Organizer Online (Wireless Environment)

by

Wan Ahmad Hilmi B Mohd Nasihuddin 1902

A Project Dissertation submitted in partial fulfillment of

the requirements for the

Bachelor of Information Technology (Hons)

Information System

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Universiti Teknologi PETRONAS

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CERTIFICATION OF APPROVAL

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Approved by,

(signature)

(Mr. Helmi B Rais)

UNIVERSITI TEKNOLOGI PETRONAS
TRONOH, PERAK
Jun 2004

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CERTIFICATION OF ORIGINALITY

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

(WAN AHMAD HILMI BIN MOHD NASIHUDDIN)

ABSTRACT

The objective of this project is to provide an online organizer in wireless website so that all people can afford to have an organizer on their own. By developing this wireless website it can encourage people to organize themselves by using an online organizer. This will be more interactive and will attract them to use it since this is a new technology and it is easy to use.

The idea came out when the people are facing a problem which is they cannot afford to buy an organizer device. Since a lot of them have a cell phone, they can access Internet from their phone and surf this website. This website provides an organizer online to the customer for free access.

Based on the study that has been done, some of people need this website in order to help them to organize themselves. In order to develop this project, the focus thing will be given to understand a new language, which will be Wireless Markup Language (WML). Since it is a new language, it may take a long time in order to get a really understanding of this knowledge. Besides that, this development also required knowledge about creating an account for every user and the security of the website. This is important in order to keep all their information confidential. The user should have a user name and password in order to login to the website. This could be the critical part since there is not much example since this technology can be considered as new technology.

For this project, it is decided to develop the website by applying Waterfall Model as the methodology to be used. Since this is a well-defined project, this is the best method to be used. This model will divide this project into some sequential stages. Every stage must be completed before beginning the next stage.

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A special appreciation and thanks to beloved parents and last but not least, to all my friends all around the world. All your patience and commitments were my inspiration throughout the project development. Thank you all for sharing brilliant ideas, knowledge and worthy experiences with me to accomplish this project.

Table of Content

CHAPTER ONE

Introduction

This Online Organizer is consists of Notes, To-Do List, Contacts and News. For the new user, they have to register by fill in the form given to them in the register pages. This is important because the provider of this wireless website may need to contact the user through e-mail or their phone number. If they are already registered, they can just login and start to use the facility given.

User can list down all the things that they need to be done in the To-Do List section. There is a section where they can add a new To-Do List and also to view all of them. They also can put all the important notes that they want in the Notes part for example important date such as birthday. They also can update their friends' information such as changes of phone number in the Contacts part.

For the News, the user can only view the news that posted by the administrator. In this section, the administrator not only can post the world news, but also the important announcement to the user. By having this section, the user not only can up-to-date with the latest information but also will be informed if there are new facilities in this website.

1.1 Problem Identification & Significance of the Project

Nowadays a lot of people want to have an organizer but not all of them can afford it. This is because the price of organizer device range from $300 to $2000 and for a pocket PC, the range is from $1500 to $3000. It is too expensive especially for a student to have an organizer device. Traditionally, people organize themselves by using a diary. They just write down all the things that need to be done in order to organize themselves. Since the technology is developing day by day, they start to use an organizer device.

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People who cannot afford to buy it will stick to the traditional way. This project will solve this problem when they can have an affordable organizer.

Some of people do a lot of traveling. This is not a problem since the user can access this website from anywhere as long as they can access Internet. Seems today, accessing Internet is not a big deal anymore since there are a lot of cell phones that provide Internet access through GPRS. In addition, a lot of people nowadays have a cell phone that can access Internet since the price of the cell phone become lower day by day rapidly. In fact, even student in preliminary school also own a cell phone. It is expected that in the future, there's millions of cell phone's users can access Internet. This will make highly mobile people will found this website will be very useful to them especially in the future.

People also tend to forget. This is one of the problems that can be solved within this project. Since this website will include to do list facilities, they could just get online and log in to their account because all of the important things that they need to be done will be there as they put in it before. Their information would be save since there is security such as the usage of password in login.

Besides that, this competitive world also makes people become very busy. They don't even have time to reading a newspaper. A lot of student didn't know what going on around them. Within this website which provide the headline in the News part, it will give at least some information to this group of people.

1.2 Objectives and Scope of Study

The objective of this project is to give the opportunity for every person to organize his or her life without buying an organizer device. Instead of buying an organizer, this project will provide an online organizer. The user can access their account from anywhere through their cell phone. It is important that phone is equipped for connect to the Internet since not all cell phones model can connect to the Internet. This is important because this website is a wireless website and it needs Internet connection.

Currently the price of this type of cell phone is not too cheap but for the future, the price will become cheaper since the price is getting lower day by day.

Besides that, the objective of this project is to remind the users of their schedule. This is because this website will provide a To Do List facility as a reminder to them. They will key in the things to be remembered in To Do List page and then they can view at any times they want.

The next objective is to encourage people to organize their life in a new way. This is a new way for them to organize themselves in a cheapest way if the price of the phone is not included. Basically this website is for the GPRS user. They just need to create their account in the wireless website and then they will have their own organizer.

In addition, this project is also including some of the things that never been taught in Universiti Teknologi Petronas (UTP) such as Wireless Markup Language (WML). This is a new technology, which can make this project become more interesting.

CHAPTER TWO
LITERATURE REVIEW

Literature Review & Theory

In this competitive world, people trying so hard in order to compete with the others. Every person becomes busy day by day. There's too much things to be remembered. Organizer has already become a need to a lot of people especially to business people. Organizer Online is the best solution. Some survey has been done in several website such as www.secureaction.com and www.csoftlab.com. This website is promoting their software that worked such as organizer. Unfortunately, not everybody can afford it. They cannot afford to have it not because of they don't have enough money but mostly because they don't have a credit card since the payment for the software must be done online and it needs credit card. Once again, Organizer Online (GPRS) is the best solution. Instead of buying the software and you can only use it on your computer or buying an organizer device which really expensive, you can just use Organizer Online (GPRS) where you can access from anywhere through your cell phone as long as it have internet connection.

The General Packet Radio Service (GPRS) is no longer a standard or concept. It is real and it has implemented in mobile networks and some mobile phones supporting it are arriving in high street stores for the general public and being sold to corporate customer by network operators. GPRS is an important steppingstone to the IP world for mobile networks, providing an interim step for 3G (3rd Generation).

GPRS will provide a boost to mobile data usage and usefulness. That much seems assured from its flexible feature set due to its latency and efficiency and speed. The only question is how soon it takes off in earnest and how to ensure that the technical and commercial features do not hinder its widespread use.

However the research shows that the usage of GPRS is become so popular lately. This is proved when a lot of giant companies make a move in this area in order to compete with each other. Since August 1999, Nokia has delivered and implemented more than 50 GPRS core networks to leading operators in Europe, USA, Asia and China, and now has the largest installed base of any supplier. SMG31 is the first specification that fully meets the GSM (Global System for Mobile communication) Release 97 standard enabling the GPRS core network to cope with multivendor environments and roaming between operator networks. Nokia also had cooperated with Sonera in order to develop this new technology. It shows that Nokia really have a big intention to popularized the usage of GPRS.

From the research also, it is identified that GPRS is hot, but WiFi (Wireless Fidelity) and 3G are important too. Wireless data in the form of GPRS is now rivaling fixed line dial-up in terms of perceived importance for mobile professionals. Over 85% rate GPRS importance as significant or higher. Interest in WiFi hotspots is less, but two thirds of respondents see a place for this approach in their overall mobile strategy. Something that's encouraging for cellular operators is that 44% are already taking 3G seriously, despite the current lack of real 3G solutions for the corporate sector.

Although the Wireless Web is still very much in its infancy, a majority of television commercials focus on ways users will exploit their Web-enabled phones to become more productive at work, to perform time-consuming tasks while they are on the go, and even how users will purchase items ranging from fast food to airline tickets using their phones. More than 20 millions users are already connected to Wireless Web. And it is expected that the numbers of the user will keep growing much higher from year to year and this is an opportunity to study on Wireless Web since it will becomes one of the most powerful tools in the future.

2.1 Wireless Technology

Wireless technology is receiving so much attention. This technology not only grabs the attention from cell phone manufacturer and telecommunication provider, but this technology also receives attention from automobile manufacturers. For example, Toyota is forming divisions devoted to the development of wireless technology. Some of automobiles in Japan are already built with wireless devices to send and receive e-mail right from the dashboard. In September 2000, Toyota Motor Corporation announced that it would establish the Toyota InfoTechnologies Center Co., Ltd. This is because they start to realize the importance of wireless information and communication.

The wireless are now is rapidly developed. Begin with the 1G (First-Generation) technology, it used the analog wireless phone system. It was 1970's back then and lasted through 1980's. Then, begin in 1990s, 2G (Second Generation) came out where it is include digital cellular phone and it is currently in used in worldwide. This technology allows digital streams to be sent over to the wireless medium using Code Division Multiple Access (CDMA). Both of this generation (1G and 2G) suffers from low capacity of 10Kbps. This is because both of them are using circuit-switching technology.

Now the 3G (Third Generation) have come out. 3G will enable wireless device to send and receive data as much as 7 times faster than a standard 56 Kbps modem. 3G is broadband digital and it uses based on packet switching technologies. In the future, 4G (Fourth Generation will come out which is now are still on the drawing board. 4G mobile phones will provide CD-quality sound and can be used to download MP3 Files. 4G phones also will be equipped with GPS (Global Positioning System) which will help in locating user. It is expected that the development of 4G will come very soon seems this technology is receive so much attention and it keeps developed rapidly.

2.1.1 Wireless Web Technology

One of the topics in wireless technology is wireless web technology. There are three technology are used to provide Web Access to wireless device. There are Wireless Application Protocol (WAP), web clipping and Microsoft's Pocket Internet Explorer, part of Pocket PC

WAP

The most important approaches to wireless communication are standard accessibility. In 1997, the Wireless Application Protocol (WAP) was developed by Nokia, Ericsson, Motorola and others to foster the emergence of the wireless Internet. The WAP is a set of communication protocols designed to enable different kind of wireless devices to communicate and access the Internet. WAP is designed to standardize development across different wireless technologies worldwide.
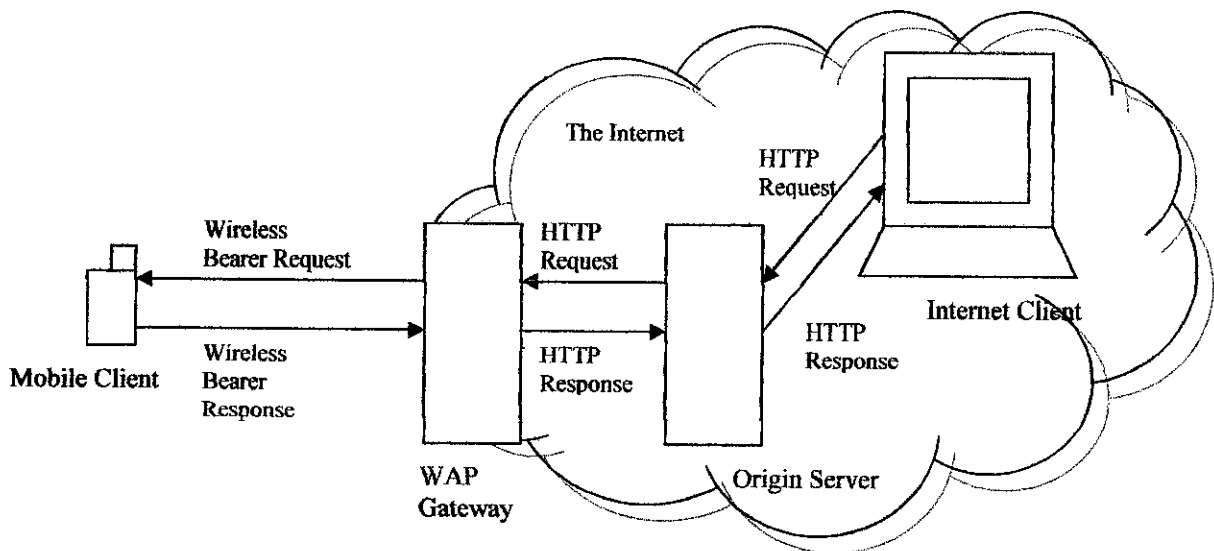

This is how the Web work.

The WAP, which is intended primarily for Internet enabled digital phones, pagers and other handheld devices, uses website specifically designed for wireless handheld that have small screens and low bandwidth constraints. Differ from desktop computer, handheld device doesn't have the powerful processing ability like a desktop computer. That is why the handheld device cannot have the same multimedia capabilities like a computer device. Besides that, they also may not have a keyboard, so user input is likely to be more awkward than on a desktop computer.

The Wireless Markup Language (WML) is the scripting language used to create Web content to be delivered to wireless handheld devices. This language had been used in order to develop this project. It is based on Extensible Markup Language (XML), removed 'unnecessary' content from web pages, such as graphics and animation. WML tags are used to 'mark up' a web page to specify how the page should be formatted on a wireless device. Without graphics and animations, the transmission consumes less bandwidth and memory and it becomes easier to view on the small screens of wireless devices. WML work with WAP to deliver the contents.

Consider a digital phone that request a web page on the Internet. A WAP gateway, which acts as a proxy server, receives the request, translate it and send it to the appropriate Internet server. The server response by sending the requested WML document. The WAP gateway parses this document's WML and sends the proper text to digital phone.

WML is mostly about text. Tags that would slow down the communication with handheld devices are not a part of the WML standard. The use of tables and images is strongly restricted. WML pages are called Decks. They are constructed as a set of Cards, related to each other with links. When a WML page is accessed from a mobile phone, all the cards in the page are downloaded from the WAP server. The phone computer does navigation between the cards, which is inside the phone. This means that the navigation between cards is done without any extra access trips to the server.

Encoded
request

Request

Handheld
Devices

Encoded
content

Content

Gateway
(WAP Server)

Web Server
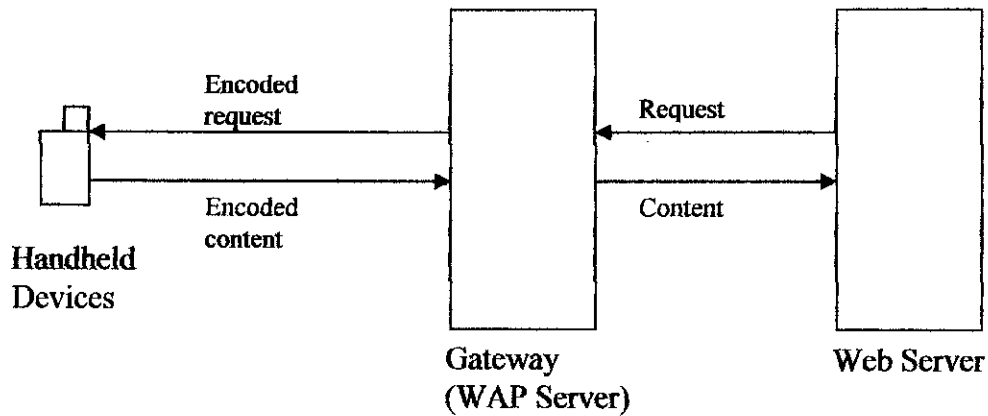
WAP and WML

WML uses WMLScript to run simple code on the client. WMLScript is a light JavaScript language. However, WML scripts are not embedded in the WML pages. WML pages only contain references to script URLs. WML scripts need to be compiled into byte code on a server before they can run in a WAP browser.

Today, the use of WAP becomes popular day by day. A lot of companies start to involve in the development of this technology. Examples of WAP use currently are:

- Checking train table information
- Ticket purchase
- Flight check in
- Viewing traffic information
- Checking weather conditions
- Looking up stock values
- Looking up phone numbers
- Looking up addresses
- Looking up sport results

<u>Web Clipping</u>

Web clipping is the technology that makes the relevant pieces of a web site taken and delivers it to wireless device possible. This technology eliminates excess content and graphics that can make browsing the site on a wireless device cumbersome. Web clipping is developed by Palm Inc., which is the leading manufacturer of PDAs. Palm has designed web clipping applications for many of the most popular website. Palm web clipping uses a proxy server to respond to queries for web pages. A proxy server lies between the client (such as a Web browser) and the regular web server.
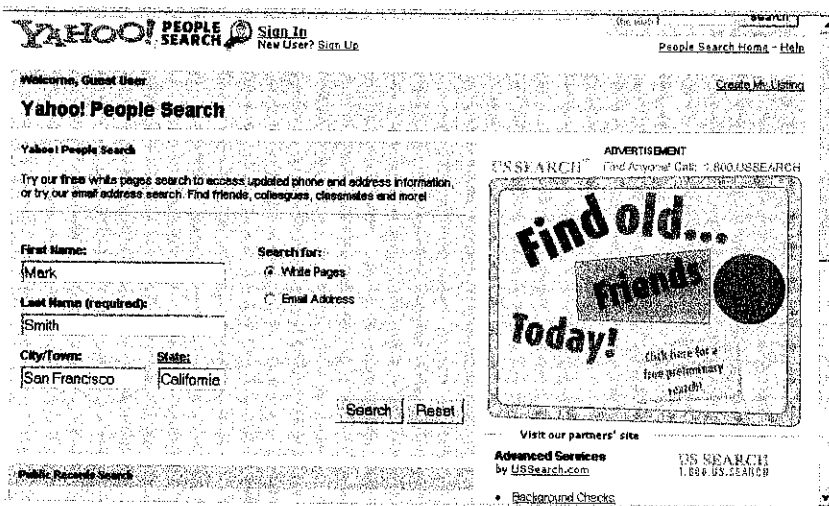
This is the example web site before being 'clipped'.

This is the example web site after being 'clipped'.

<u>Microsoft's Pocket Internet Explorer</u>

Microsoft's Pocket PC platform takes a different approach to displaying web content on hand-held devices. Pocket PCs include Pocket Internet Explorer, which reformats complete web pages as they are downloading from the Internet for display on the pocket PC. This process allows pocket PC users to access most of the content currently available on the web and eliminates the needs to tailor web content for delivery to handheld devices. Pocket Internet Explorer supports HTML, XML and other popular standards used in web development. Users sync (or network) their pocket PC with their desktops and download their favorites web sites to their pocket PC. This gives users access to information on the sites, even when they are not online.

This is the example of website that have been download from pocket PC using Microsoft's Pocket Internet Explorer.

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2.2General Packet Radio Service (GPRS)

General Packet Radio Service is the latest technology for providing packet data services. It has a higher bandwidth, which create a higher speed for data transmission compared to standard GSM. According to Tutun Juhana and Maiyusril, GPRS is designed to provide packet data services at higher speeds than those available with standard GSM circuit-switched data services.

From the www.symbian.com, it is found that General Packet Radio Service is a radio technology for GSM networks that adds packet-switching protocols, shorter set-up time for ISP (Internet Service Provider) connections, and offer the possibility to charge by amount of data sent rather than connect time.

Both definition shows that GPRS have advantage in a lot of ways. This new technology not only has a very high speed compared to standard GSM, but also has the greatest advantage, which is GPRS is a packet-switching technology. This means that a given user consumes RF (Radio Frequency) resources only when sending or receiving data. If a user is not sending data at a given instant, then another user can use the timeslots on the air interface. GPRS will eliminate wasted dial up connection times. In addition GPRS also allows the user being always online. For example if the users are using Yahoo Messenger using GPRS, even if they stop surfing the internet, they will always considered online and will receive the message just like they still online.

By using this technology (GPRS), a user can save a lot of money since they are only charged based on the receiving data only. Before this (using GSM) the charge is depend on the time they are using the Internet connection. The worst part is standard GSM have a very low speed which means the user have to pay much more since the air time is very long. GPRS runs at speeds up to 115 kilobits per second, much faster compared with current GSM (Global System for Mobile Communications) systems' 9.6 kilobits.

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GPRS promises to support flexible data transmission rates typically up to 20 or 30 Kbps, as well as continuous connection to the network. A 2.5G enhancement to GSM, GPRS is the most significant step towards 3G, needing similar business model, and service and network architectures.

It is also a new network element in GPRS technology such as Packet Control Unit (PCU). The PCU is a logical network element that is responsible for a number of GPRS-related functions such as the air interface access control, packet scheduling on the air interface, and packet assembly and re-assembly.
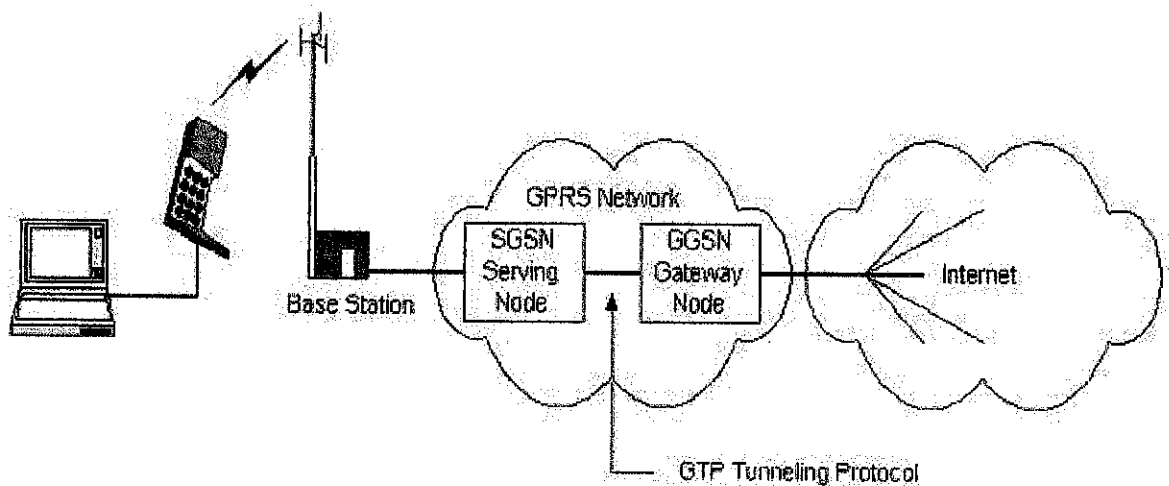
The picture above shows how the cell phones are connected to the Internet. The GPRS is relies on a network of base stations.

*SGSN = Serving GPRS Service Nodes
*GGSN = Gateway GPRS Service Nodes

2.2.1 Architecture in GPRS

Maxis Communication brought the GPRS technology to Malaysia. It is expected that more than 3 millions subscriber for Maxis Mobile will subscribe for this facility in the next two years. By combining the technology with Motorola, Maxis came out with architecture combines voice, data and multimedia in one broadband, internet-protocol (IP) based network. This encompasses access networks, applications, services and end-point devices to enable Internet services over wireless networks, voiceover IP and global, feature-rich mobile services.

SNDCP: Subnetwork dependence Convergence Protocol
LLC: Logical Link Control
RLC: Radio Link Layer
MAC: Medium Access Control

Ref: GSM 03.60 series
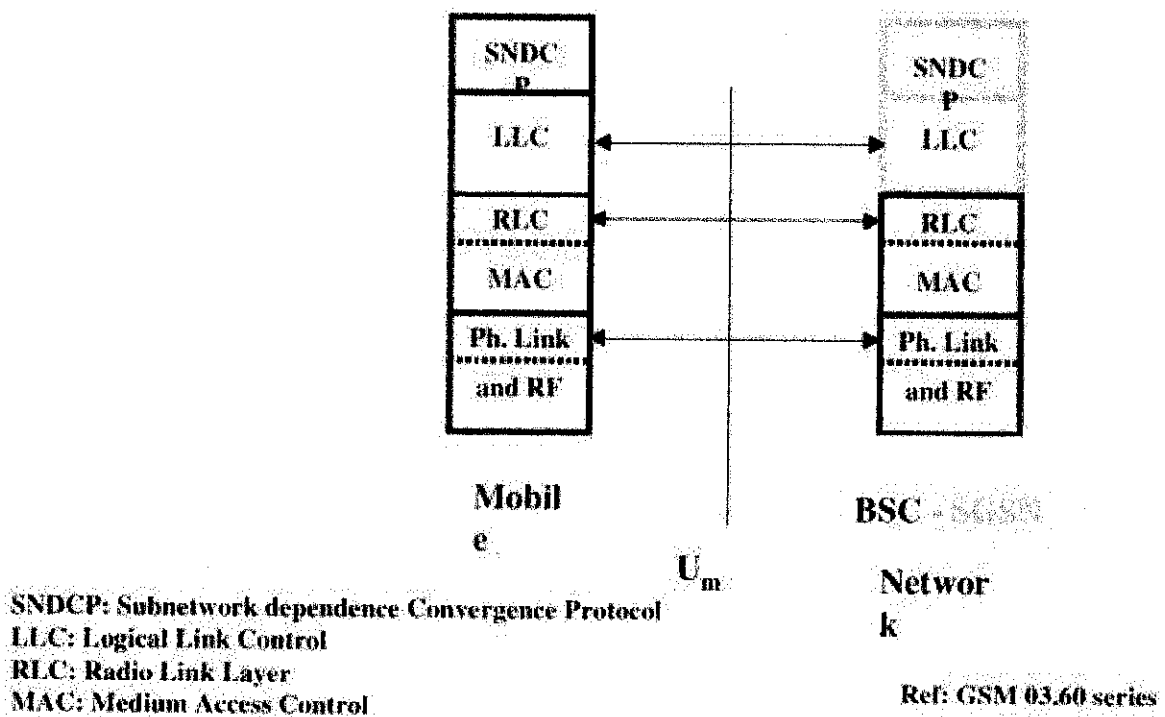
GPRS architecture used by Maxis Mobile.

*BSC = Binary Synchronous Communication

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CHAPTER THREE
METHODOLOGY AND PROJECT WORK

3.1 METHODOLOGY

Since this project will using Waterfall Model as the methodology, it is decided that this project will be divided into four main phases. This model was chosen because this project is clearly is a well-defined project. The waterfall model is a popular version of the system development life cycle model for software engineering. Often considered the classic approach to the systems development life cycle, the waterfall model describes a development method that is linear and sequential.

Waterfall development has distinct goals for each phase of development. Imagine a waterfall on the cliff of a steep mountain. Once the water has flowed over the edge of the cliff and has begun its journey down the side of the mountain, it cannot turn back. It is the same with waterfall development. Once a phase of development is completed, the development proceeds to the next phase and there is no turning back.

The advantage of waterfall development is that it allows for departmentalization and managerial control. A schedule can be set with deadlines for each stage of development and a product can proceed through the development process. Development moves from planning, analysis, design and implementation. Each phase of development proceeds in strict order, without any overlapping or iterative steps. It is estimated that for this project, the critical part will be in the design and the implementation phase since it is the time where all the coding will be applied.

Planning

During this phase, identification of the goals and objectives of the project had been done. The objective of this project is to give the opportunity for every person to organize his or her life without buying an organizer device by developing Online Organizer in wireless environment.

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All the activities that need to be done for the whole project had been scheduled properly. It means that every activity in all four phases had been planned in detail. The flow of this project had been planned to avoid the unexpected things happen and to prepare for the unexpected things.

Analysis

In the analysis phase, determination of all the tools that is needed in order to complete this project had been done. All the details and information gathered was analyzed in this phase. Some coding was currently being analyzed to have the better understand.

For example, the following coding needed just to have the pages as shown below.

```
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">
<wml>
<card title="Paragraphs">
<p>
This is a paragraph
</p>
<p>
This is another<br/>with a line break
</p>
</card>
</wml>
```

The coding in Wireless Markup Language (WML)

```
------- Paragraphs -------

This is a paragraph

This is another
with a line break
```
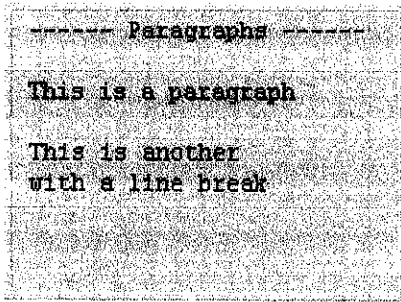
This is the result of the
coding given

Design

In this phase, a storyboard for the whole project will be made. The purposes of the storyboard are to show how the flow of this wireless website and how this wireless website would be looked like. Besides that the storyboard can help the developer to make it as a guide in order to develop this wireless website.

The storyboard and workflow are developed by listing all the pages that will be developed in this wireless website. The flow of the website and the link between them must been defined in these session to make it easier to developer to develop this website according to the storyboard and workflow given. Every link from one page to another page should be planned carefully in order to promote user-friendly in this website.

The design of the user interface also will be done in this project. The design will be definitely meet the user requirements in order to satisfy the user. It is planned to collect some feedback on the design so that the design of this project can be improved. Form the feedback the design will be changed to meet the standard. Since this is wireless website, there's actually not much to worry on the attractiveness of the site because there are a lot of limitation for the wireless website. For example it is still impossible to insert flash movies in the site. The space in this site also is limited.

Implementation

In this phase, the implementation of all the design in the Design Phase for this project will be done. It is planned to upload this project to the web server. This is to ensure that this wireless website really worked. This is also the time where the system encoding, debugging and testing for overall system will be done. Besides that, in this phase also is the time where this work or project will be presented.

```
┌─────────────┐
│   Analysis  │◄─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┐
└─────────────┘                                         │
        │                                               │
        ▼                                               │
    ┌─────────────┐                                     │
    │   Planning  │◄─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐  │
    └─────────────┘                                  │  │
            │                                         │  │
            ▼                                         │  │
        ┌─────────────┐                               │  │
        │   Design    │◄─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐  │  │
        └─────────────┘                            │  │  │
                │                                   │  │  │
                ▼                                   │  │  │
            ┌──────────────────┐                    │  │  │
            │  Implementation  │◄─ ─ ─ ─ ─ ─ ─ ─ ┐  │  │  │
            └──────────────────┘                  │  │  │  │
                    │                ┌───────────────────────────┐
                    └───────────────►│        Maintenance        │
                Product             └───────────────────────────┘
                deliverable
```
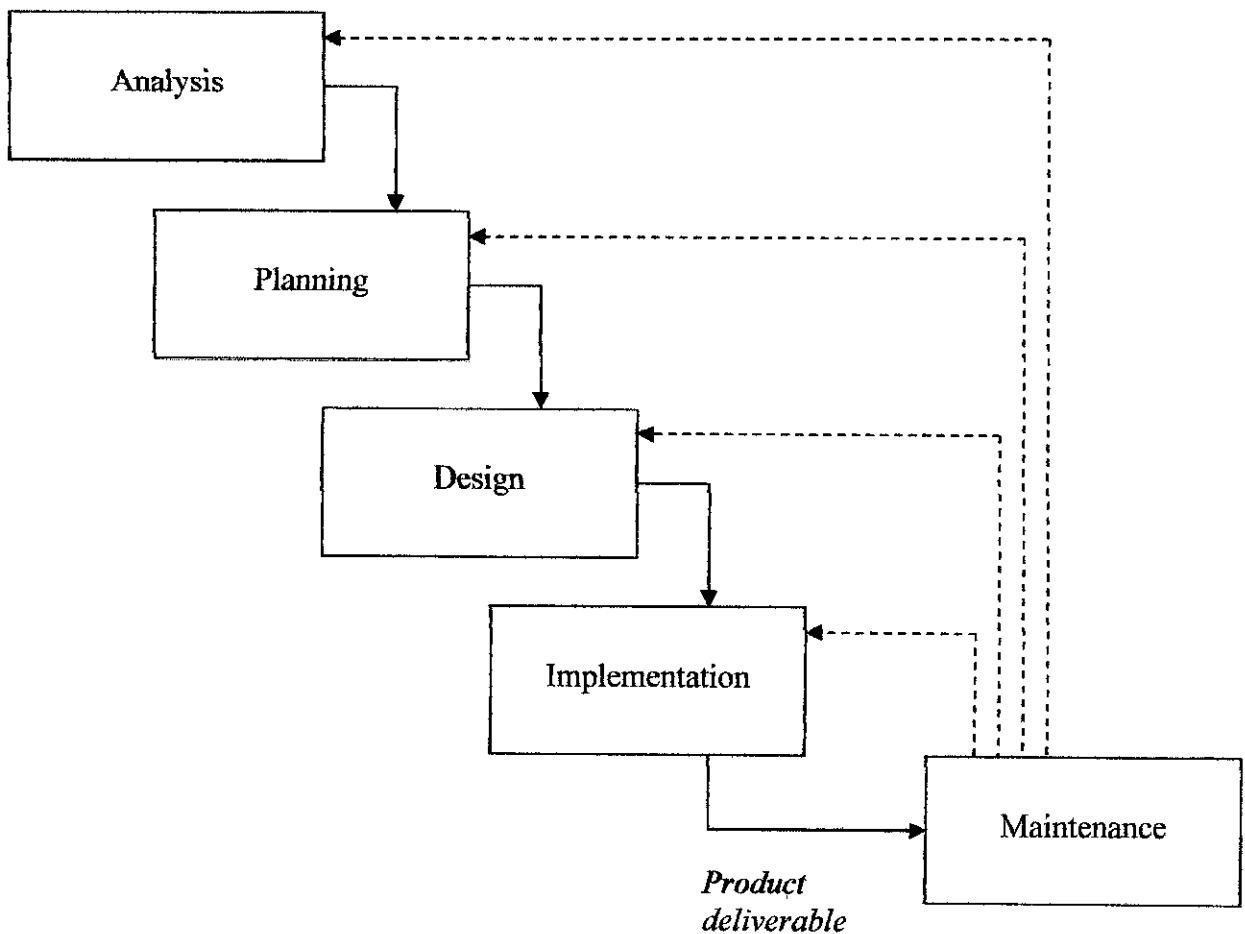
Illustration of Waterfall Model

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3.2 TOOLS

After made some analysis and consideration, it is decided to use several software. Some additional had been made for the tools that will be used for the project in this Progress Report since it is discovered that in order to develop this project, it is needed for using some others software. Here are current list for the software that will be used for the project:

1.   MySQL Server

   - Will be used as a server.

2.   WML (Wireless Markup Language)

   - Will be used for coding purposes

3.   Mobile Browser Simulator

   - Will be used to compile or test the code.

4.   PHP

   - Will be used for coding purposes in order to connect to the database.

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CHAPTER FOUR
RESULTS AND DISCUSSION

This chapter will be divided into two parts. The first one will be the result from the entire project and activities. The second part will be the discussion of the overall project.

Results
<u>Result from Questionnaires</u>

From the planning analysis, twenty of the questionnaires have been distributed to get the feedback from the community. The purpose of this survey is to know how importance of organizer to them. Based on the feedback, 19 out of twenty answers that people answered are 3 out of 5. These questionnaires mostly answered by the students in University Technology of Petronas (UTP).


In the same time, it is found out that no one from them already have organizer device. Based on the importance of organizer rated by them, it seems that they have intention to have an organizer but cannot afford it or they may think that it is not worth it to buy an organizer device, which are so expensive. To buy the software that worked as such as organizer, which are sold in the website such as <u>www.secureaction.com</u> and <u>www.csoftlab.com</u>, they don't even have the credit card which required to buy this software. Since most of them have the cell phone that can connect to the Internet, Online Organizer could be the best answer to them.

*The example of questionnaires is included in the appendices.
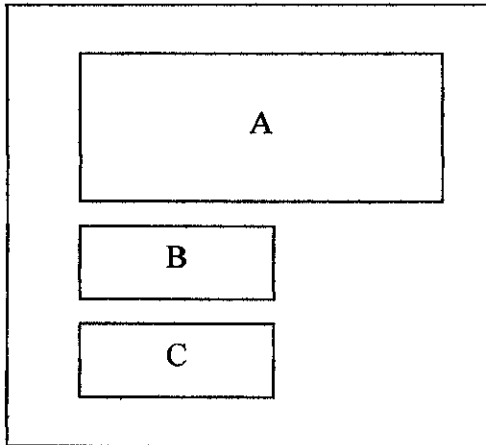
Result from Design Phase

From the Design Phase, the developer had come out with the workflow and the storyboard for the project. This is important in order to ensure the development process of this website are moving smoothly. The link between the pages are planned carefully to keep this website user-friendly.

Workflow
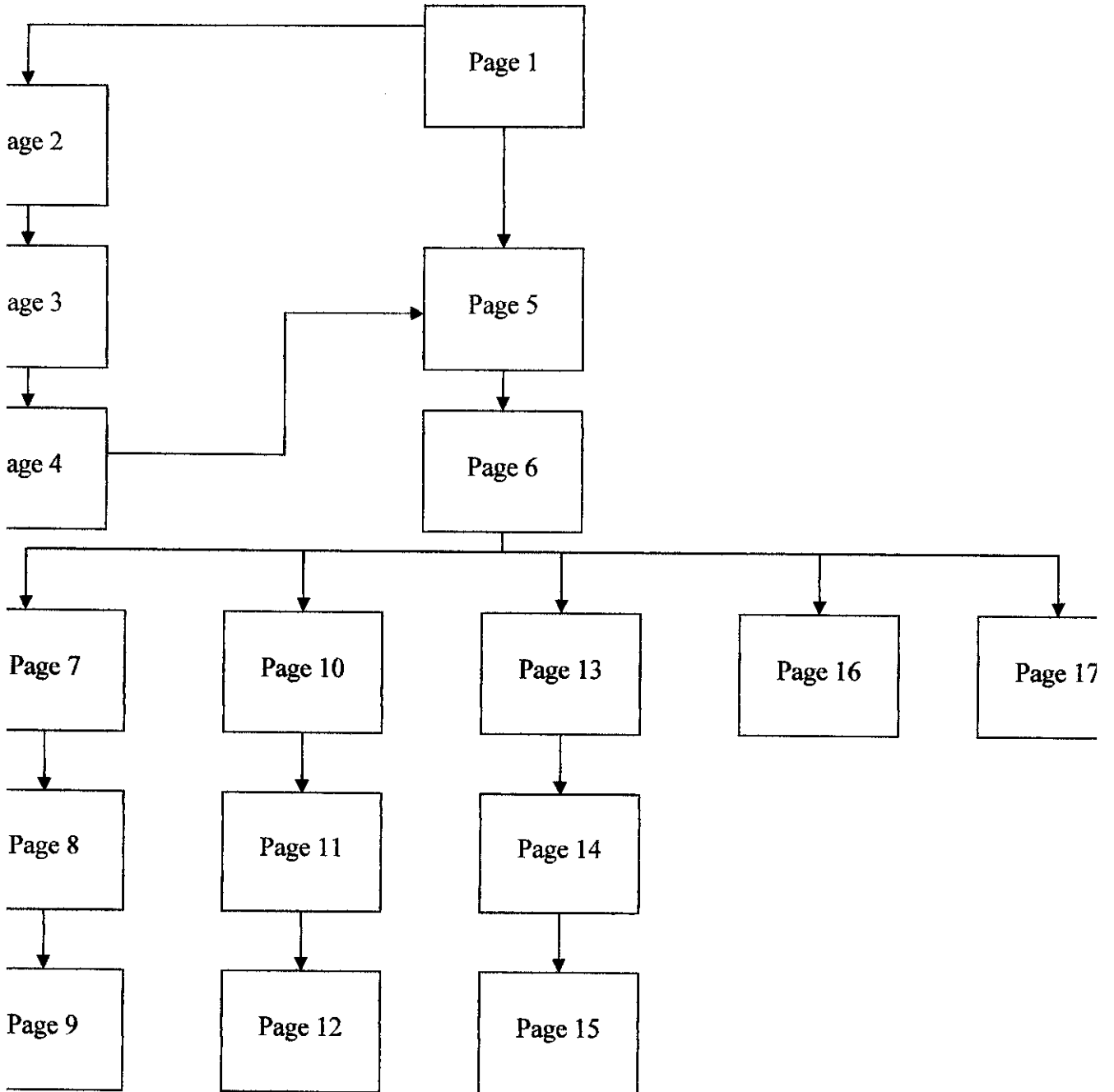
Page 1

This is the welcome page where in the section A, there will be welcome notes written to greet the user.

If the users is already register, then they can log in otherwise the have to register

A – Welcome Text
B – Log In [Link to page 5]
C – Register [Link to page 2]

Page 2
Page 3
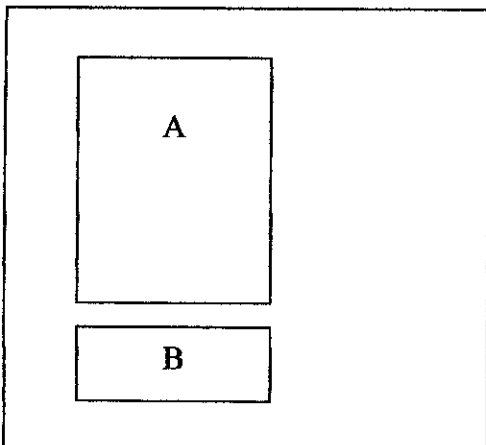
This is the page for the registration. For the user-friendly purposes, there are two pages for the registration, which are page 2 and page 3.

Section A is the form that the user needs to fulfil in order to register.

For the 2nd page, section B will be the link to page 3 and for the 3rd page, it will be the link to page 4.

A – Form
B – Next / Submit [Link to page 3 / 4]

Page 4

```
┌─────────────────────────────┐
│ ┌───────────────────┐       │
│ │                   │       │
│ │         A         │       │
│ │                   │       │
│ │                   │       │
│ └───────────────────┘       │
│ ┌───────────────────┐       │
│ │         B         │       │
│ └───────────────────┘       │
│                             │
└─────────────────────────────┘
```

A – Next Instruction
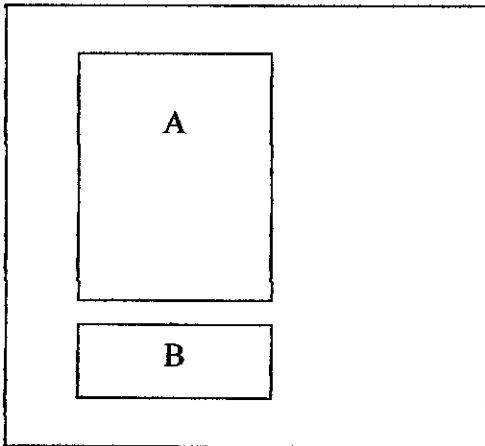B – Log In [Link to page 5]

This is the page where in the section A, the user will be noticed that they are already registered.

Section B is the link for the user to enter the page to log in.

Page 5

```
┌─────────────────────────────┐
│ ┌───────────────────┐       │
│ │                   │       │
│ │         A         │       │
│ │                   │       │
│ │                   │       │
│ ├───────────────────┤       │
│ │         B         │       │
│ └───────────────────┘       │
│                             │
└─────────────────────────────┘
```
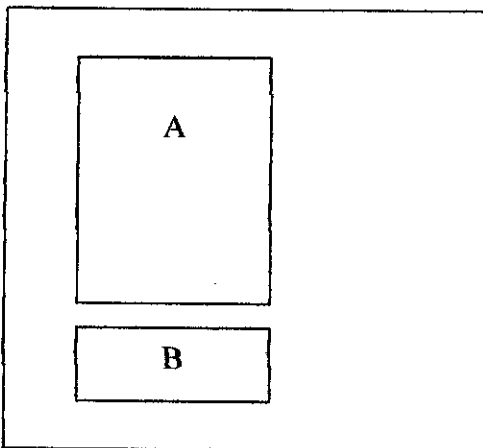
A – Form
B – Log In [Link to Page 6]

This is the log in page where the user needs to write the user name and the password in the section A.

Section B is the link for the user to enter the Organizer Online and go to Main Page.

Page 6

```
┌─────────────────────────┐
│   ┌───────────────────┐  │
│   │        A          │  │
│   └───────────────────┘  │
│   ┌───────────────────┐  │
│   │        B          │  │
│   └───────────────────┘  │
│   ┌───────────────────┐  │
│   │        C          │  │
│   └───────────────────┘  │
│   ┌───────────────────┐  │
│   │        D          │  │
│   └───────────────────┘  │
│   ┌───────────────────┐  │
│   │        E          │  │
│   └───────────────────┘  │
└─────────────────────────┘
```
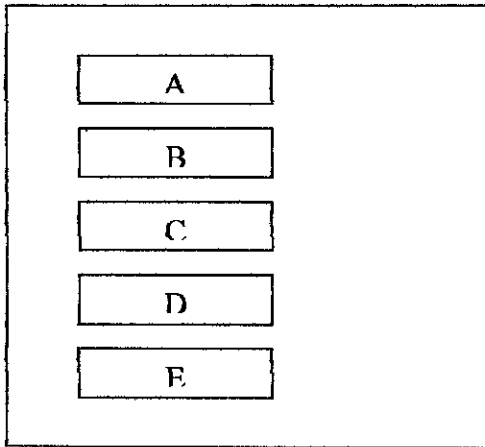
A – Note [Link to page 7]
B – To-Do List [Link to page 10]
C – Contact Number [Link to page 13]
D – What's New [Link to page 16]
E – Log Out [Link to page 17]

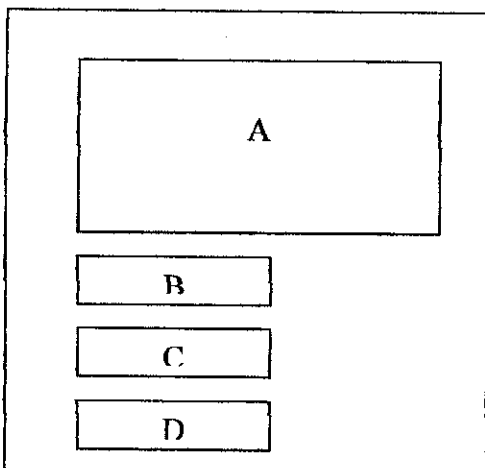This is the Main Page where all the features in Online Organizer will be placed in this page.

Section A, will be the link to the user to enter the Note page.

Section B, will be the link to the user to enter the To-Do List page.

Section C, will be the link to the user to enter the Contacts page.

Section D, will be the link to the user to enter the News page where the hot news will be placed in here.

Page 7
Page 10
Page 13

```
┌─────────────────────────┐
│   ┌───────────────────┐  │
│   │                   │  │
│   │        A          │  │
│   │                   │  │
│   └───────────────────┘  │
│   ┌───────────────────┐  │
│   │        B          │  │
│   └───────────────────┘  │
│   ┌───────────────────┐  │
│   │        C          │  │
│   └───────────────────┘  │
│   ┌───────────────────┐  │
│   │        D          │  │
│   └───────────────────┘  │
└─────────────────────────┘
```

A – Instruction Text
B – Add New [Link to page 8 / 11 / 14]
C – View [Link to page 9 / 12 / 15]
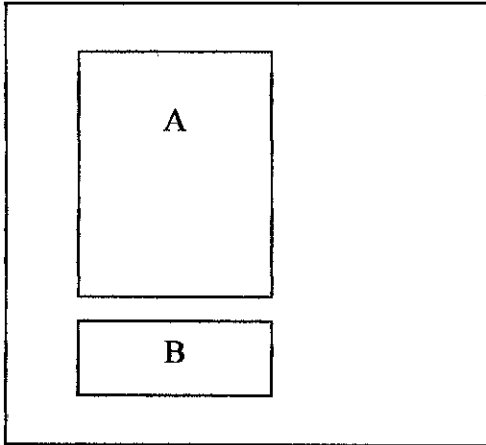D – Back to Main Page [Link to page 6]

Page 7, 10 and 13 will have the same format but there are different page and link to the different database.

For page 7, section B and C is to add or view the notes. Meanwhile for page 10 they will link to add or view To-Do list. For the 13th page, it used to add or view the contacts information.

Section A is an instruction to guide the user. The instruction will be different for every page.

Section D has the same purpose, which is to go back to the main page.

Page 8
Page 11
Page 14

```
+-----------------------------+
|  +----------------------+   |
|  |                      |   |
|  |          A           |   |
|  |                      |   |
|  |                      |   |
|  +----------------------+   |
|  +----------------------+   |
|  |          B           |   |
|  +----------------------+   |
|                             |
+-----------------------------+
```
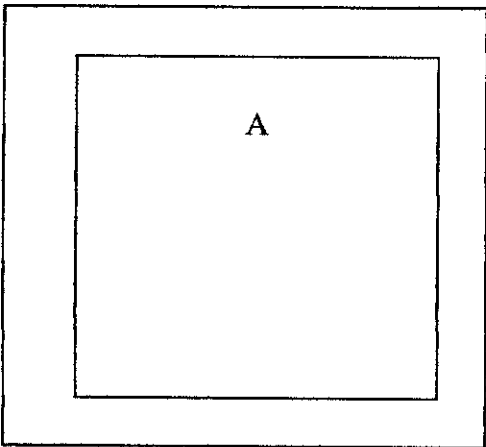
A – Form
B – Save [Link to page 7 / 10 / 13]

This is the page for the user to add the note, To-Do list or contacts information.

They have almost the same format for every page but there are connected to different field in the database according to the page they entered. For example, in 8th page, the section A will be the form for the user to add note.

Section B is the button to save all the information written in the section A.

Page 9
Page 12
Page 15
Page 16

```
+-----------------------------+
|  +----------------------+   |
|  |                      |   |
|  |                      |   |
|  |          A           |   |
|  |                      |   |
|  |                      |   |
|  |                      |   |
|  +----------------------+   |
|                             |
+-----------------------------+
```
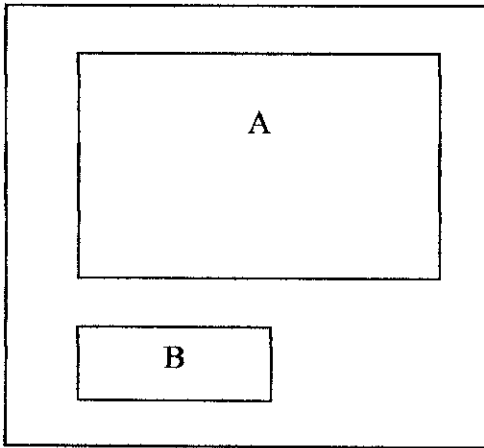
A - Form

This is the page where the section A will retrieve the information from the database according to the information requested.

For example, page 9 will show the user all the notes that have been written by the user.

Meanwhile page 16 is for display the latest news from Online Organizer Administrator.

27

```
+-----------------------------------+
|  +-----------------------------+  |
|  |                             |  |
|  |                             |  |
|  |              A              |  |
|  |                             |  |
|  |                             |  |
|  +-----------------------------+  |
|                                   |
|  +---------------------+          |
|  |         B           |          |
|  +---------------------+          |
|                                   |
+-----------------------------------+
```

This is the log out page where will comes out when the user log out from the Online Organizer.

Section A will be the text to inform the user that they are already logged out.

Section B will bring the user to back to Welcome Page.

A – Text
B – Back to Online Organizer [Link to page 1]

Result : The interface of the website

*Due to the small screen constraint, the pages shown on the right side will show the full content in the particular page.
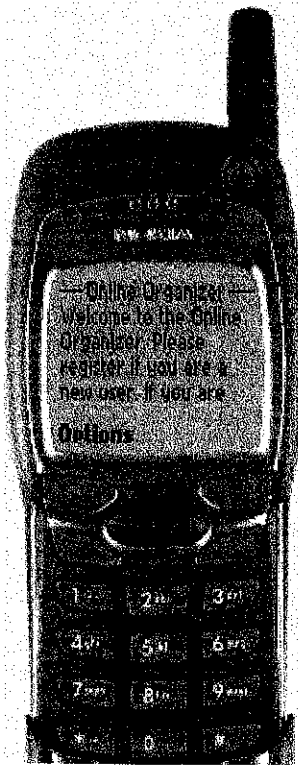
Page 1

> Online Organizer
> Welcome to Online Organizer. Please register if you are a new user. If you are already registered please log in.
>
> Register
> Log In
>
> Options

Description of Page 1

This is the welcome page. There is some written text to welcome the user. Since wireless website have a lot of limitation, then it is impossible for today's technology to include any multimedia in this site. To maintaining the user-friendly in the website, some welcome text had been done. The user can choose whether to register or log in. The developer didn't put the back button purposely. This is one way to promote the use of this facility. By doing this the user have only two choices. If the users are not yet registered then they can start register by choosing the Register button and if the users have already register, then they can log in and enter the Online Organizer web pages.
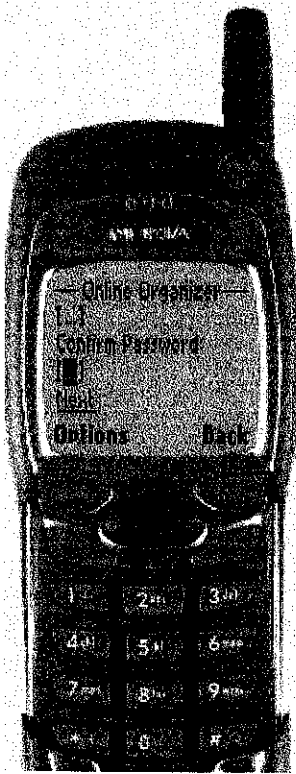
Page 2

```
      Online Organizer
User Name.
[...]

Password.
[...]

Confirm Password.
[...]

Next

Options              Back
```

Description of Page 2

This page is for the user to register. There are two pages for registration. Actually it is possible to put all the information needed in only one page. Once again, due to the limitation in wireless technology such as small screen, it is needed to make it two pages to keep the user-friendly in this site. The information required in this page are only user name, password and confirm password to ensure they write the correct password. If the user made a mistake to enter this page instead of log in, Back button is provided to them.

Page 3


```
┌─────────────────────────────┐
│       Online Organizer       │
│ E-mail.                      │
│ [...]                        │
│                              │
│ Phone No.                    │
│ [...]                        │
│                              │
│ Submit                       │
│                              │
│ Option            Back       │
└─────────────────────────────┘
```

Description of Page 3

This page is also the registration form. It is the continuity of the 2nd page. The user doesn't need to worry for the charge to open this page. This is because 2nd page and 3rd page is in the same deck. They are only in different card. So there is no charge for downloading or requesting this page. This page required e-mail and phone number of the user to be fulfilled. This is important for the developer to contact them if there is any important news. The Back button also provided.
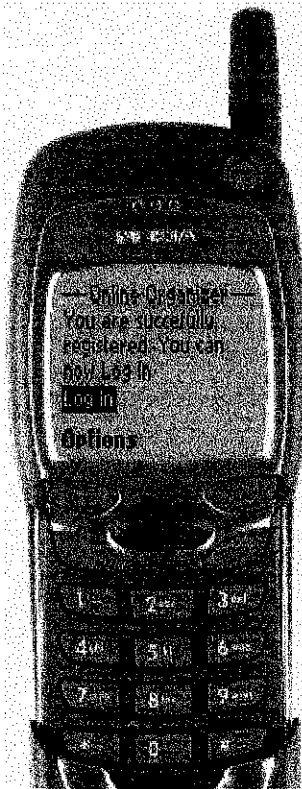
Page 4

```
        Online Organizer
You are successfully
registered. You can now
Log In.

Log In

Option
```

Description of Page 4

This page is purposely being made to keep user-friendly in this web site. This page will tell the user that they are already registered. From now on, they don't need to register again but they can just log in. This page is also in the same deck with the registration form (Page 2 and Page 3) but they are in the different card. By this time, all the information about the user are already entered into the database. The Back button is purposely not being included here since they are no need to go back to the previous page because all the information written are already entered into the database.
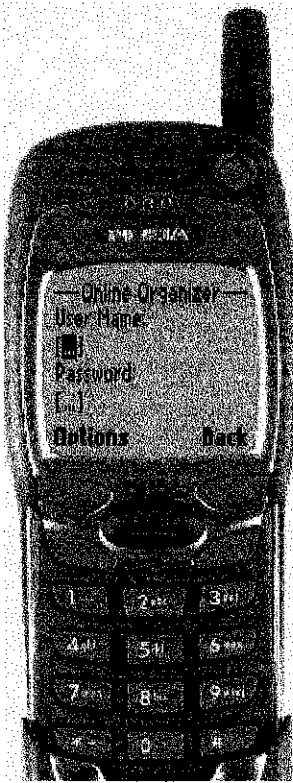
Page 5

```
┌─────────────────────────────┐
│      Online Organizer       │
│  User Name.                 │
│  [...]                      │
│                             │
│  Password.                  │
│  [...]                      │
│                             │
│  Log In                     │
│                             │
│  Option              Back   │
└─────────────────────────────┘
```

Description of Page 5

This page is for the user to enter the website. As other website, the user need to log in by key in their user name and password. This page is called the Log In page where to enter this page, the user need to click on the Log In button whether in the page 1 or in the Page 2. The Back button is placed in this page because there is possibility that the users from the first page who want to register had click on the wrong button which bring them to this page.

33
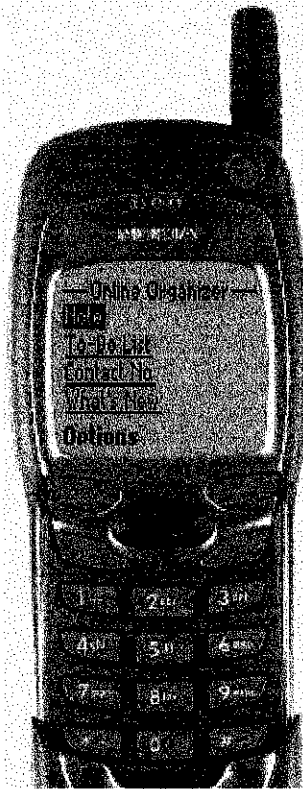
Page 6


```
Online Organizer
Note
To-Do List
Contact Number
What's New
Log Out

Option
```

Description of Page 6

After log in, the user can enter this page, which is called the Main Page. All the facilities that provided by this website are included in this page. There are Note, To-Do List, Contact Number, What's New and Log Out button in this page. The users can choose which one of the facility to use. For example if the user want to view notes that they have written before, they can click on the Note.

There is no need to put the back button here because the previous page was the log in page. There is no reason to log in again. That is why the Back button didn't included in this page.
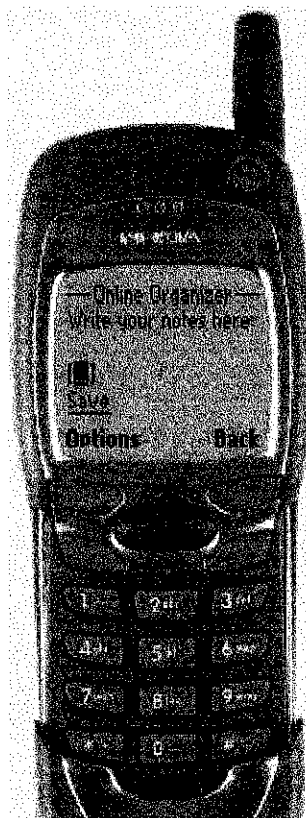
Page 7

```
          Online Organizer
     You can add new note or
     view all the notes.

     Add Note
     View Notes
     Back To Main Page

     Option            Back
```

Description of Page 7

This page can be entered from the Main Page (Page 6). If the users click on the Note, then they will be brought to this page. In this page, they have a choice whether to add new note or to view all the notes that they already wrote before. If they want to add new notes, then the link will bring them to Page 8 but if they want to view the notes then the link will bring them to Page 9.

The users can go back to the main page by click on the Back To Main Page. If the previous page was the main menu then the user can just click on the Back button on the right side. There is possibility that the previous page is not the main page such as the user already add the note, then the previous page for them will be Page 8.

Page 8

```
Online Organizer
Write your note here.

[...]

Save
Option              Back
```

Description of Page 7

This page is for the user to add new notes. The input box given is the place for the user to key in their notes. Once finished, the user can click on the save button. Then the system will save the notes into the database and will bring the user back to the Page 7. Due to the limitation, the character that can be entered in this input box is only 225. So it is important to put the highlight only in the input box.

The Back button on the right side is included in this page since there is possibility that the user just want to view the notes but made a mistake to enter this page by clicking no the wrong link.
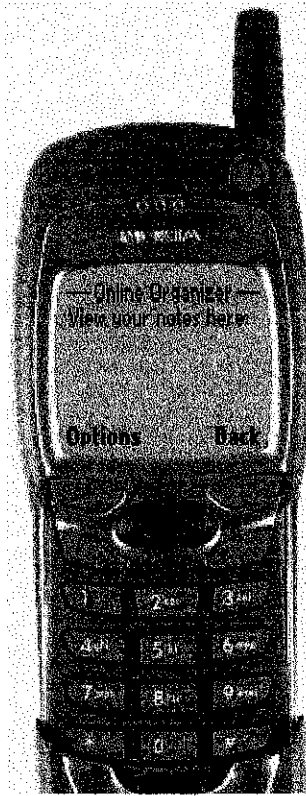
```
  Online Organizer
  View your notes here:



Next

Option            Back
```
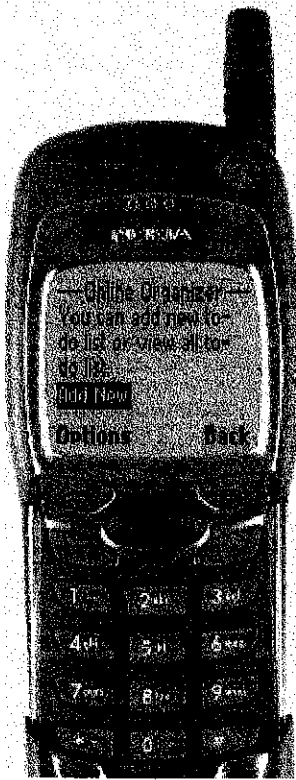
Description of Page 9

This page is for the user to view their notes that they already written before. Since there is no note yet, the picture above doesn't show any notes. If there are any notes, then the notes will be appeared below the 'View Your Notes Here'. And if there are more than one notes, then the next button will appeared to bring the user to view the next note.

The Back button is created to the user for exit from this page. The user will be brought back to the Page 7.
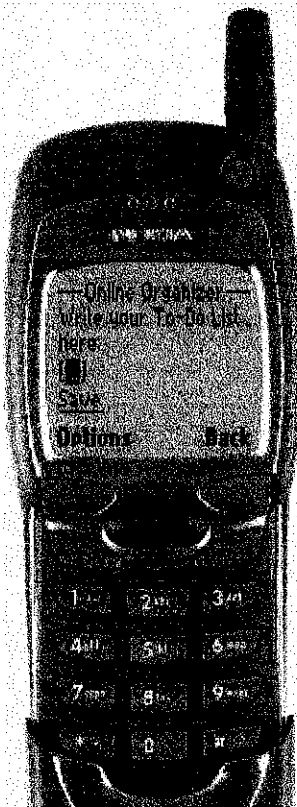
Page 10

```
Online Organizer
You can add new to-do
list or view all to do list.

Add New
View
Back To Main Page

Option              Back
```

Description of Page 10

This page can be entered from the Main Page (Page 6). If the users click on the To-Do List, then they will be brought to this page. In this page, they have a choice whether to add new list or to view the entire To-Do list that they already wrote before. If they want to add new list, then the link will bring them to Page 11 but if they want to view the To-Do list then the link will bring them to Page 12.

The users can go back to the main page by click on the Back To Main Page. If the previous page was the main menu then the user can just click on the Back button on the right side. There is possibility that the previous page is not the main page such as the user already add the list, then the previous page for them will be Page 11.

Online Organizer Write your To-Do List here.
[...]
Save
Option   Back

Description of Page 11

This page is for the user to add new To-Do list. The input box given is the place for the user to key in their list. Once finished, the user can click on the save button. Then the system will save the list into the database and will bring the user back to the Page 10. Due to the limitation, the character that can be entered in this input box is only 225. So it is important to put the highlight only in the input box.

The Back button on the right side is included in this page since there is possibility that the user just want to view the To-Do list but made a mistake to enter this page by clicking no the wrong link.

Page 12

```
Online Organizer
View Your To-Do List
here:



Next

Option                    Back
```
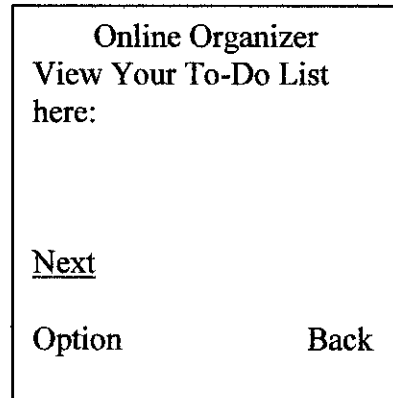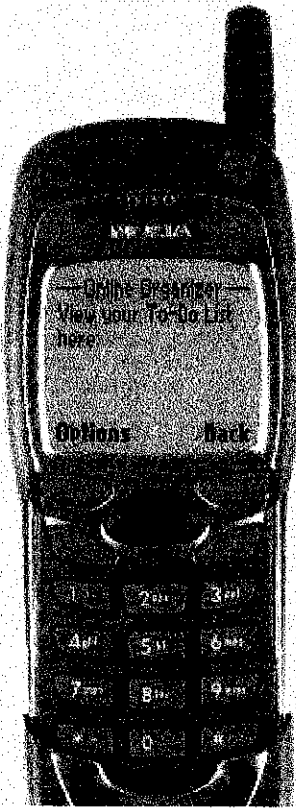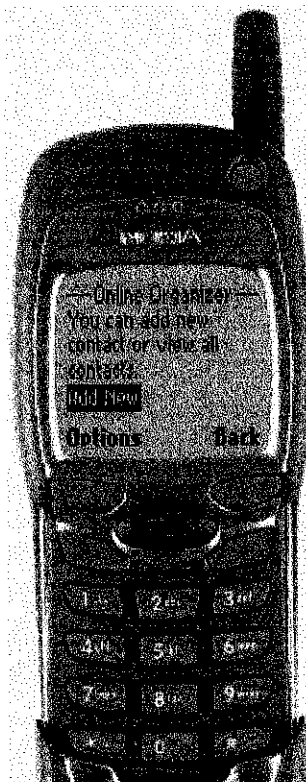
Description of Page 12

This page is for the user to view their To-Do List that they already written before. Since there is no list yet, the picture above doesn't show any To-Do List. If there is any list, then the To-Do List will be appeared below the 'View Your To-Do List Here'. And if there are more than one list, then the next button will appeared to bring the user to view the next list.

The Back button is created to the user for exit from this page. The user will be brought back to the Page 10.

Page 13

```
┌─────────────────────────────────┐
│        Online Organizer          │
│   You can add new contact        │
│   or view all contacts.          │
│                                  │
│   Add New                        │
│   View                           │
│   Back To Main Page              │
│                                  │
│   Option              Back       │
└─────────────────────────────────┘
```

Description of Page 13

This page can be entered from the Main Page (Page 6). If the users click on the Contacts Number, then they will be brought to this page. In this page, they have a choice whether to add new contact or to view the entire Contacts Number that they already wrote before. If they want to add new contact, then the link will bring them to Page 14 but if they want to view the Contact Number then the link will bring them to Page 15.

The users can go back to the main page by click on the Back To Main Page. If the previous page was the main menu then the user can just click on the Back button on the right side. There is possibility that the previous page is not the main page such as the user already add the contact, then the previous page for them will be Page 14.
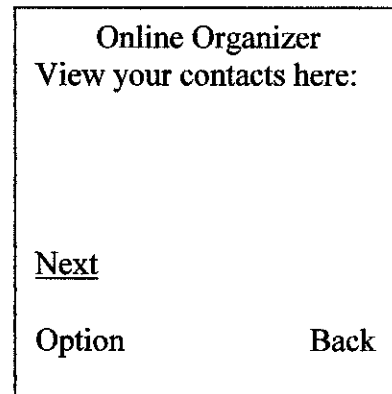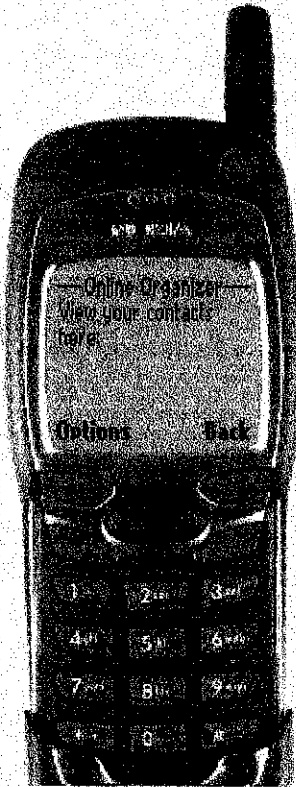
Page 14

```
┌─────────────────────────────┐
│      Online Organizer       │
│  Name.                      │
│  [...]                      │
│                             │
│  Phone Number.              │
│  [...]                      │
│                             │
│  Save                       │
│                             │
│  Option              Back   │
└─────────────────────────────┘
```

Description of Page 14

This page is for the user to add new contact information. The input boxes given are the places for the user to key in their contact name and phone number. Once finished, the user can click on the save button. Then the system will save the list into the database and will bring the user back to the Page 13.

The Back button on the right side is included in this page since there is possibility that the user just want to view the contact number but made a mistake to enter this page by clicking no the wrong link.

Page 15

```
┌─────────────────────────────┐
│      Online Organizer        │
│   View your contacts here:   │
│                              │
│                              │
│                              │
│                              │
│  Next                        │
│                              │
│  Option            Back      │
└─────────────────────────────┘
```
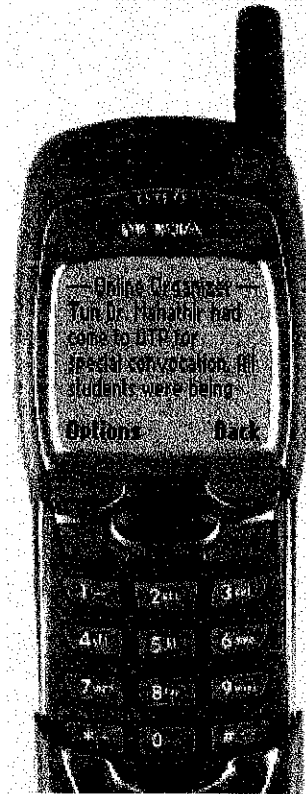
Description of Page 15

This page is for the user to view their contacts number that they already written before. Since there is no list yet, the picture above doesn't show any To-Do List. If there is any list, then the To-Do List will be appeared below the 'View Your To-Do List Here'. The format for the view part will be:

< contact's name>

< contact's phone number>

The Back button is created to the user for exit from this page. The user will be brought back to the Page 13.

Page 16


```
┌─────────────────────────────┐
│      Online Organizer       │
│   Administrator places the  │
│   latest news in here.      │
│                             │
│                             │
│                             │
│                             │
│                             │
│                             │
│  Option              Back   │
└─────────────────────────────┘
```
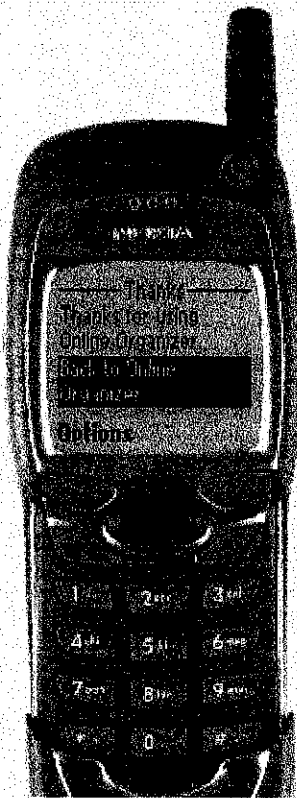
Description of Page 16

This page can be entered from the Main Page (Page 6). If the users click on the What's New, then they will be brought to this page. In this page, they can only read the news posted by administrator. If there is more than one news, the there will be the Next button to bring them to the next news.

The Back button is created to the user for exit from this page. The user will be brought back to the Main Page which is Page 6.

```
            Online Organizer
      Thanks for using Online
      Organizer

      Back To Online

      Organizer.



      Options
```

Description of Page 16

This page can be entered from the Main Page (Page 6). If the users click on the Log Out, then they will be brought to this page. In this page, the website will thanks to the user for using this website. This is the polite way to say goodbye to the user who had already want to exit from this website. Back To Online Organizer will bring back the user to the Welcome Page which is Page 1.

In this page, the developer didn't provide the Back button since the user had already logged out. If they want to go back to the main page, then the user has to log in all over again.

Discussion

Wireless technology is becoming more important day by day. This technology grabbed the attention from various kind of company. Not only from the cellular phone manufacturer and telecommunication provider, even automobile manufacturer also start to take this technologies seriously. Our government also are promoting and supporting this developing technology. This project is the starting point for the developer to cope with this technology.

The General Packet Radio Service (GPRS) is no longer a standard or concept. It is real and it has implemented in mobile networks and some mobile phones supporting it. There are arriving in high street stores for the general public and being sold to corporate customer by network operators. GPRS is an important steppingstone to the IP world for mobile networks, providing an interim step for 3G (Third Generation). GPRS will provide a boost to mobile data usage and usefulness. That much seems assured from its flexible feature set by its latency, efficiency and speed.

In the future, the wireless technology can become the most important information and communication devices. Once this technology entered the 4G (Fourth Generation), the usefulness of this particular technology will become higher. It is expected that one day this technology also can help disable people. For example, a hearing impaired person shopping in mall cannot hear an announcement about a sale in a store. Using Bluetooth technology (wireless technology that provides short range, high speed and data communication between digital devices), the mall could broadcast the announcement to the person's Bluetooth-enabled device, which would convert the speech to text and display the text message for the hearing impaired person.

CHAPTER FIVE
CONCLUSION

As a conclusion, this project is about developing the wireless website. The main purpose is to build an organizer online for public. This is the one of the latest technology. The usage of GPRS has already increased tremendously lately. This is because of the revolution of cell phone has developed so fast day by day. Since late last year, service provider for phone communication such as Maxis has started to promote the usage of GPRS by provides a lot of facilities for their subscribers.

Every step taken in this development process in this project has been done carefully. Even the simplest thing such as interface of the website is being taken care of the developer. Not all pages that have been developed have the Back button in the right side because the developer have to control the flow of the website in order to keep this website very user-friendly.

If this project is successfully done, it can help a lot of people to organize their life. In fact this wireless website also has already fulfilled one of people's needs. With all the features given, it makes this website become more interesting and reliable. Some of the things such as meeting, appointment or certain events can be easily being forgotten. That is why this organizer can become useful to a lot of people.

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Appendices

Online Organizer
Questionnaires

Personal Information

Name   :

Age   :

Occupation :

1. Out of 5, how do you rate the importance of the organizer?

Low ————————————————————————→ High

    1   2   3   4   5

2. Do you have an organizer device?

    Yes | No

3. Do you have credit card?

    Yes | No

4. Do you have a cell phone?

    Yes | No

    Model: _____

Purposes of Questionnaires

First question

This question is to know how important the organizer to the people.

Second question

This question is to know how many of them have an organizer device thus the developer can know how many of them can afford to buy the organizer device.

Third question

This question is to know how may of them having credit card since there already have online organizer (not wireless website). If they have a credit card, they can use this service since this service must be paid every month using credit card.

Fourth question

This question is to know how many of them already have a cell phone that can connected to internet, which is why the developer need to know the model of the cell phone.