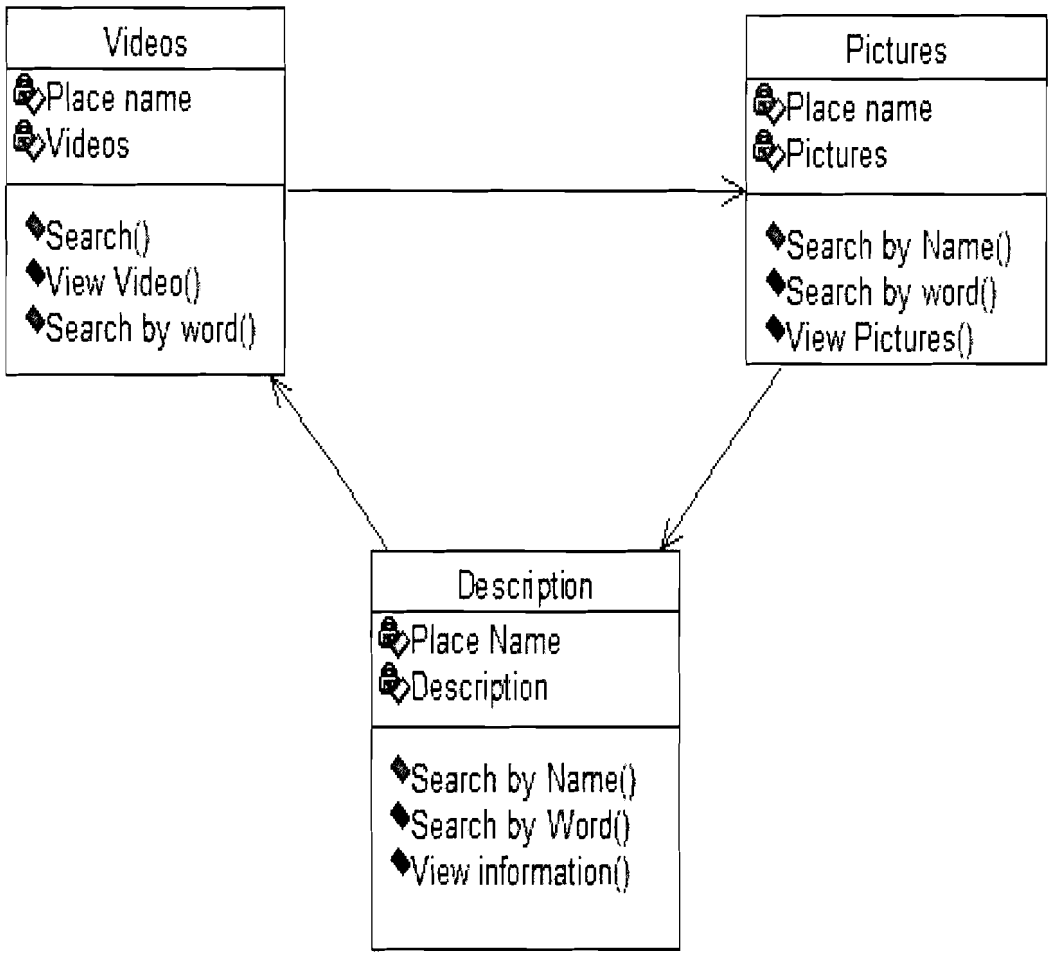


Figure 4.11:Class diagram

4.8 Mobile Tourism in Malaysia prototype design

4.8.1 Home page

Description: this is the main screen in the mobile Tourism in Malaysia, it provide some information about Alor setar the capital of Kedah, in addition it is access page because it help the tourist to make a search by the search option figure 4.13.

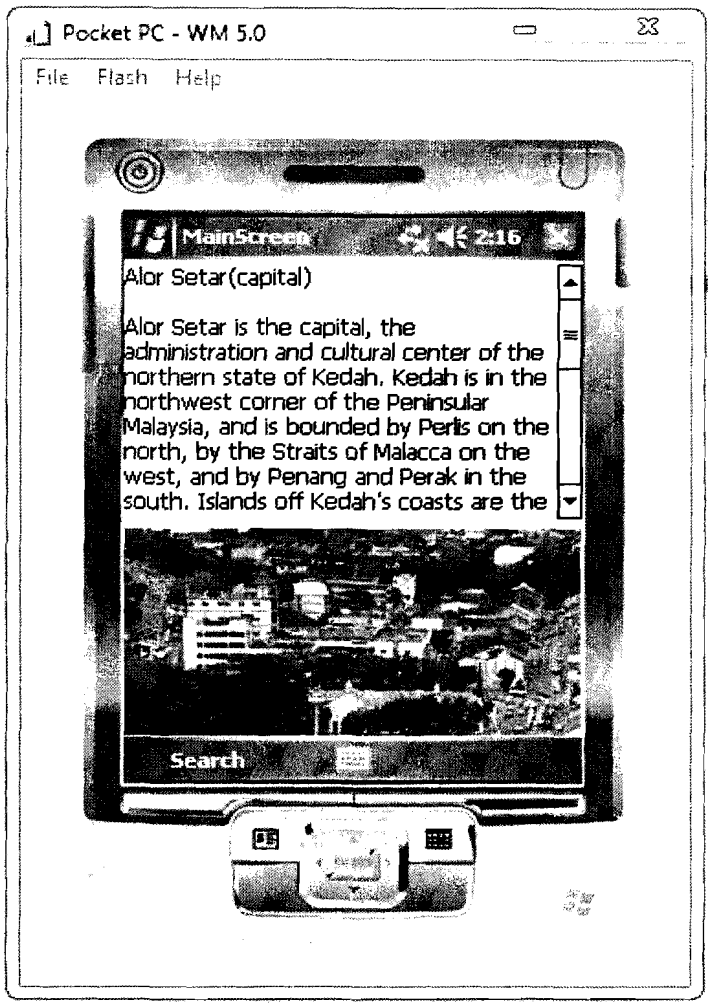


Figure 4.12: Home page

4.8.2 Type of Search Page

Description: this page has two type of search first search by place name, second search by word figure 4.14.

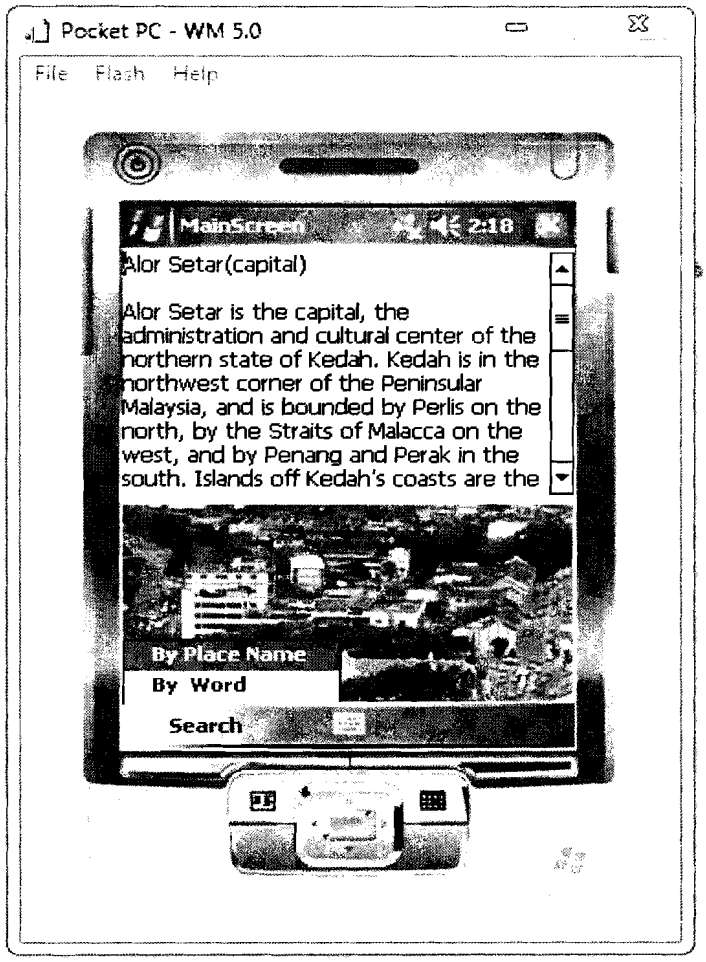


Figure 4.13: Type of Search Page

4.8.3 Search by Place Name

Description: This page shows search system, which depends on the name of the places, this type help directly to find landing place by the name figure 4.15.

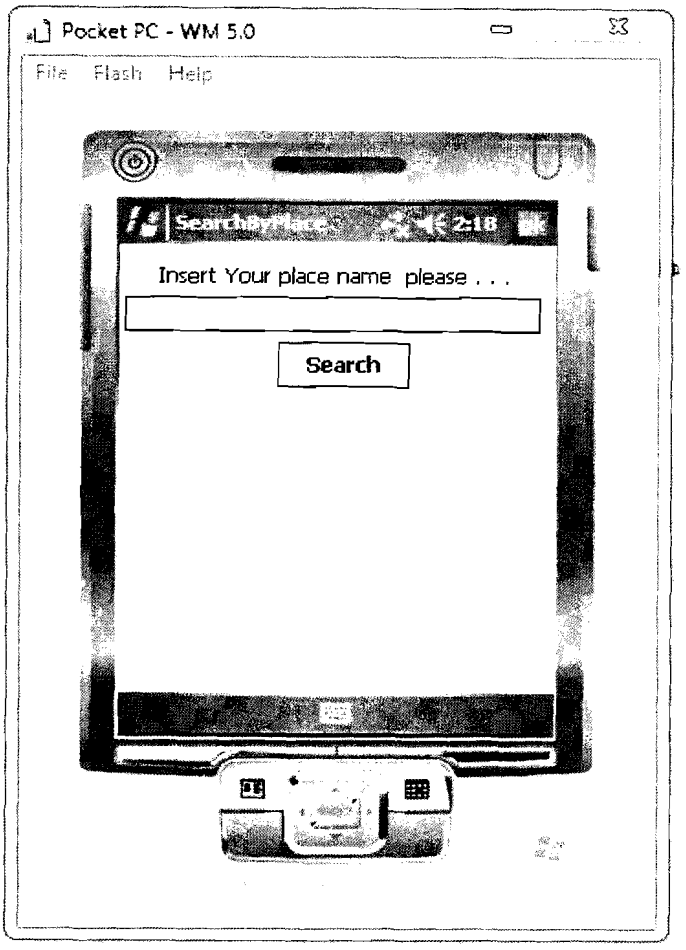


Figure 4.14: Search by Place Name

4.8.4 Result of the Search by Place Name

Description: This design shows the result after doing the search by the name for example Langkawi Island. In addition, provide the three buttons that related with many type of information about the Langkawi Island figure 4.16.

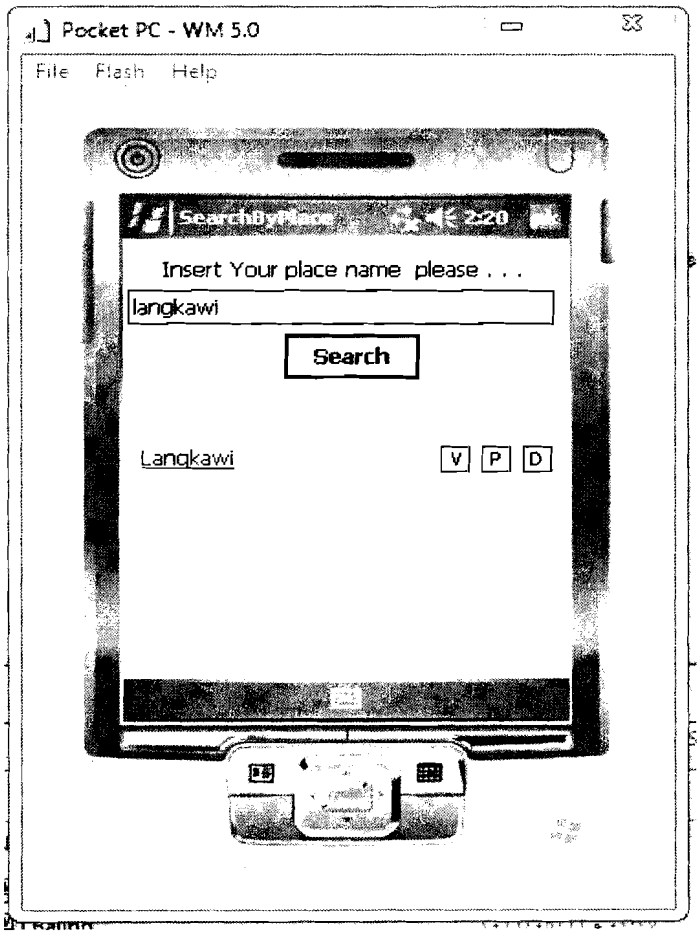


Figure 4.15: Result of the Search by Place Name

4.8.5 Show the Description Page

Description: This page describes the first button that related with description about the place figure 4.17.

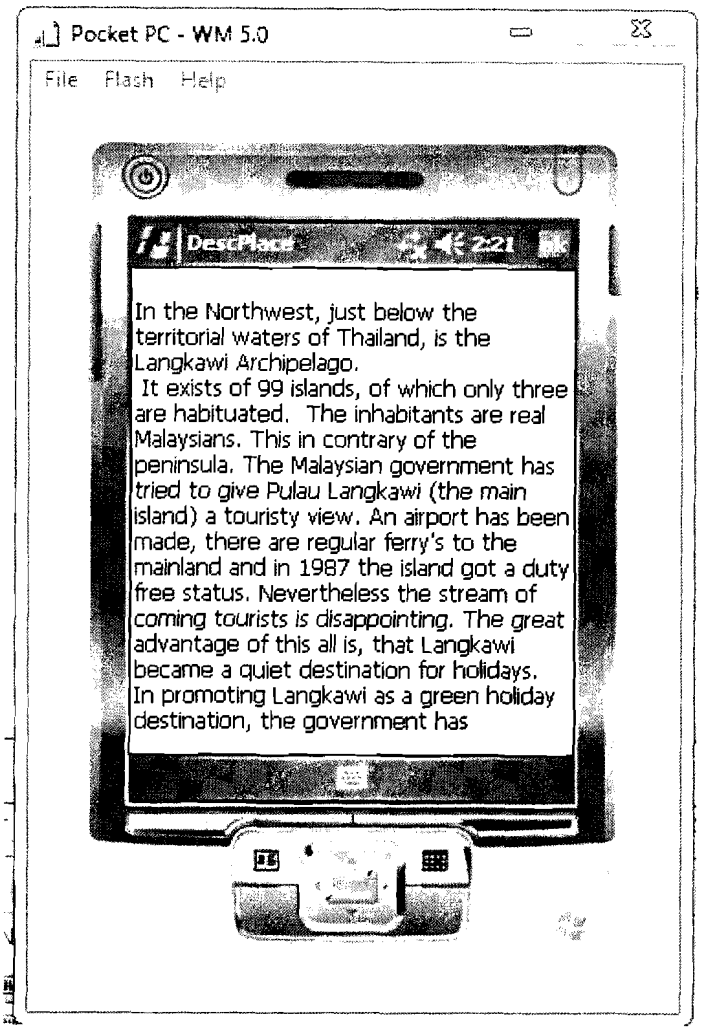


Figure 4.16: Show the Description Page

4.8.6 Show the Pictures Page

Description: This window describes the second button that provides many pictures about the place figure 4.18.

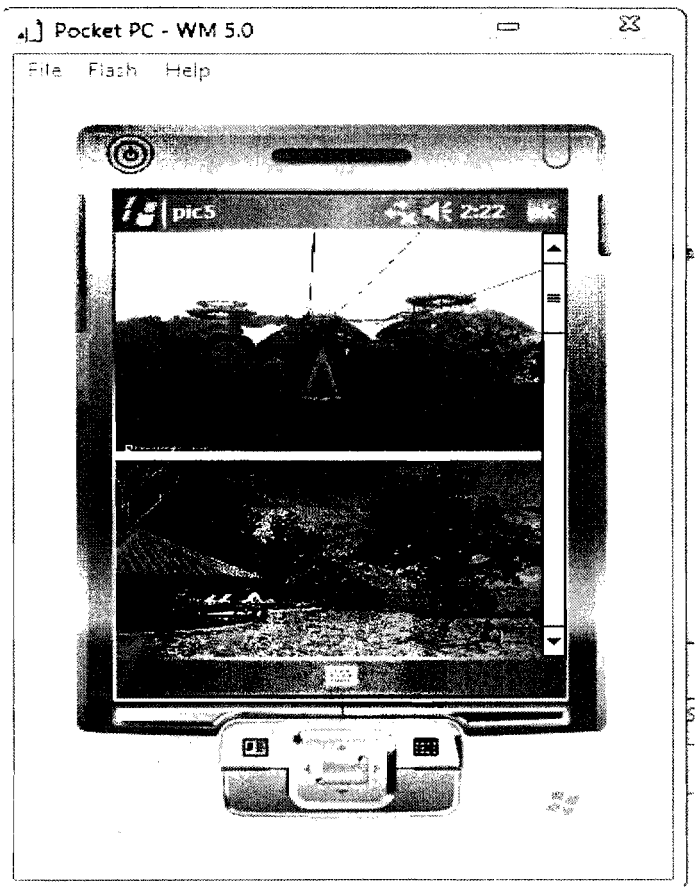


Figure 4.17: Show the Pictures Page

4.8.7 Show the Video Page

Description: This page shows the last button that appears different videos that help the tourists to get background about the place figure 4.19.

Figure 4.18: Show the Video Page

4.8.8 Search by Words

Description: This page shows second type of search system, which depends on the word that related with characteristic of the places, this type help tourist to retrieve information to find landing place without use any name of places just write the favorite word figure 4.20.

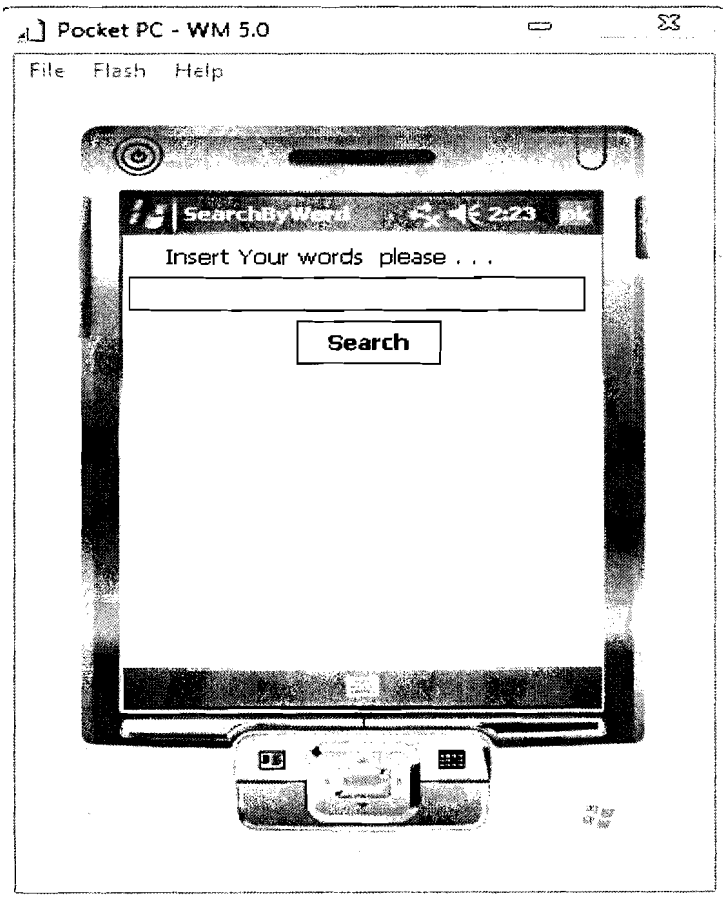


Figure 4.19: Search by Words

4.8.9 Result of the Search by words

Description: This page shows the result by using search by word, here the tourist type the **Beach** word in the search area then the system retrieve a places that have this word. Furthermore, arranged them on the page based on number of word frequency in each of them figure 4.21.

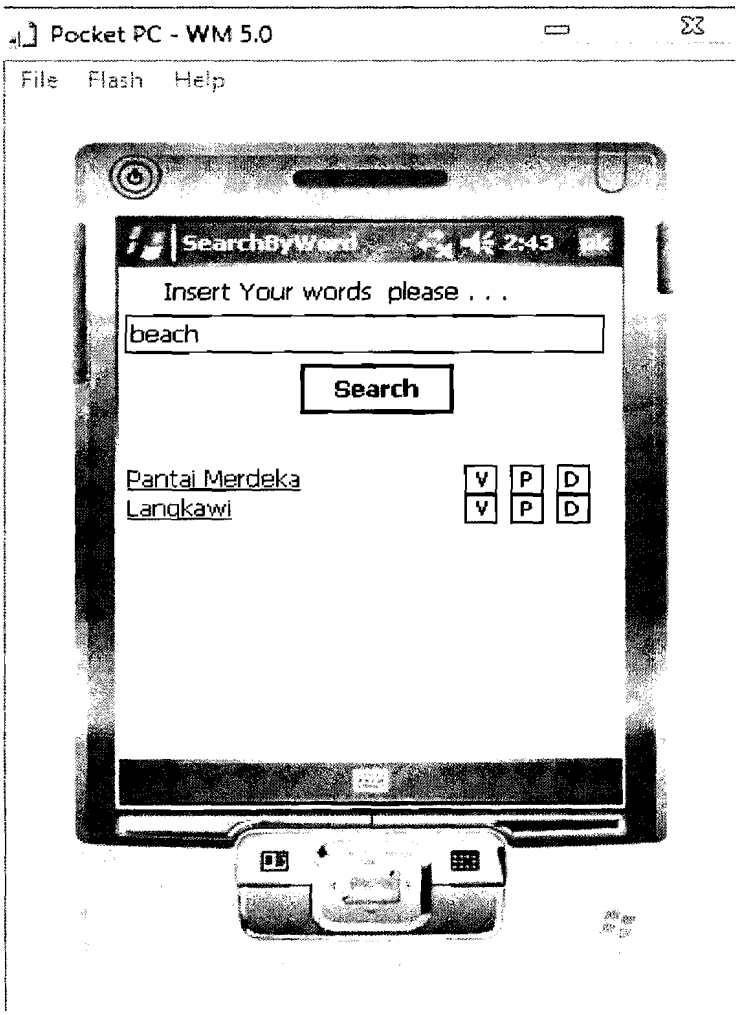


Figure 4.20: Result of the Search by words

CHAPTER FIVE

DISCUSSION AND FINDING

The study motivation was provided by the need for a more flexible and improved technique of gathering information of tourist places in Malaysia. Generally speaking, the mobile phone is not the tool to obtain comprehensive information from, regarding tourist places but is plays an important role in supporting the convenient services of the tourism sector. In other words, the m-Tourism application improves the tourism sector by providing information regarding tourism places in Malaysia particularly in the state of Kedah.

5.1 Introduction

The present chapter attempts to explore and discuss the analysis of the evaluation carried out for the purpose of the study. The technique used for the evaluation is the User Testing (questionnaire) technique that analyzes the rate of user satisfaction with the tourism service mobile application and to carry out the application's usability and functionality from various facets to meet the objectives of the study:

i. To identify the system requirements of designing mobile application for tourists in Malaysia.
ii. To design a mobile application that provides tourism information in the context of Malaysia.
iii. To test and evaluate functionality and usability of m-Tourism application.

The tourists' requirements were collected and organized through interviews of seven participants comprising of international tourists and students. The interview questions also obtained the opinion of the responders regarding the M-tourism application.

5.2 Finding

5.2.1 Statistics analysis

The Statistical Package for Social Sciences (SPSS) version 18 used to achieve descriptive statistics analysis for the collected data.

Table 5.1: Demographics Data Summary

Gender	Frequency	Percentage (%)
Male	13	65,0
Female	7	35.0
Age		
18 - 24	2	10.0
25 - 30	10	50.0
31 - 35	6	30.0
Over 35	2	10,0

According to the Table 5.1 that shown: 13 (65.0 %) were male and 7 (35.0 %) were female. Most of the respondents 13 (65.0 %) are between the ages of 25-35 years old, in other hand, followed by 7 (35.0 %) are between 18-30 years old.

Table 5.2: Descriptive Statistic for Application of Mobile Tourism

Table 5.2 Descriptive Statistics for the general information (first part)

	N	Minimum	Maximum	Mean	Std. Deviation
Mobile Device	20	1	1	1.00	.000
How Long	20	2	3	2.70	.470
Kind Mobile	20	1	5	2.90	1.714
Modern Mobile	20	1	2	1.05	.224
Valid N (listwise)	20				

Table 5.3: Descriptive Statistics for the system aspects (second part)

	N	Minimum	Maximum	Mean	Std. Deviation
Q1	20	1	5	3.95	1.146
Q2	20	2	5	4.05	1.146
Q3	20	3	5	4.25	.639
Q4	20	3	5	4.30	.733
Q5	20	3	5	4.40	.754
Q6	20	3	5	4.15	.813
Q7	20	2	5	3.90	.788
Q8	20	1	5	4.30	1.174
Q9	20	2	5	4.10	.788
Q10	20	3	5	4.10	.788
Q11	20	2	5	3.65	.933
Q12	20	3	5	4.45	.759
Q13	20	3	5	4.05	.686
Q14	20	3	5	4.05	.759
Valid N (listwise)	20				

The Table 5.3 shown the main schema is (Minimum, Maximum the Mean and Std. Deviation).The system evaluation measure the usability and functionality of using the M-tourism application to supports tourist to get various information about tourism places though mobile anytime and anywhere. The explained result by analyzed the questionnaire showed the acceptance from the different respondents (tourists). In addition, the higher result was the information retrieved by Application of Mobile Tourism was effective in helping tourists to Composition of a strong background for tourist places which was (mean= 4.45 from 5).The most questions that presented the high results are (Q3, Q4, Q5, Q8 and Q12).

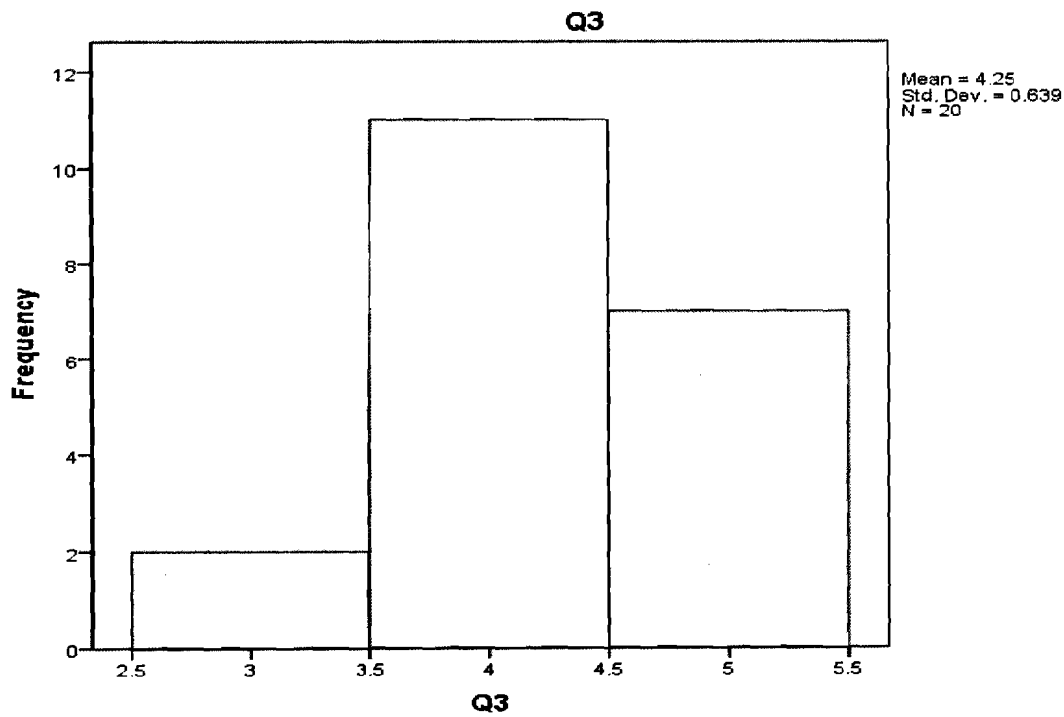
5.2.2 The highest result questions

Questions number three, four, and five are measured the usability of the application for the mobile tourism. In addition, questions number eight and twelve are measured the function of the application. Through the descriptive analysis, it shows that these questions got the highest ranked result. It denotes that the tourist was accepted to use the application of mobile tourism. The reasons behind this acceptance were increasing the productivity of the application, easier to engage more information about tourism places, useful in the tourism sector, flexible to interact with, and effective to help the tourist to compose a strong background for tourist places.

Q3: Using the application of mobile tourism would increase the productivity in tourism environment.

Q3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Netural	2	10.0	10.0	10.0
	Agree	11	55.0	55.0	65.0
	StronglyAgree	7	35.0	35.0	100.0
	Total	20	100.0	100.0	

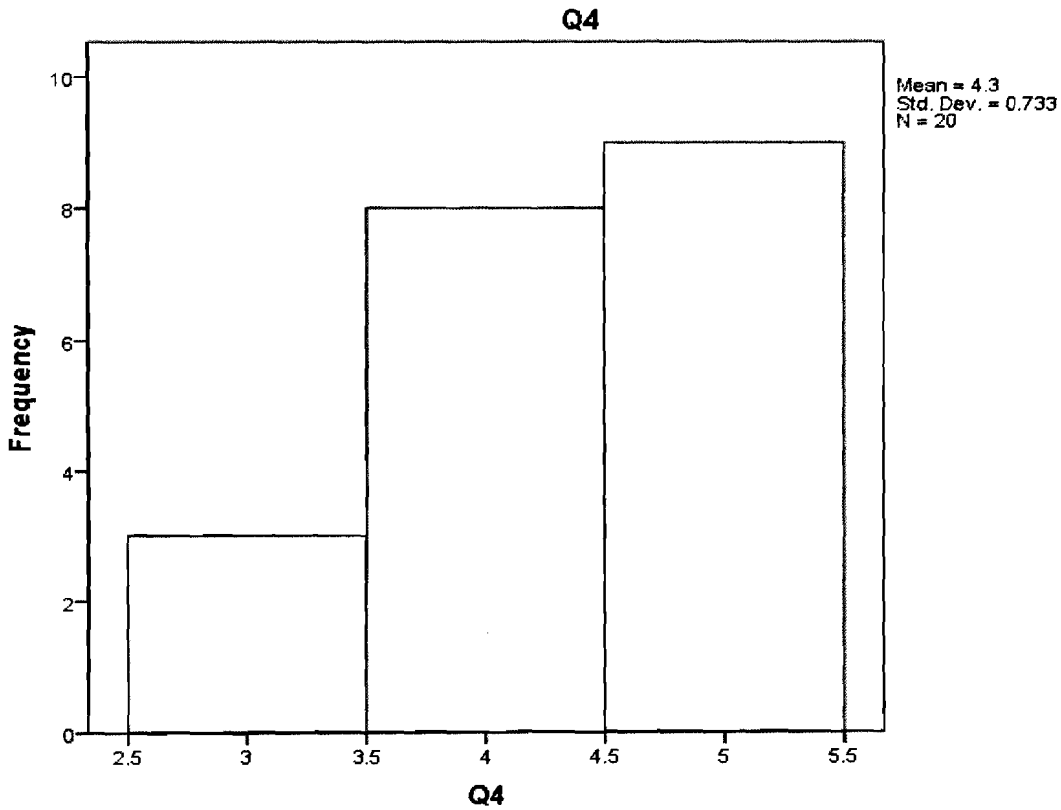


This previous figure describe frequency of the respondents on the question one that shows two chose Neutral, eleven chose agree and seven chose strongly agree, the meant is 4.25.

Q4: Using the application of mobile tourism would make it easier to engage and get information about tourism places.

Q4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Netural	3	15.0	15.0	15.0
	Agree	8	40.0	40.0	55.0
	StronglyAgree	9	45.0	45.0	100.0
	Total	20	100.0	100.0	

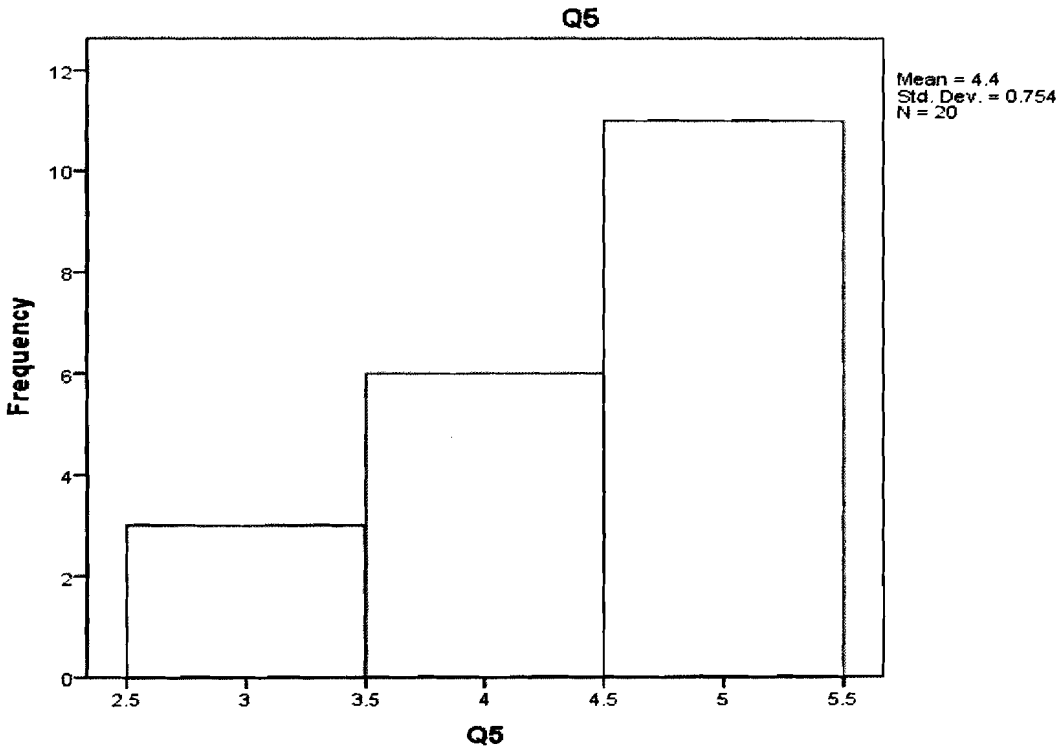


This figure describe frequency of the respondents on the question one that shows three chose Neutral, seven chose agree and nine chose strongly agree, the mean is 4.3.

Q5: I find the application of mobile tourism useful in the tourism sector.

Q5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Netural	3	15.0	15.0	15.0
	Agree	6	30.0	30.0	45.0
	StronglyAgree	11	55.0	55.0	100.0
	Total	20	100.0	100.0	

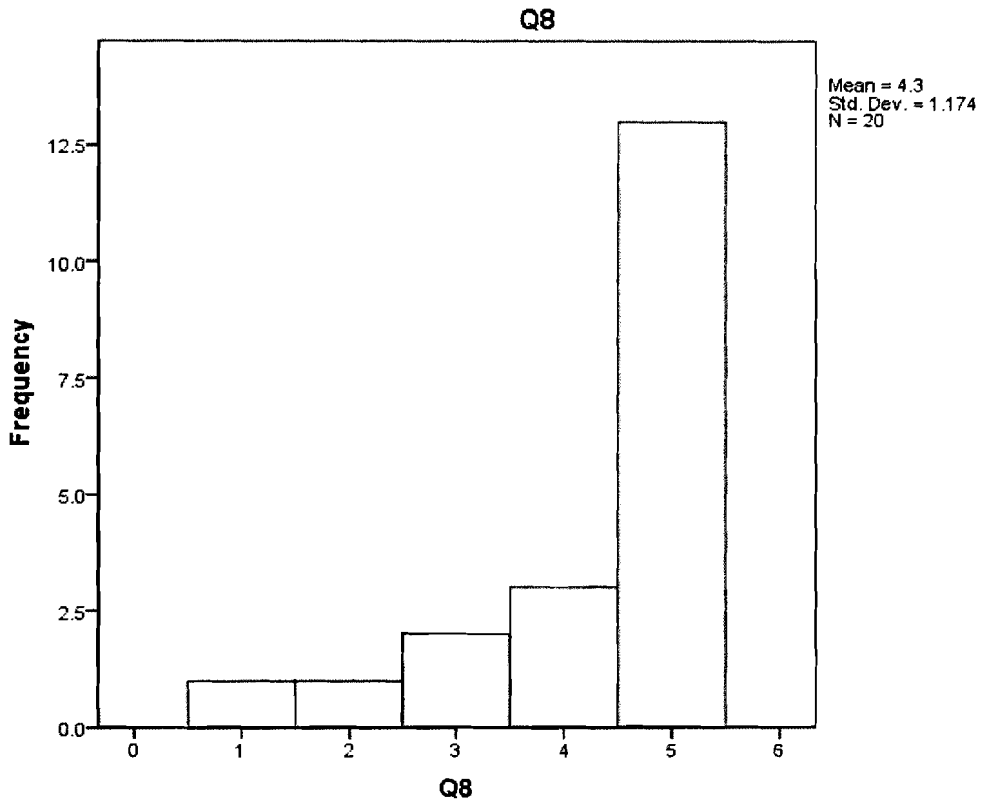


This figure describe frequency of the respondents on the question one that shows three chose Neutral, six chose agree and eleven chose strongly agree, the mean is 4.4.

Q8: I find the application of mobile tourism are flexible to interact with.

Q8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	StronglyDisagree	1	5.0	5.0	5.0
	Disagree	1	5.0	5.0	10.0
	Netural	2	10.0	10.0	20.0
	Agree	3	15.0	15.0	35.0
	StronglyAgree	13	65.0	65.0	100.0
	Total	20	100.0	100.0	

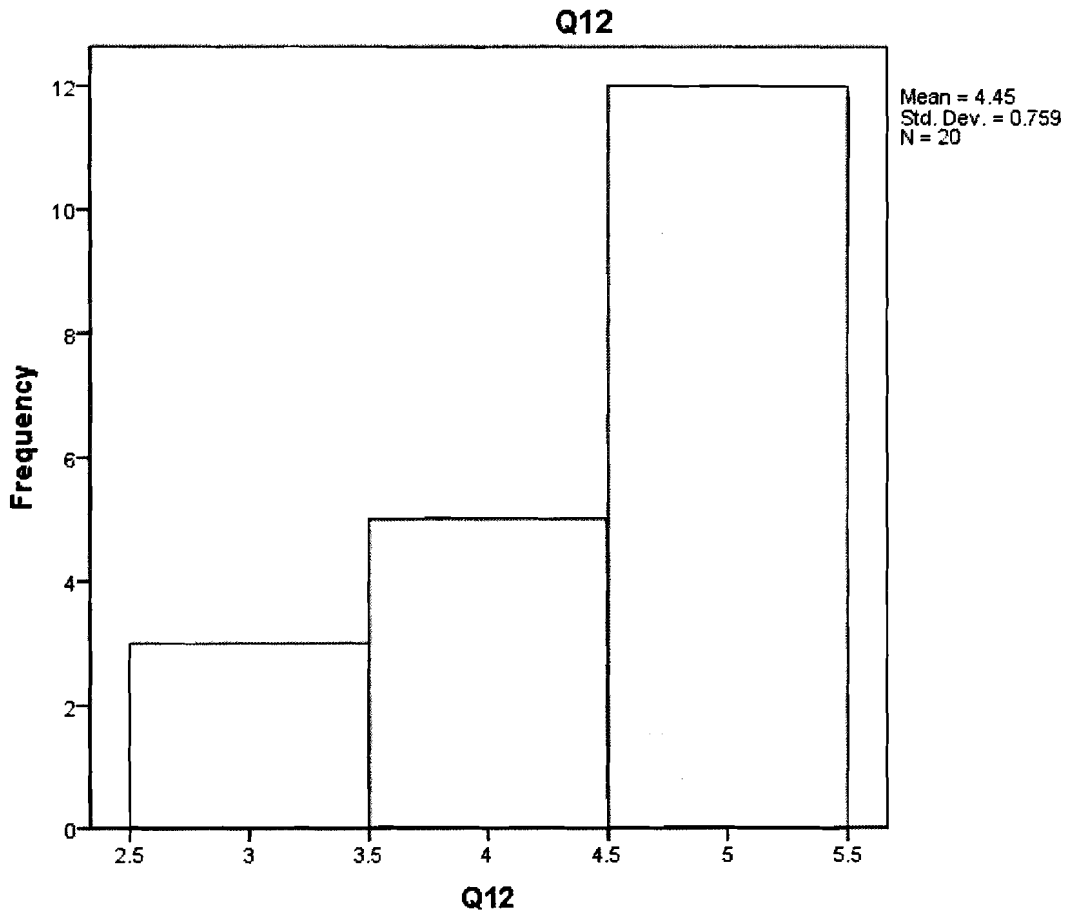


This figure describe frequency of the respondents on the question one that shows one of them chose strongly disagree, one chose disagree, two chose Neutral, three chose agree and thirteen chose strongly agree, the mean is 4.3 .

Q12: The information retrieved by application of mobile tourism was effective in helping me to Composition of a strong background for tourist places.

Q12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Netural	3	15.0	15.0	15.0
	Agree	5	25.0	25.0	40.0
	StronglyAgree	12	60.0	60.0	100.0
	Total	20	100.0	100.0	



This figure describe frequency of the respondents on the question one that shows three chose Neutral, five chose agree and twelve chose strongly agree, the meant is 4.45 .

5.3 Summary

This chapter present discusses the analysis of data acquired by questionnaires. In addition, described and summarized each of the participants about application of mobile tourism. Furthermore, demonstrated evaluation outcome of the user that almost of them agree using the application of mobile tourism from the usability and functionality.

CHAPTER SIX

FUTURE WORKS AND CONCLUSION

6.1 Introduction

This chapter tackles and explains the study's findings and lists limitations and issues of the study. Moreover, it emphasizes on future works of M-tourism application as recommended by the research. The final part of the chapter concludes the research findings and implications.

6.2 Discussion

Application of mobile tourism enables tourists to get needed information through a simple downloading of the application. The application allows the tourists to gather information without accessing the Internet. The study's core objective is the development of application of mobile tourism that provides tourists information regarding touristic places in Malaysia. It has been developed to facilitate convenience to the tourists and to assist the tourism industry in Malaysia. The methodology utilized to develop the application is adopted from Vaishnavi & Kuechle (2004) and it comprises of five phases: awareness of problem, suggestion, development, evaluation and conclusion.

The perception of users regarding the applications functionality and usability was assessed through two factors: Usefulness and Ease of Use. The participants consisted of twenty individuals and all twenty of them are of the consensus that MTIM possesses good functionality and usability in terms of *Usefulness, Ease of Use and Outcome/Future Use* as evidenced by the great rating of all measures.

6.3 Problems and Limitations

Generally speaking, creating a mobile web application is not an easy task as it is even more complicated than creating web pages for a standard web browser. This is due to the limitation of the mobile including its small sized screen, minimal space and internal capacity. Hence, in the development stage, the developer had some doubts regarding the screen size. However, successful development of the mobile tourism application was carried out in the English language.

6.4 Future works

- ✓ The research range is confined as it only addressed places in the state of Kedah. Further studies have to be made to include other tourist places in Malaysia.
- ✓ Future works should look into applications that enable tourists to take pictures and add an application that provides information regarding the picture
- ✓ Users should be informed regarding tourism transactions that can be done through text messages by merely contacting the service provider. The languages supporting such an application should be increased to support the service.

6.5 Conclusion

As discussed in chapter one, the objectives of the present study is the development of Mobile Tourism application for Malaysian tourists particularly in the state of Kedah and the testing of its usability and functionality to comprehend further requirements. The researcher has applied UML diagrams consisting of Use Case specification, Use Case diagram and Sequence diagram in the system design to explain the research

objectives. Moreover, evaluation of the prototype and confirmation of its outcome was carried out and it can be stated that the application is proven to be invaluable for tourists as it assists them in performing background checks of the tourist places to wish to explore. The application was developed on the basis of the users' requirements. The provision of such a service to tourists that bring revenues to the telecommunication companies.

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APPENDIX (A): QUESTIONNAIRE

APPLICATION OF MOBILE TOURISM FOR KEDAH

Prototype Evaluation

The questionnaire consists of two sections first section: covers the general information; second Section: it has system aspects that measuring the functionality and usability of MTIM. Respondent are required to answer all the questions in order to complete the session.

First part: General information

This segment is about your background information. Please fill up the blanks and mark

[√]where appropriate.

1. **Gender: [ ] Male [ ] Female**

2. **Age: _____ Years**

3. **Do you own a mobile Device**

   Yes: ____ No: ____

4. **How long have you been using mobile phone ?**

   Less than 1 year___ 1 – 4 years___ Over 5 years___

5. **What the kind of mobiles you used:**

   Nokia___ I-mate___ Sony Ericsson___ Siemens___ others___

6. **Your mobile is modern type?**

Yes : ____ No: ____

Second part: System aspects

For the next part, please check or shade the answer to the following questions using the scale below.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

No.	Statement					
(1)	Using the application of mobile tourism would enable me to accomplish tasks more quickly.	1	2	3	4	5
(2)	Using the application of mobile tourism would improve the performance on tourism environment.	1	2	3	4	5
(3)	Using the application of mobile tourism would increase the productivity in tourism environment.	1	2	3	4	5
(4)	Using the application of mobile tourism would make it easier to engage get information about tourism places.	1	2	3	4	5
(5)	I find the application of mobile tourism useful in the tourism sector.	1	2	3	4	5
(6)	Know many type of tourism information by use the application of mobile tourism is easy for me.	1	2	3	4	5
(7)	I find it easy to use the application of mobile tourism to find what I want.	1	2	3	4	5
(8)	I find the application of mobile tourism are flexible to interact with.	1	2	3	4	5

(9)	My interaction with the application of mobile tourism is clear and understandable.	1	2	3	4	5
(10)	Learning to operate application of mobile tourism would be easy for me.	1	2	3	4	5
(11)	This application of mobile tourism has all the function and capabilities that I expect it to have.	1	2	3	4	5
(12)	The information retrieved by application of mobile tourism was effective in helping me to Composition of a strong background for tourist places.	1	2	3	4	5
(13)	The services listed by the application of mobile tourism as a reply to my request were suitable for my tourism environment.	1	2	3	4	5
(14)	It is easy to access all the functionality of the application of mobile tourism.	1	2	3	4	5

APPENDIX (B): INTERVIEW QUESTIONS

statement

(1) I have a trouble in the tourist information when I arrive Malaysia International Airport.

(2) I find problem when I access to the internet in some places in Malaysia.

(3) I need to use M- application on tourism places in Malaysia without access to the Internet.

(4) I need to use m-application to provide discretion about tourism places in Malaysia.

(5) When I arrive Malaysia is better to use application that provides tourist information through download it by telecommunications companies.

(6) I require mobile application to provide pictures about tourism places.

(7) I require application of mobile tourism to provide videos about tourism places.

(8) I likely to use application mobile that provide advance search to retrieve information about any place without use the places names.

Information about interview respondents

- Ms. Linda hazen alzoubi: from Russia.

  Slzoubi.linda@yahoo.com

- Ms. Dania Ammari: from America.

  dania_ammari@yahoo.com

- Mr. Sharaf kaled: from Jordan.

  sharaf.alzoubi1@yhoo.com

- Mr. Ahmad Issa: from Jordan.

  jafaar_1984love@live.com

- Mr. Ibrahim Alhuwari: From Jordan.

  ibrahimhuwari@yahoo.com

- Mr. Daniel Tosi: From Brazil.

  dan.tosi@google.com

- Mr.Adel Alahmad: From Romania.

  herradelco@yahoo.com

- Mr.Atheer Alobidi: From Iraq.

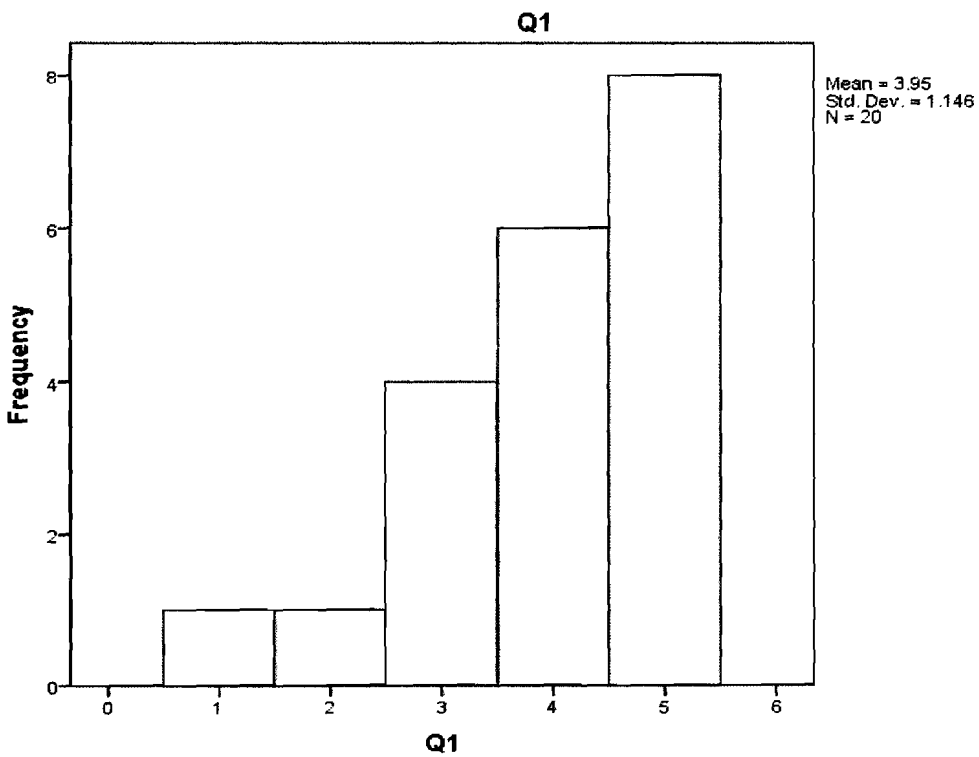
  atheer_20006@yahoo.com

APPENDIX (C):RESULTS OF THE QUESTIONNAIRE

Q1: Using the application of mobile tourism would enable me to accomplish tasks more quickly.

Q1

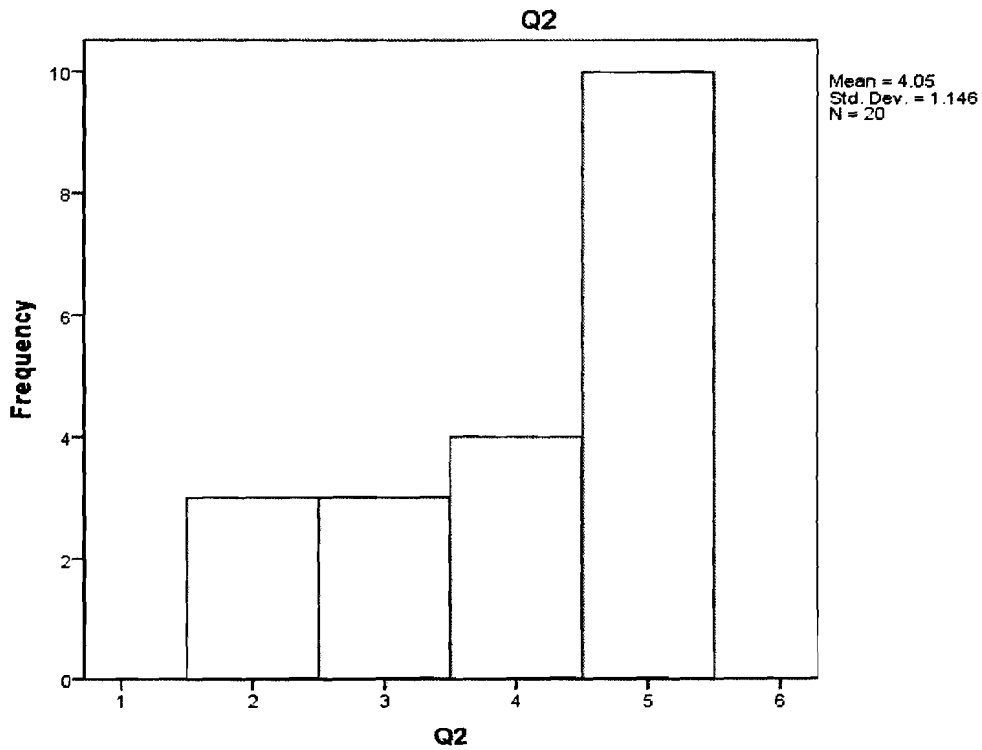
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	StronglyDisagree	1	5.0	5.0	5.0
	Disagree	1	5.0	5.0	10.0
	Netural	4	20.0	20.0	30.0
	Agree	6	30.0	30.0	60.0
	StronglyAgree	8	40.0	40.0	100.0
	Total	20	100.0	100.0	



Q2: Using the application of mobile tourism would improve the performance on tourism environment.

Q2

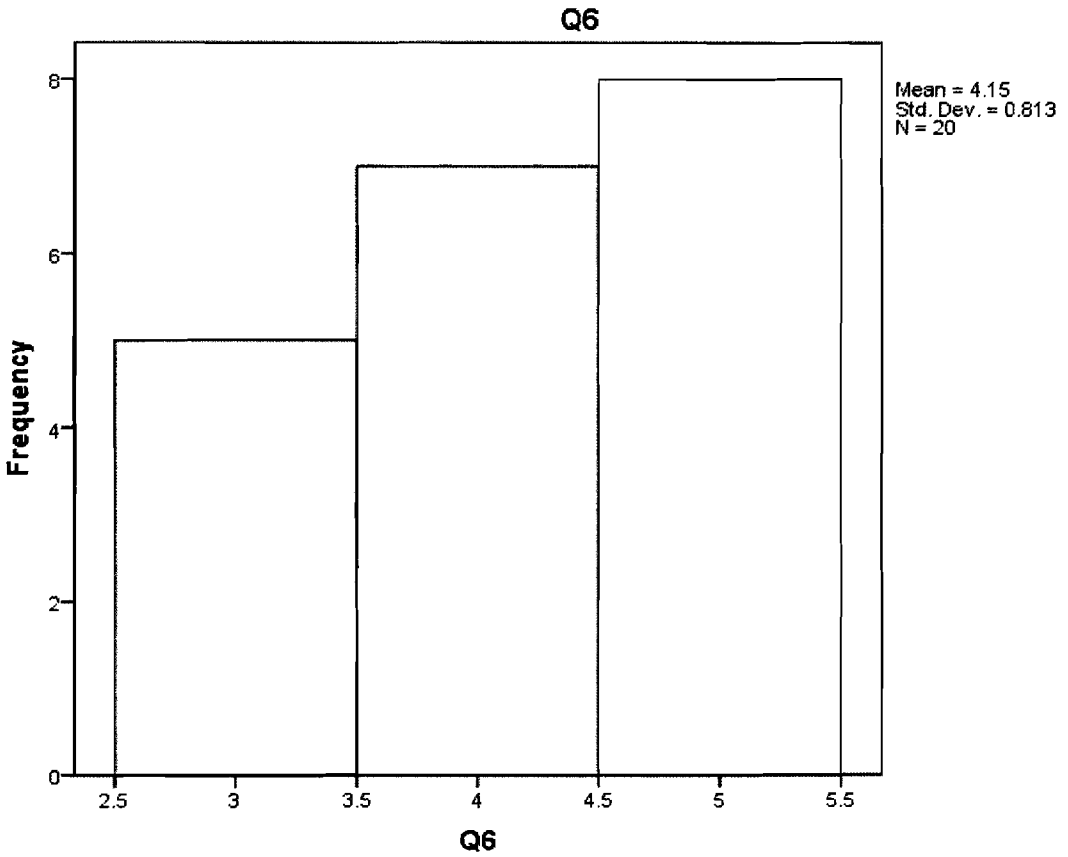
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	15.0	15.0	15.0
	Netural	3	15.0	15.0	30.0
	Agree	4	20.0	20.0	50.0
	StronglyAgree	10	50.0	50.0	100.0
	Total	20	100.0	100.0	



Q6: I find the application of mobile tourism useful in the tourism sector.

Q6

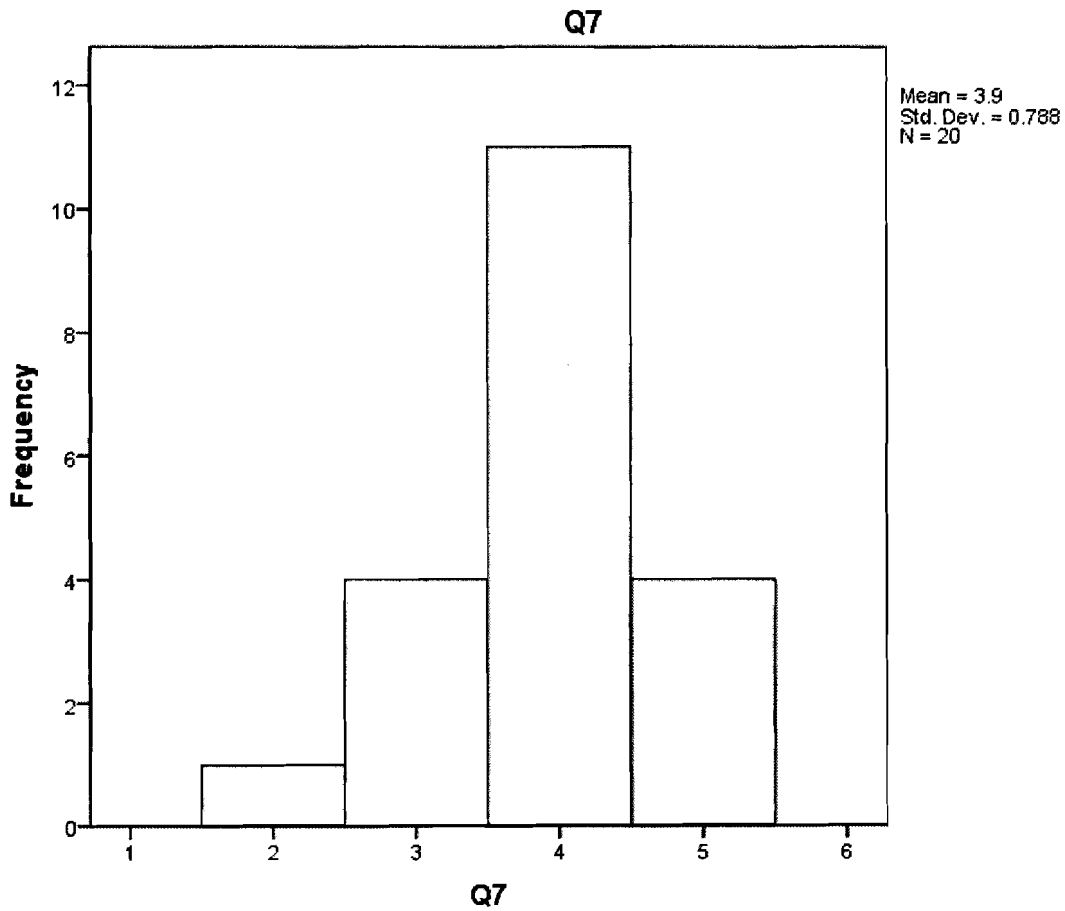
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Netural	5	25.0	25.0	25.0
	Agree	7	35.0	35.0	60.0
	StronglyAgree	8	40.0	40.0	100.0
	Total	20	100.0	100.0	



Q7: I find it easy to use the application of mobile tourism to find what I want.

Q7

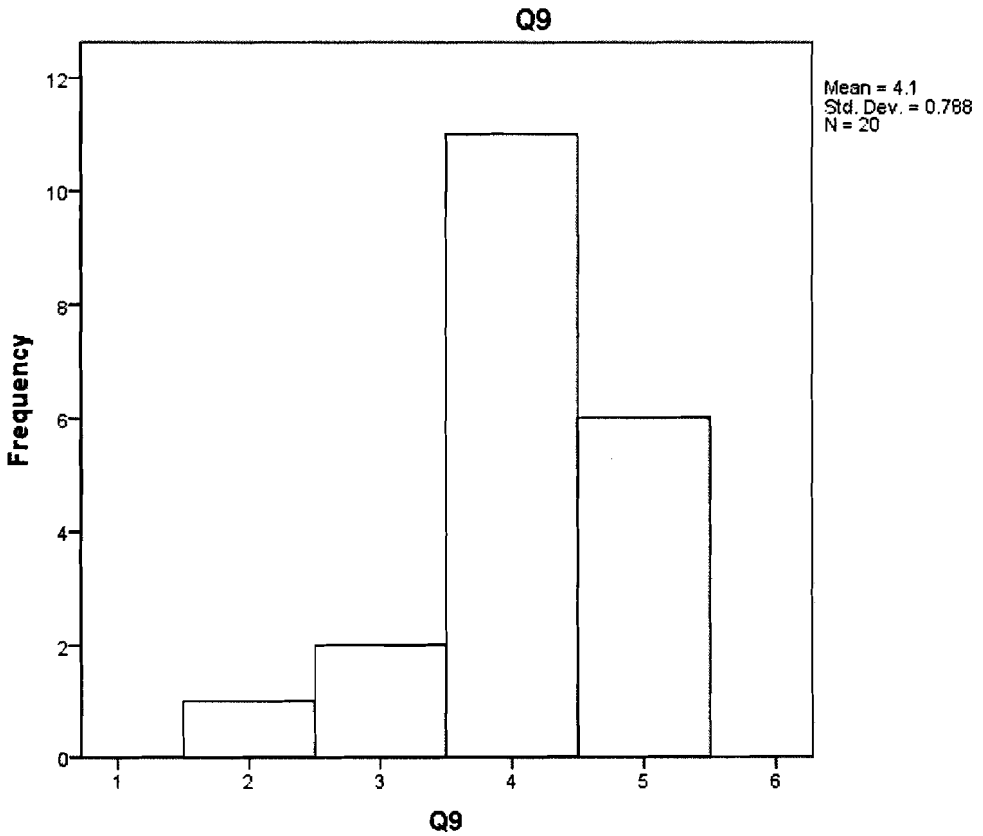
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	5.0	5.0	5.0
	Netural	4	20.0	20.0	25.0
	Agree	11	55.0	55.0	80.0
	StronglyAgree	4	20.0	20.0	100.0
	Total	20	100.0	100.0	



Q9: My interaction with the application of mobile tourism is clear and understandable.

Q9

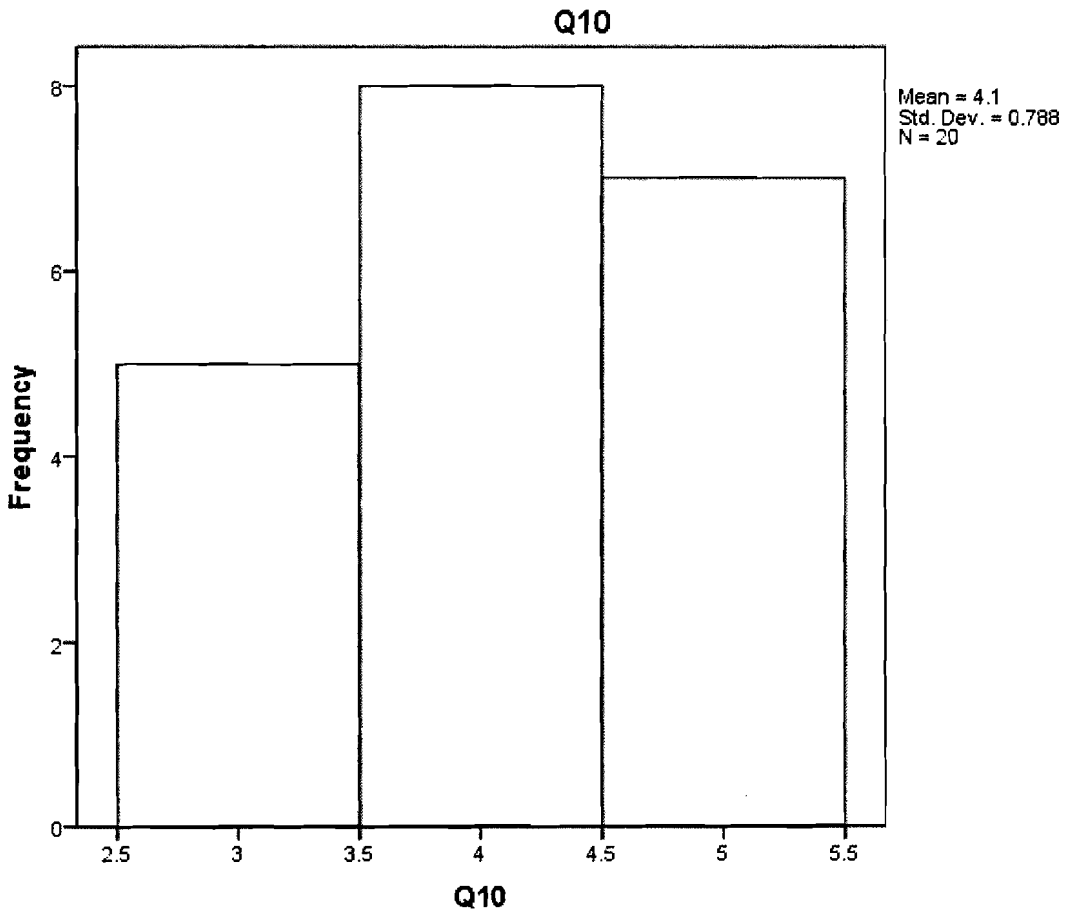
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	5.0	5.0	5.0
	Netural	2	10.0	10.0	15.0
	Agree	11	55.0	55.0	70.0
	StronglyAgree	6	30.0	30.0	100.0
	Total	20	100.0	100.0	



Q10: Learning to operate application of mobile tourism would be easy for me.

Q10

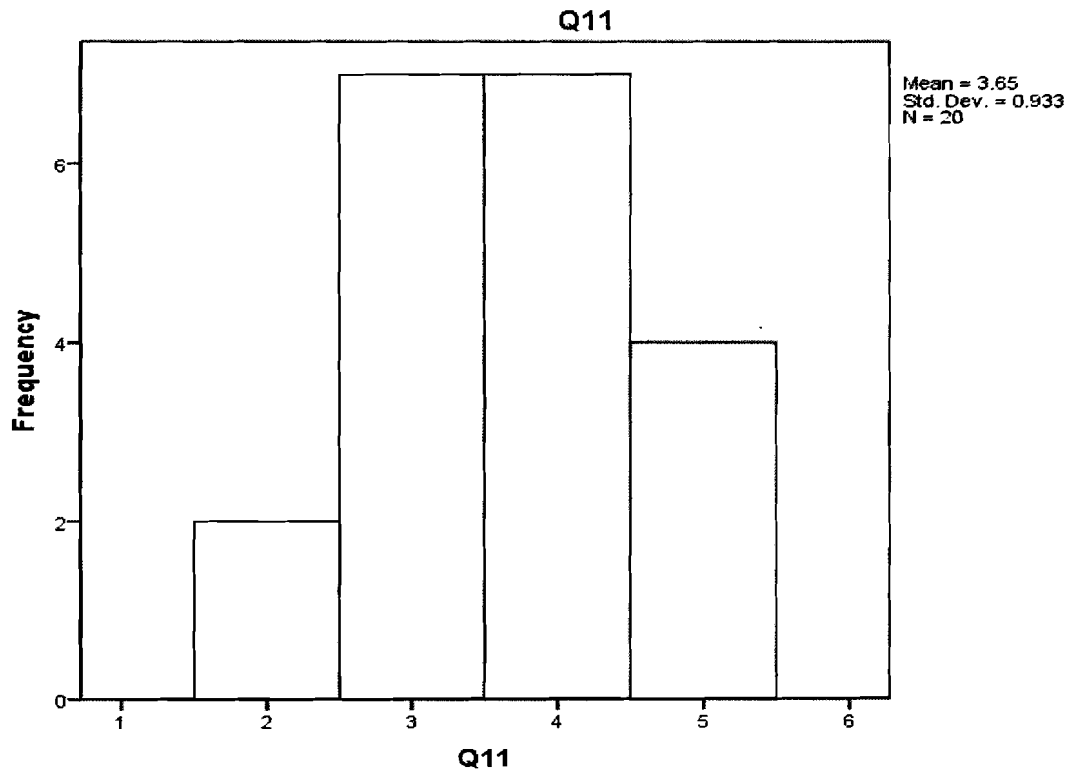
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Netural	5	25.0	25.0	25.0
	Agree	8	40.0	40.0	65.0
	StronglyAgree	7	35.0	35.0	100.0
	Total	20	100.0	100.0	



Q11: This application of mobile tourism has all the function and capabilities that I expect it to have.

Q11

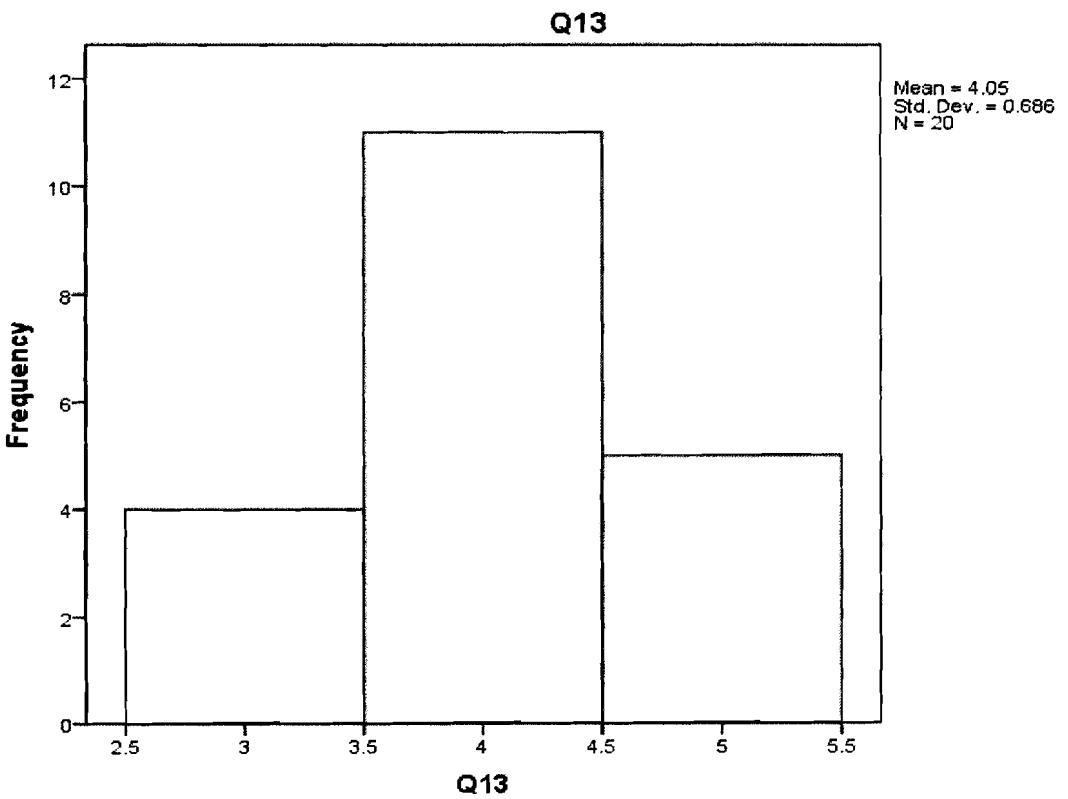
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	10.0	10.0	10.0
	Netural	7	35.0	35.0	45.0
	Agree	7	35.0	35.0	80.0
	StronglyAgree	4	20.0	20.0	100.0
	Total	20	100.0	100.0	



Q13: The services listed by the application of mobile tourism as a reply to my request were suitable for my tourism environment.

Q13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Netural	4	20.0	20.0	20.0
	Agree	11	55.0	55.0	75.0
	StronglyAgree	5	25.0	25.0	100.0
	Total	20	100.0	100.0	



Q14: It is easy to access all the functionality of the application of mobile tourism.

Q14

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Netural	5	25.0	25.0	25.0
	Agree	9	45.0	45.0	70.0
	StronglyAgree	6	30.0	30.0	100.0
	Total	20	100.0	100.0