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OKING VIA WAP

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ABSTRACT

Nowadays, bus is one of the top public transports that are used by people. Currently, most of the bus companies still using conventional style in selling their bus ticket where customers need to go to ticket counter to buy or book the bus ticket. Another way is by purchase or book the ticket online at the internet. Thus, the objective developing this system is to change the current system into the ticket booking system via wireless application protocol (WAP) using mobile phone. The purpose of the system is to give convenient to customer because mobile phone nowadays have lots of application and something that we take along with us where ever we go. To enable this system to work, PHP and MySQL were used as the programming language and the database. During developing this system, Rapid Application Development (RAD) methodology are chosen to make the development successful.

ABSTRAK

Pada masa kini,bas merupakan salah satu pengangkutan awam yang utama yang digunakan oleh orang ramai. Kebanyakan syarikat bas masih menggunakan cara biasa untuk menjual tiket di mana pelanggan perlu pergi ke kaunter untul mendapatkan tiket. Antara cara lain yang digunakan adalah pembelian atau tempahan secara dalam talian di internet. Oleh itu,objektif perlaksanaan sistem baru ini adalah untuk mengubah sistem yang sedia ada ini dengan sistem tempahan tiket menggunakan protokol aplikasi tanpa wayar melalui telefon bimbit. Sistem ini bertujuan untuk memberi kemudahan kepada pengguna memandangkan telefon bimbit telah mempunyai pelbagai aplikasi dan merupakan gadjet yang sentiasa dibawa bersama pengguna selain dapat menjimatkan masa. Untuk membolehkan sistem ini berfungsi,. PHP dan MySQL digunakan sebagai bahasa program dan pangkalan data. Rapid Application Development (RAD) merupakan methodologi yang dipilih untuk pembangunan sistem ini.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

There are more than 300 million cell phone users in this world. There are also millions of internet users in the world. Accordance to an expert, the number of users of both of these technologies will continue grow rapidly for several years. These two markets are rapidly converging on same spot: small, lightweight, inexpensive mobile computing devices that are equally suitable for high frequency voice communication, modest bandwidth 5 to 10 Kbps data communication, seamless Internet connectivity, access to Internet services such as an e-mail and content and general purpose, programmable computing devices that can run custom applications. In other word its call smart phone. A mobile is something that we take along with us where ever we go (unlike our computers) and that is one of the reasons many analysts believe that within three years more people will be accessing the Internet from mobile phones than from office or home computers. Mobile phone users have more than quadrupled in the past few years, even surpassing the growth rate of computer / internet users. Nowadays, having a mobile phone and wireless gadgets is not only a necessity but it is a lifestyle.

There is an organization, the Wireless Application Protocol (WAP) forum, whose members predicted this convergence a few years ago. The founding members, Ericsson, Motorola, Nokia and Phone.com, started collaborating to design architecture for delivering advanced data services to smart phone. This architecture, which draws heavily from existing internet technologies, is based on the protocol stack called the Wireless Application Protocol (WAP). WAP sits on top of a variety of wireless carrier. It provides services such as compression, encryption, the integration of telephony and data services, and most important, the Wireless Application Environment (WAE). For building application programs that run on smart phone.

In our country Malaysia, the applications of WAP are not widely use among mobile user except in stock, online newspapers, e-mailing and banking. In this project, the user might book the bus ticket online by using WAP.

1.2 Problem Statement

Nowadays, in our country Malaysia, most bus companies still using conventional style in selling their bus ticket where customers need go to ticket counter to buy or book the bus ticket. Nowadays, this style is not suitable because of people now become busier and the development of technologies rapidly grows continuously.

According to this problem, a research will be made to overcome it and one of the best solutions is build a system that enable user to booking ticket online by using WAP. Mara Liner bus is one of the bus companies that use online booking ticket system in Malaysia besides others bus companies.

1.3 Project Objective

The objectives of this project are:

i. To develop a system that enable user to book bus ticket online by using WAP.

ii. To develop an administrator page that enable administrator organizes this system.

1.4 Scope of Project

This project is to develop a WAP system that enable user to book bus ticket by using wireless communication such as mobile phone and PDA (Personal Digital Assistance) because of bus is the famous one public transportation in Malaysia and a lot of users outside prefer to use bus compare to another. But to this project, the system is being scope for mobile phone's users because mobile phone users have more than quadrupled in the past few years, even surpassing the growth rate of computer / internet users.

This project include the system based on web application that enabling administrator to organize the system such as manage the bus trip schedule and the system based on WAP application that enable user to book bus ticket via WAP.

1.5 Thesis Organization

Chapter 1 discussed about the system overview which describes what the system is all about including introduction, problem statement, objective and scope of the project.

Chapter 2 will explains on literature review which will discuss about the current system itself that consist of the weakness of the system, type of application used, techniques used, and development tools.

Chapter 3 will contains the methodology that will be used to implement the systems. The chapter will also describe more on the phase in the methodology.

Chapter 4 will contains the designed project development that is interface and databases.

Chapter 5 will explains on the discussions about the system that has been completed.

Chapter 6 is the conclusion for the entire chapter that has been done earlier.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction.

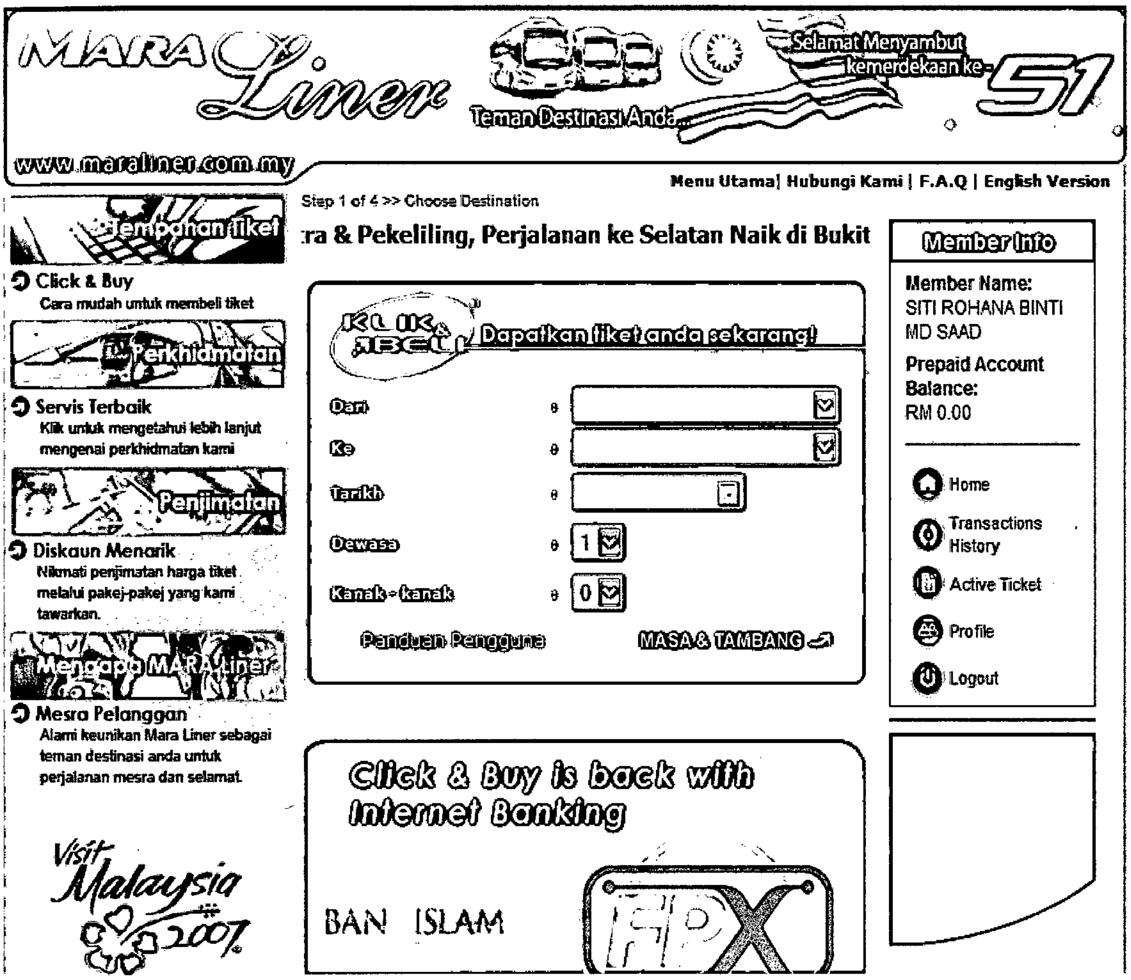
This chapter reviews about ticket booking system in Malaysia, others existence ticket booking system, database, WAP (Wireless Application Protocol), WAP protocol stack, servers and gateways and WML (Wireless Markup Language). In this part, there are some of the existences booking ticket system that customer can have alternative to book ticket; online booking and booking via mobile phone. The example given is bus, flight, taxi/ cab and train ticket booking system.

2.2 Ticket Booking System in Malaysia

In Malaysia, booking ticket by online have be a one of the most chosen way by user because it faster and seem to be easier. Lots of the booking system already use online system such booking public transport; bus, flight, taxi, and also train. Nowadays, user also can book the tickets through mobile phone.

2.2.1 Bus Ticket Booking System

Bus booking ticket by online are use for some company such MaraLiner Sdn Bhd but this system are based on HTML. For this system user need to register first to used it. This system involves four steps which are user need to select the destination and date, number of booking for first step as shown in Figure 2.1. For second step, user need to state time of departure as shown in Figure 2.2 and third step is select the bus seat as shown in Figure 2.3 and send. After these three steps are done, user has to do the confirmation to the ticket that they already booked as shown in Figure 2.4.


MARA Liner
Teman Destinasi Anda...
Selamat Menyambut kemerdekaan ke-51
www.maraliner.com.my
Menu Utama | Hubungi Kami | F.A.Q | English Version
Tempahan tiket
Perkhidmatan
Penjimatan
Mengapa MARA Liner?
Klik ABC
Dapatkan tiket anda sekarang!
Dari
Ke
Tarikh
Dewasa
1
Kanak-kanak
0
Panduan Pengguna
MASA & TAMBANG
Member Info
Home
Transactions History
Active Ticket
Profile
Logout
Visit Malaysia 2007
BAN ISLAM
FPX

Step 1 of 4 >> Choose Destination

ra & Pekeliling, Perjalanan ke Selatan Naik di Bukit

Click & Buy
Cara mudah untuk membeli tiket

Servis Terbaik
Klik untuk mengetahui lebih lanjut mengenai perkhidmatan kami

Diskaun Menarik
Nikmati penjimatan harga tiket melalui pakej-pakej yang kami tawarkan.

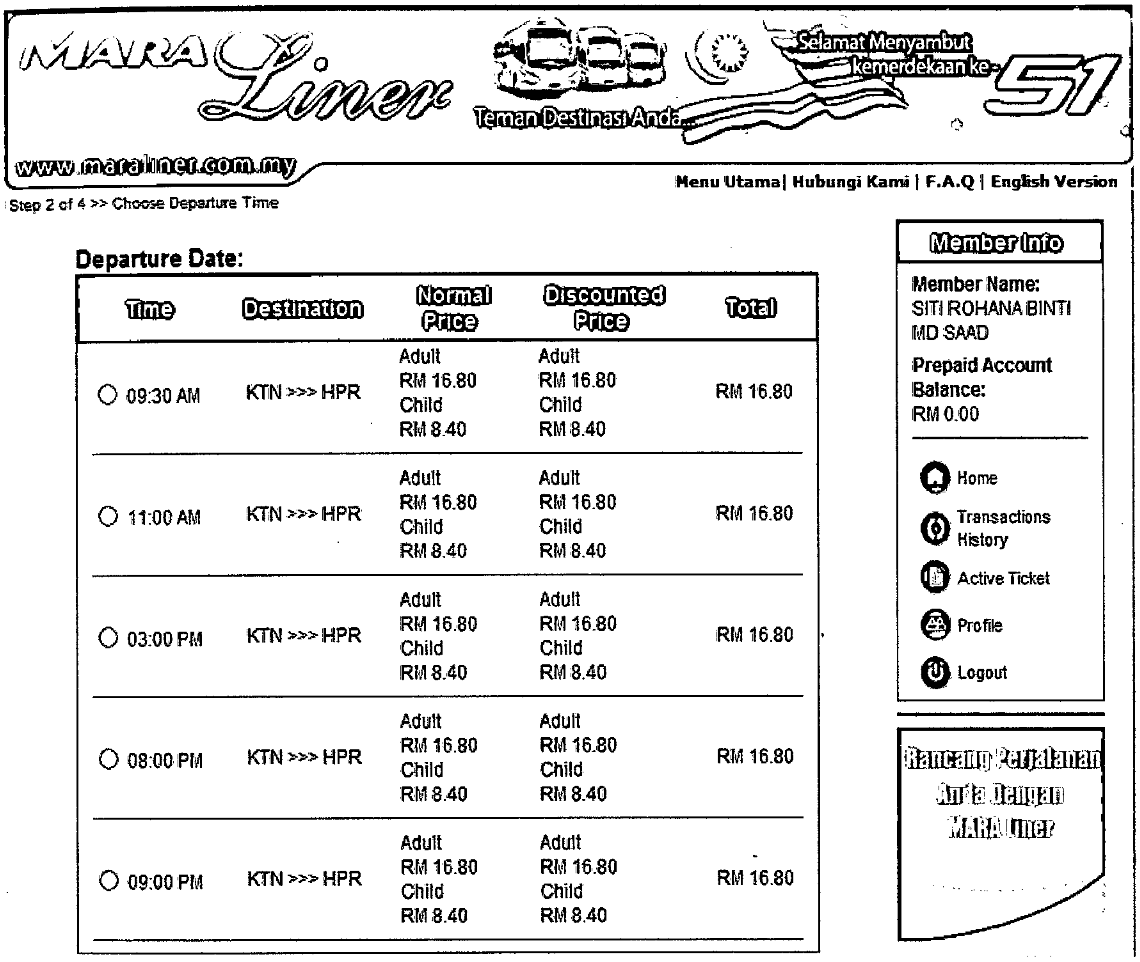
Mesra Pelanggan
Alami keunikan Mara Liner sebagai teman destinasi anda untuk perjalanan mesra dan selamat.

Member Name:
SITI ROHANA BINTI MD SAAD
Prepaid Account Balance:
RM 0.00

Click & Buy is back with Internet Banking

Figure 2.1: First Step; Choose Destination

The first step is choosing destination as shown in Figure 2.1. Customer needs to register first before book and purchase the ticket. Then customer must choose their departure and destination place, date and also the amount of the ticket for adult and children.


MARA Liner
Teman Destinasi Anda...
Selamat Menyambut kemerdekaan ke-51
www.maraliner.com.my
Menu Utama| Hubungi Kami | F.A.Q | English Version
Home
Transactions History
Active Ticket
Profile
Logout
Rancang Perjalanan Anda Dengan MARA Liner

Step 2 of 4 >> Choose Departure Time

Departure Date:

Time	Destination	Normal Price	Discounted Price	Total
○ 09:30 AM	KTN >>> HPR	Adult RM 16.80 Child RM 8.40	Adult RM 16.80 Child RM 8.40	RM 16.80
○ 11:00 AM	KTN >>> HPR	Adult RM 16.80 Child RM 8.40	Adult RM 16.80 Child RM 8.40	RM 16.80
○ 03:00 PM	KTN >>> HPR	Adult RM 16.80 Child RM 8.40	Adult RM 16.80 Child RM 8.40	RM 16.80
○ 08:00 PM	KTN >>> HPR	Adult RM 16.80 Child RM 8.40	Adult RM 16.80 Child RM 8.40	RM 16.80
○ 09:00 PM	KTN >>> HPR	Adult RM 16.80 Child RM 8.40	Adult RM 16.80 Child RM 8.40	RM 16.80

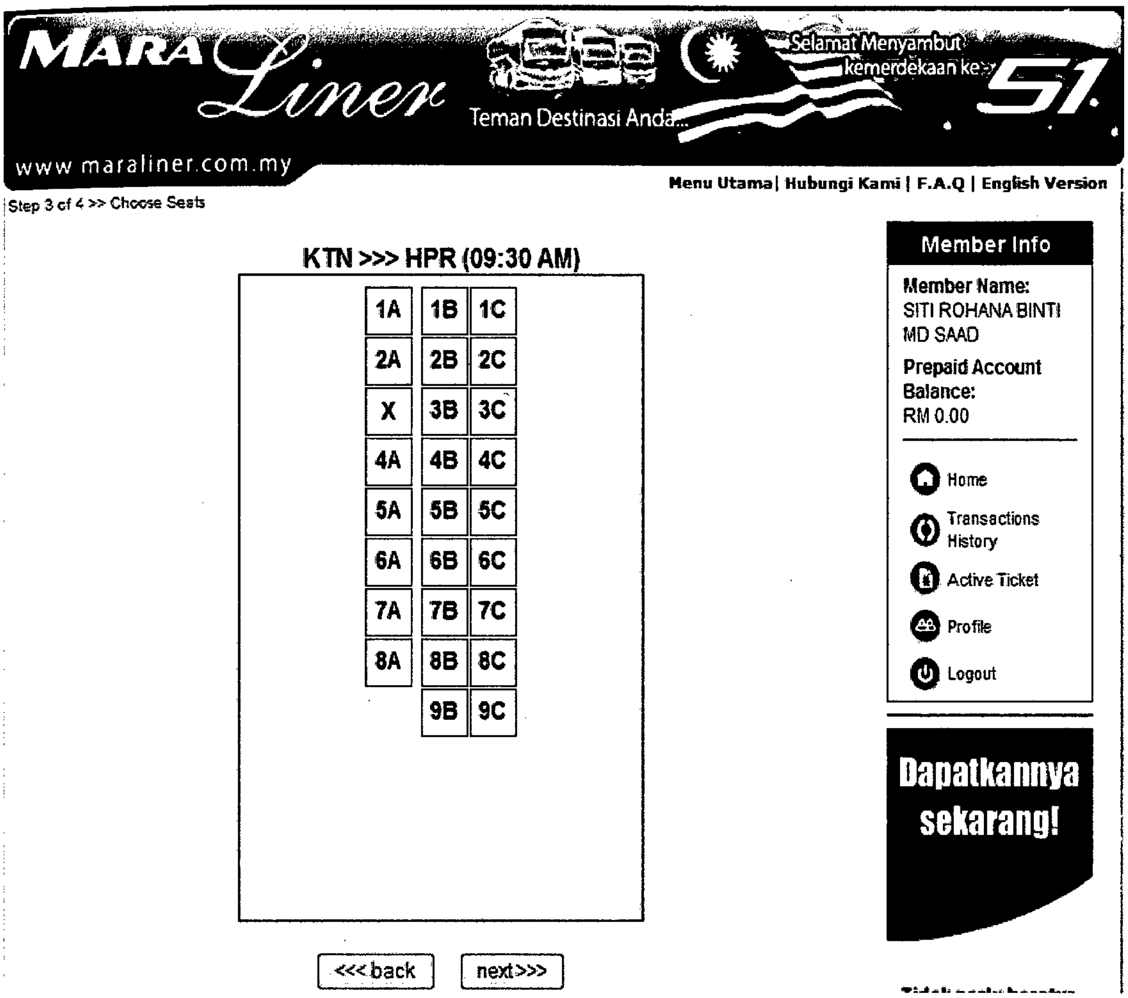
Member Info

Member Name:
SITI ROHANA BINTI MD SAAD

Prepaid Account Balance:
RM 0.00

Figure 2.2: Second Step; Choose Departure Time

The second step is choosing departure time as shown in Figure 2.2. At this step, customer needs to choose the departure time as given.


MARA Liner
Teman Destinasi Anda...
Selamat Menyambut kemerdekaan ke-51
www maraliner.com.my
Menu Utama | Hubungi Kami | F.A.Q | English Version
Home
Transactions History
Active Ticket
Profile
Logout
Dapatkannya sekarang!
<<< back
next>>>

Step 3 of 4 >> Choose Seats

KTN >>> HPR (09:30 AM)

1A	1B	1C
2A	2B	2C
X	3B	3C
4A	4B	4C
5A	5B	5C
6A	6B	6C
7A	7B	7C
8A	8B	8C
	9B	9C

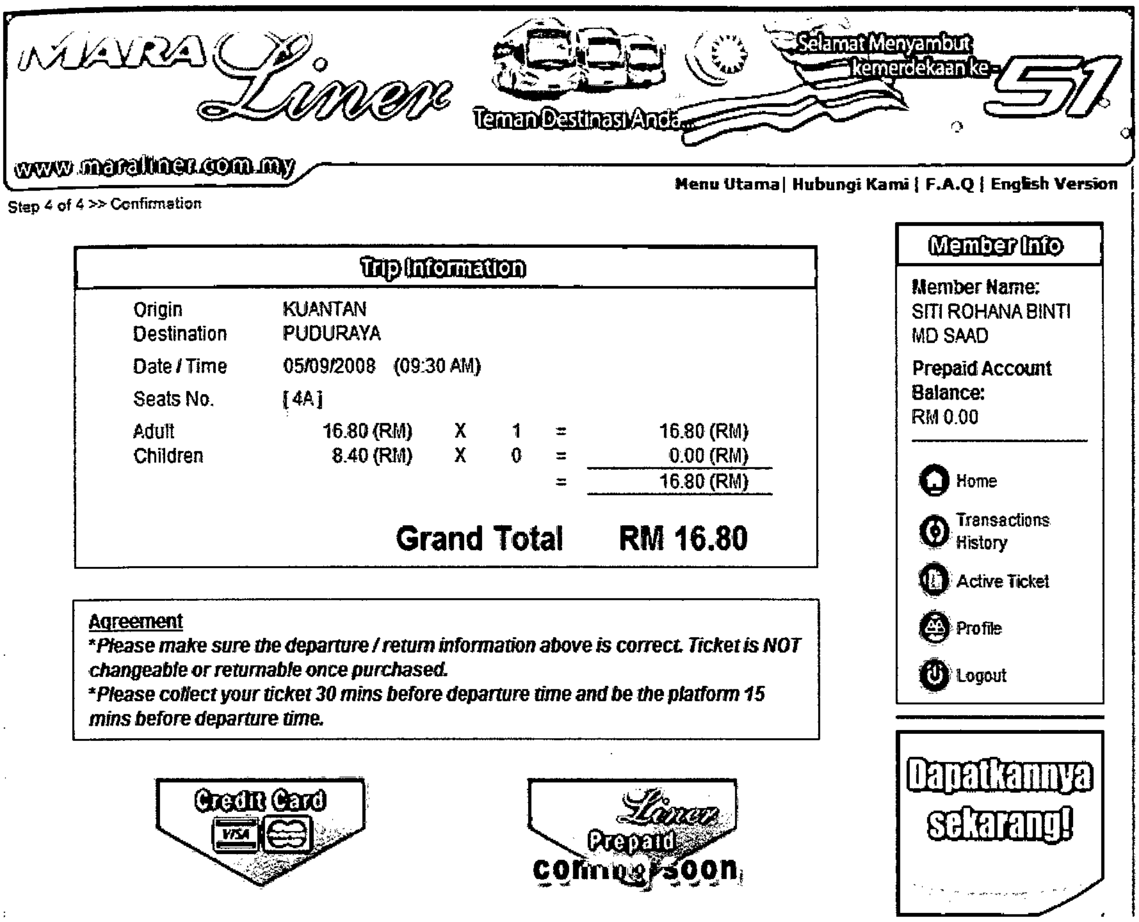
Member Info

Member Name:
SITI ROHANA BINTI MD SAAD

Prepaid Account Balance:
RM 0.00

Figure 2.3: Third Step; Choose Seats

The third step is choosing seats as shown in Figure 2.3. The system will display available seats and customer just needs choose seat that they want and proceed to the next step.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Selamat Menyambut kemerdekaan ke-51
www.maraliner.com.my
Menu Utama | Hubungi Kami | F.A.Q | English Version
Step 4 of 4 >> Confirmation
Trip Information
Member Info
Home
Transactions History
Active Ticket
Profile
Logout
Dapatkannya sekarang!
Credit Card
Liner Prepaid
coming soon

Origin	KUANTAN				
Destination	PUDURAYA				
Date / Time	05/09/2008 (09:30 AM)				
Seats No.	[4A]				
Adult	16.80 (RM)	X	1	=	16.80 (RM)
Children	8.40 (RM)	X	0	=	0.00 (RM)
				=	16.80 (RM)

Grand Total RM 16.80

Agreement

Please make sure the departure / return information above is correct. Ticket is NOT changeable or returnable once purchased.

Please collect your ticket 30 mins before departure time and be the platform 15 mins before departure time.

Member Name:
SITI ROHANA BINTI MD SAAD

Prepaid Account Balance:
RM 0.00

Figure 2.4: Fourth Step; Confirmation

The fourth step is confirmation of the information to purchase the ticket as shown in Figure 2.4. The system will display the trip information and customer needs to confirm the information.

This project is similar to this system but this project is developing to enable the customer to book the ticket using mobile phone and this project not use password that easier user to enter the system.

2.2.2 Flight Ticket Booking System

AirAsia Berhad is a low-cost airline based in Kuala Lumpur, Malaysia. It operates scheduled domestic and international flights and is Asia's largest low fare, no frills airline. AirAsia pioneered low cost travelling in Asia [1]. AirAsia today take one first step further by being the first airline in the world to offer a total, comprehensive booking system targeting mobile phones & wireless devices. This would allow mobile phone and PDAs users with any GPRS, 3G, EDGE or wireless facilities, to view the web pages directly, from anywhere in the world, 24 hours a day [2]. To book online flight ticket just need six easy steps, which is search, select, guest, contact, payment and itinerary.

i. In step 1 that is search, customer needs to decide your trip type, select the departing and arriving cities, select the departure and return date and select the number of passengers.
ii. In step 2 that is select, customer needs to select a departing and retuning flight with the chosen fare and time.
iii. In step 3 that is guest, customer needs to review carefully a summary of flight selected and fill in the guest information.
iv. In step 4 that is contact, customer needs to complete all the details, and can register as a member if the customer is not yet the registered as member.
v. In step 5 that is payment, customer needs to verify the total price for flight and select payment method.
vi. In last step that is itinerary, the page will display Flight Itinerary once the payment has been processed and will be sent to customer's email.

2.2.3 Taxi/Cab Ticket Booking System

Comfort and CityCab, both taxi companies belonging to ComfortDelGro Corporation Limited, are the largest players in Singapore's taxi industry with a combined fleet of about 15,000 taxis. The ComfortDelGro taxi booking system, arguably one of the best in the world, wirelessly connects the taxis using the General Packet Radio Service (GPRS) technology via the in-vehicle Mobile Data Terminals (MDTs) [3]. Comfort and CityCab taxi offers several ways to book the taxi such as Dial-A-Cab which is customer have to call hotline number of Comfort and CityCab, SMS Taxi Booking, and FastCall which is customer have to dial the FastCall hotline and enter designated location PIN. Customer can make quickly booking using SMS especially at peak periods, when it's nearly impossible to call through to the operators [4]. There are three methods to book taxi via SMS.

i. The 1st method is Postal Code. The SMS format is BOOK <space> postal code <space> #pickup pt. Example; BOOK 038986 #taxi stand.
ii. The 2nd method is Address. The SMS format is BOOK <space> Bldg Name, Blk No, St Name <space> #pickup pt. Example; BOOK Suntec Tower Four, 6 Temasek Boulevard #taxi stand.
iii. The 3rd method is Fastcall Pin Code. The SMS format is FC <space> Fastcall Pin Code. Example; FC 10041.

Other features of SMS Taxi Booking are:

i. Customer can cancel current taxi booking using SMS simply by send CANCEL to 71222 and the system will cancel the booking made under customer's mobile number. This will apply to all current bookings made using other methods as well.
ii. The system also can match 2 most probable addresses from customer's previous record with Comfort and CityCab under customer's mobile

number and send it back to customer. Customer just needs to send AUTO to 71222.

iii. The last feature is the system can help customer to find the postal code of customer's address by send FIND <space> Bldg Name, Blk No., St Name. Example; FIND <space> Suntec Tower Four, 6 Temasek Boulevard.

2.2.4 Train Ticket Booking System

Keretapi Tanah Melayu Berhad (KTMB) or Malayan Railways Limited is the main rail operator in Peninsular Malaysia. Fares are generally reasonable, but the low speed of the intercity trains does not usually make them competitive with other modes of transportation [5]. However, it still one of the most useful and popular transportation among user. Like other public transportation, train ticket also can be book and purchase online. Now, besides offering travel services that are both comfortable and safe, Starting from June 03, 2008, Intercity Services has embarked on a new era of servicing 'SMS Mobile Ticketing', the easier way to book train ticket. Intercity Services is always on the move to research and market new technologies to provide better and fast services for customers to reach us through the Ticketing System, ticket counters and call centers [6]. There are two steps to make booking train ticket via SMS:

i. The 1st step is making a booking. The format is KTMB <from> <destination> <quantity adult> <quantity children> <date> and send to 32425. Example; KTMB KL JB 2 0 19/2/08. After customer sends this SMS, customer will receive from 32425 like RM1.00: KTMB: Train from KL to JB on 01/06/08 AEC Class 1)0800 2)1400 3)2200. Choose time & SMS SAH 1, 2 or 3to 32425 for confirmation. Example SAH 1.

ii. The 2nd step is confirming booking. Customer needs to send confirmation SMS like SAH 1 to 32425. After that, customer will receive confirmation verification from 32425 like RM1.00: KTMB: 2

AEC Class Ticket from KL to JB on 01/06/08 0800 successfully booked. Ref. No. AAVWFN. Please collect before 29/05/08.

Customer also able to find information about the available ticket by simply sends INFOKTM <from> <destination> <date> to 32425. Example INFOKTM KL JB MAY05.

2.3 Database

Database can be defined as a structured collection of records or data that is stored in a computer so that a program can consult it to answer queries. The records retrieved in answer to queries become information that can be used to make decisions [7].

The central concept of a database is that of a collection of records, or pieces of information. Typically, for a given database, there is a structural description of the type of facts held in that database: this description is known as a schema. The schema describes the objects that are represented in the database, and the relationships among them. There are a number of different ways of organizing a schema, that is, of modeling the database structure: these are known as database models (or data models). The model in most common use today is the relational model, which in layman's terms represents all information in the form of multiple related tables each consisting of rows and columns (the true definition uses mathematical terminology). This model represents relationships by the use of values common to more than one table. Other models such as the hierarchical model and the network model use a more explicit representation of relationships [7].