

**MOBILE ASSISTANT APPLICATION ON NEGERI SEMBILAN
DIALECT**

By

NASRUL ZUKRI BIN ZULCAPLI

Dissertation submitted in partial fulfillment of

the requirements for the

Bachelor of Technology (Hons)

(Business Information System)

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Universiti Teknologi PETRONAS

Bandar Seri Iskandar

31750 Tronoh

Perak Darul Ridzuan

CERTIFICATION OF APPROVAL

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By

Nasrul Zukri Bin Zulcapli

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Approved by,

(Assoc. Prof. Dr. Mohd Fadzil Hassan)

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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 accept 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.

NASRUL ZUKRI BIN ZULCAPLI

ABSTRACT

Amongst the states in Malaysia there are a few states that have their own dialect and one of the states that are using their own dialect is the Negeri Sembilan state. For generations the people of Negeri Sembilan have been using the dialect but due to modernism that is undergoing in Malaysia the youngster of the state are changing their preference to use the main stream dialect rather than Negeri Sembilan dialect. As such, this creates a problem to understand the dialect due to the descending numbers of Negeri Sembilan dialect users. The dialect will someday become extinct if not preserve. This project intends to develop a system to help people learn the Negeri Sembilan dialect. It will contain commonly use Malaysian language but in the spelling of Negeri Sembilan dialect. Furthermore the application will pronounce words for the users to help them in the pronunciation of the dialect. The project aims to help the younger generation of the Negeri Sembilan to rekindle their usage of the dialect in everyday conversation and also for the people of Malaysia to learn the beauty of the Negeri Sembilan dialect.

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CHAPTER 1: INTRODUCTION

1 INTRODUCTION

1.1 BACKGROUND OF STUDY

Dialect has been a cultural aspect of any civilization all over the world. It is a distinctive ways to point out the uniqueness or differences between states in a country. Due to the variety of dialect in a country there are a standard dialect and non-standard dialect. In Malaysia there are difference types of dialect being used such as the Negeri Sembilan, Kelantan, Melaka, Perak, Terengganu and more and this cause a headache for people to understand or familiarize with all the dialect so a standard Malay dialect was used to communicate between states.

The usage of the standard dialect has become the basis of daily conversation intermediaries. Due to the migration of people from state to another state people are keener to speak the standard dialect. The cultural dialects in Malaysia are being ignored and less people are conversing using it, only the elder generations are sticking to their dialect. Young generations are slowly losing their culture which in this term is their motherland dialect tongue.

The dialects in Malaysia need to be preserved by any means necessary. So the idea of creating software for android to store the dialect of Negeri Sembilan is an act for preserving the Negeri Sembilan dialect. According to recent research on the population of Negeri Sembilan, there are merely more than a million people which mean that the Negeri Sembilan is amongst the least populated state in Malaysia. With this number in hand it can be concluded that the Negeri Sembilan dialect is rather unpopular or uncommonly known to the people of Malaysia, this can become a burden for outsiders to

understand the dialect. Further with younger generation from Negeri Sembilan are attracted to the usage of the standard dialect the problem of preserving the dialect has become more of a problem.

There is no application to assist outsiders to understand the Negeri Sembilan dialect and this will make it hard for them if they ever visited the state. Furthermore the learning of the dialect is basically learned through the daily conversation with family members, friends or strangers, there are no platform for people to learn the dialect.

1.2 PROBLEM STATEMENT

Current trend of using dialect based on corresponding states has decreases throughout the whole Malaysian region. This is due to the usage of the standard language as the main medium of interaction between the Malaysian citizens. It has been the Malaysian government incentive to encourage their citizens to use the standard language as a medium of communication between others, this is due to the variety of races that are living in Malaysia and to make them closer is by using the standard language or the national language which is Bahasa Kebangsaan.

Throughout the states in Malaysia it is considered the Negeri Sembilan dialect is unpopular or uncommonly known to outsiders of the state. Compare to the Kelantanese dialect which is used by Kelantanese people even when outside of their state, Negeri Sembilan people are less likely to converse with people from other state using their own dialect. This is due to the unfamiliar pronunciation of the Negeri Sembilan dialect to outsiders of the state act as a barrier to make it a habit to fully use the Negeri Sembilan dialect in everyday conversation.

Furthermore as mention in the first point with the Malaysian government insisting on pushing the crowds to use the standard language, it makes the younger generation of the Negeri Sembilan and the other states in Malaysia to basically converse in the standard language. Young generations are less likely to learn their own dialect in schools and other education institution due to the usage standard language as a medium to teach any education in schools and university.

Another problem is cause due to modernization, which have force people to use English in everyday conversation thus neglecting the usage of other dialects. Globalization has made the world a boundless place. People from different countries are interacting to do business with each other thus making the standard world language, English a must master language.

For the last problems is that there are no assistant for outsiders to guide them in a conversation with the locals of Negeri Sembilan. This will make it hard for them to understand what the locals are saying.

1.3 OBJECTIVES

Every new invention and innovations are developed for a purpose. The main objectives of this research are:

- To educate the young people in understanding Negeri Sembilan dialect.
- To teach how to pronounce Negeri Sembilan dialect.

1.4 SCOPE OF STUDY

In order to complete the project there are a few studies that is needed to done. The studies are discussed as follows:

1. Gathering information on how to develop a mobile assistant application on dialect.
 - There are no applications on dialect for any Malaysian dialect so this project is a new application being develop for Malaysian.
 - Research is needed on how or what there is to be included in the application to fully make the application a success
2. Market the application so that people will use it in helping them to learn the Negeri Sembilan dialect.
 - Find alternative to market the product so people will use them.
3. Study the tools used to develop android based system.
 - To understand the functionality and how to use some of the tools to develop android applications.

4. Study on the Negeri Sembilan dialect on each and different region in the Negeri Sembilan state.

- To understand all the types of dialect being used by the local from different region of Negeri Sembilan.
-

1.5 REVELENCY OF THE PROJECT

This system is relevant to the needs of the people of Malaysia. In this case, young generation and visitors to the state are the main users. It will help enhance the conversation of people on their Negeri Sembilan dialect.

FEASIBILITY OF THE PROJECT WITHIN THE SCOPE AND TIME FRAME

Technical Feasibility

In terms of technical feasibility, the software is feasible technically, although there are some risks taken into consideration. It concerns whether or not the system can be developed.

High risk on Familiarity of the Functional Area

The system developer needs to explore on how to come up with the suggested and proposed system. Plus, the developer must have a comprehensive understanding of what it is has to be done, who else to be influenced by the project, what the project will achieve and defining in definitive terms the outcome of the project. At the same time, a better understanding on how Android base systems work in which the methods used to develop it is required. Hence, the risk is medium in this context area.

Medium risk on Project Size

Based on the suggested and proposed features that are made available in the system development, the project size of the proposed system is in a small to medium scale. Due to the development of this system is only done by a developer; it caters only for young generation and visitors which relatively reduces the risk. Furthermore, the user involvement is required to be able to come up with this system.

In terms of time frame, a complete and thorough study of the subject matter especially in the vocabulary content requires a high time commitment. Since the research period is very short, it is limiting the extensive research outcomes and transforming ideas and solutions into a working system will be quite challenging. With all the constraints that may be encountered throughout the development phase, the risk on the project size is medium.

High compatibility of the proposed system with existing technology

The compatibility of the system with the technology is great. There are many assistant to help guide in the development process of the system. Mobile applications are still being implemented and at a higher level, an application creator is available to ease the developer in developing the system. With the development of this system, it helps to store information and vocabulary in a more organized manner.

Time Feasibility

The time given is considered feasible but is likely hard to be completed, this is due to all the activities needed to be done in order to understand the Negeri Sembilan dialect and understand mobile application.

CHAPTER 2: LITERATURE REVIEW

2 LITERATURE REVIEW

2.1 DIALECT

The term dialect is used in two distinct ways. The first usage can be referred to a variety of language that is a characteristic of a particular group of the language's speakers. The first term of dialect applied to people in the same country in different regional that have their own speech patterns. The speech pattern can also be defined by other factors such as social class. The dialect associated with a particular social class can be concededly call sociolect.

The second usage refers to a language socially subordinate to a regional or national standard language often historically similar to the standard, but not all of it or in other sense, imitative from it.

A dialect is distinguished by its vocabulary, grammar and pronunciation. When the distinction can only be made in the terms of pronunciation than it is not a dialect but is appropriately call accents.

A dialect can be considered a standardized and non-standardized dialect. A standard dialect is where a dialect is being supported by institutions. Such institutions are commonly government recognition or designation. It is the standard form of language in school with it being publish in dictionaries, text books and grammars. Dialect standard may have multiple standards within a single language. For example the English language has many standards such as Standard American English, Standard Canadian English, Standard Indian English and standard Australian English are to be said standard dialects of the English language.

2.2 LEARNING DIALECT

Learning dialect is like learning new knowledge it requires passion and commitment. To first learn dialect a person needs to choose a specific dialect or place. For example in Malaysia and selecting the Negeri Sembilan dialect.

The second step would be researching about the place. The things needed to be research about are the weather, working classes, religious, political and social influences in the area. This will provide basic understanding of the people there.

The third step would be listening to real people or first person encounter with the locals. Find a real person that can speak the dialect. There might be numbers of dialects pronunciation in the area and it is best to get an idea on how they all sound. Experiencing a conversation with the dialect users is a good way to understand the

The fourth step would be search for materials to learn from. This is where books, articles, journals, documents and recording would be a great help to guide you to pronounce dialects. Getting variety of resources on certain dialect words could become handy in understanding the word more precisely.

The fifth step would be to work or practice with the resource for a stage dialect. A stage dialect is a term for the cleanup or mastering the dialect, which keeps the rhythm, placement and sound changes of the original, but has the best chance of being understood people. The first step would be use imitation, and then use the same accent or dialect with a script from any documents. Be sure to record while practicing and play back the recording to find out the errors in the pronunciation.

The last and final step would be speaking the new dialect exclusively for as long as you can. Find a dialect buddy to converse frequently. The buddy should be supportive and should not critique your pronunciation. Talk as long until improvement is seen.

2.3 ANDROID



Figure 1: Android logo

The project would be solely developed using the Android mobile platform. Android is the most popular mobile platform. There are over hundreds of millions of mobile devices throughout the world are using the Android system to power their devices. It is the largest installed base of any mobile platform and is still growing every day. Compare to its competitors such as IOS and Windows phone, Android has the most made apps, games and other digital content.

It gives the user a world-class platform for creating apps and games for Android user everywhere as well as an open marketplace for distributing to them instantly. With its announcement in 2007 by Google, the purpose at hand was to devote advancing open standards for mobile devices.

Building on the contributions of the open-source Linux community and more than hundreds hardware, software and carrier partners, Android has rapidly become the fastest-growing mobile operating system.

Android has a powerful development framework which gives everything their user needs to build best-in-class app experiences. It gives a single application model that lets you deploy apps broadly to hundreds of millions of users across a wide range of

devices from phones to tablets. With new and improve devices rapidly being announce every year by phone and tablets manufacturers/ developers, Android give the developer the tools for creating apps that look great and taking the advantages of the hardware capabilities available on each of the devices. It will automatically adapt to the user interface of the devices and will look best on each device while giving the manufacturers/ developers ultimate control as they want over the user interface of their own devices.

The most prominent app that Google invented to ease the distribution of app between app developer and user is the Google Play which is the premier marketplace for selling and distributing Android apps. Publishing an app on Google Play it will reach the huge installed base of Android. As an open marketplace, Google Play puts Android users on how to sell their products; can publish whenever you want, as often as you want, and to the customers you want. Using Google Play app inventor can distribute broadly to all markets and devices or focus on specific segments, devices, or ranges of hardware capabilities. Google Play is a good platform to distribute the Mobile Assistant Application on Negeri Sembilan Dialect.

An operating system is not without its platform versions; there will always be development to enhance the operating system to make the operating system better than the old version. Such said Android also is not left behind with the development of its operating system. The versions of Android operating system are as below:

1. 1.5 Cupcake
2. 1.6 Donut
3. 2.0, 2.1 Éclair
4. 2.2 Froyo
5. 2.3.x Gingerbread
6. 3.x.x Honeycomb
7. 4.0 Ice Cream Sandwich
8. 4.1.x Jelly Bean

These operating systems are faster, more responsive and more user friendly compare to their predecessor.

Android has an active community of developers and enthusiasts who use the Android source code to develop and distribute their own modified versions of the operating system. These community releases the most widely used of which being CyanogenMod which is an open source replacement firmware for smart phones and tablet computers based on the Android mobile operating system, in which they will bring new features and updates to devices faster than through the official manufacturer/ carrier channels. This is because there are many phone or tablet manufacturers that are using Android as their base operating system for their devices and they would want to make their devices unique compare to their competitors. The unique features are usually on the user interface itself and synchronizing the Android operating system with their pattern hardware or software that give them the uniqueness compare to their competitors. Below are examples of the difference between a SONY phone compare to a Samsung phone that is using the same Android base operating system.



Figure 2 : SONY XPERIA user interface



Figure 3 : Samsung S2 user interface

On getting started to develop an app for Android is available on developer.android.com. There will be everything from the developer Software Development Kit (SDK), Application Programming Interface documentation, and design guidelines, to information about the current device landscape and how to distribute and monetize your app. There is never an app similar to another app but the structure is more or less similar in a way. The app development can be categorized into three main stages which are the Design phase, Develop phase and Distribute phase.

1. Design

Any basic application development will have to start with the design of the user interface this is to make it fit the Android user experience. Although the developer will know on what the main function of their application would be like but he/ she will need to focus for a while on how a user will interact with the application itself. This is because even if the application deliverables is good but it is hard to handle than the app is a failure itself. The design should be sleek, simple, and powerful and tailored to the Android experience. It would be a difficult task if the app design is tailored according to an Iphone or Window phone experience because the user will be confuse.

2. Develop

Once the design is finalized, all the developer need is the tools to turn the app ideas into reality. Android;s framework provides you the APIs to build apps that take full advantage of device hardware, connected accessory devices, the internet, software features and more. With the power of Android, there are no limits to the power of the app.

3. Distribute

After completing the app it is now time to distribute to users all across the world that are using Android base devices. The developer need to test it on the Android emulator and on real devices to make sure that the app is supported on a variety of screen sizes and densities. Distributing the app depends on a variety of factors, such as the monetization strategy and which types of devices your app supports. But the easiest way to distribute is through Google Play.

2.4 MOBILE APPLICATION KEEFAK

Keefak is a mobile application that teaches the Lebanese dialect. It does not actually teach people on how to read or write. But it will teach people on how to speak and understand the Lebanese language. The master mind behind Keefak is Hadi El Khoury a 10 year information security expert and consultant living in France. The idea of the creation of Keefak was after her daughter was born which he explained that a lot of Lebanese nationals are living abroad for some times and their children aren't learning their native language. This would become a burden to parents for their children to not understand and give up on their own mother tongue heritage.

Keefak which was launch in January 2012 is currently limited to learn Lebanese from two different language which are English and France. Their next agenda would to include more language option for getting a bigger market.

The system will teach the users on five main topics which are 'Introduction', 'Family', 'Moving', 'Shopping' and 'Eating'. From the five main topic users can use four functionality to guide them in the learning process which are on vocabulary, text, grammar and exercises for the users to use. Under vocabulary user will be prompt with most common language usage from the five main topics, the user will then select a paragraph of words of conversation and the application will pronounce the words in Lebanese. On the text functionality the application will provide English and Lebanese text to user to understand how the words are spell. For example "Kifak ?" in Lebanese and on the English side would be "How are you?". Grammar on the other hand will provide information on grammar on the words. The last functionality is the exercise which will provide user with two types of exercises. The first exercise is a multiple choice question which would give user a sentence of word in Lebanese and three answers for the sentence in English. The user will have to select the correct answers to go to the next question. For the second exercise would prompt users with a linking type of question. The user will be given four Lebanese words and four English words. The user will than match the Lebanese word to the English word by linking them together.



Learn arabic lebanese with Keefak Apprenez l'arabe libanais avec Keefak



Figure 4: Keefak on Google Play

2.5 JIBBIGO

Jibbigo is a self-contained speech-to-speech translation application for mobile phones. Its function is receiving a sentence from one language and then translating it back into another language. It does not require data or phone connection. With the availability of nine different languages which are:

- Thai – English
- Chinese – English
- French – English
- German – English
- German – Spanish
- Iraqi – English
- Japanese – English
- Korea – English
- Spanish – English
- Tagalog – English

The features available in the application is a state of the art Speech Recognition Technology, with vocabulary over 40,000 words, statistical machine translation for optimal performance, Natural voice output using SVOX speech synthesis technology and with the availability of dictionary.

Even so it is not a dictionary and not a phrase book, but rather a speech translator. You simply speak a sentence and it speaks the sentence aloud in the other language, must like a personal human interpreter would.

Jibbigo shows the recognition and translation on the application screen, so it is easier to identify your translation is accurate to what you spoke.



Figure 5: JIBBIGO interface

2.6 MOBILE PLATFORM, LANGUAGES AND SDK's

There are many mobile brands, multiple possible platforms and SDK's depending on the devices. It's a vast field of platforms for users to use for the development of mobile application. Below is the brief summary of what involved with each platform, devices they run on and places to start looking for information.

- iOS

iOS runs on iPhone and iPad. Apps developer can sell their apps only through the iTunes App Store. For inventor using iOS they need to start at the iPhone Dev Centre which they will gain access on resources for developing, designing and distributing applications for iOS. It will require developer and inventor to run Mac OS X, a fee of \$99 for the SDK and must use the Xcode IDE for the development process.

- Android

Android runs on a range of Android enabled devices including phones from HTC, Samsung, LG and Motorola as well as a numbers of growing Tablets in the market. Information on Android can be learned at Android.com. It is an open source which can be built on Windows, Mac OS X and Linux. The apps can be sell at the official Android Market or unofficial stores such as Handango, GetJar, Handmark and SlideME.

- BlackBerry

BlackBerry runs on all BlackBerry devices. To start developing an app using BlackBerry platform developers can start at the BlackBerry developer zone. It write native apps in Java 5, or write BlackBerry Widgets for newer devices using HTML + JavaScript. The apps developed can be sell at the official store BlackBerry App Worl or unofficial stores such as Handango, GetJar and Handmark.

- Symbian

Symbian basically runs on most Nokia devices and a range of others from manufacturers such as Sony Ericsson and Sharp. To start developing a developer can search for information at Symbian Developer Site. Although apps can be written in a range of language the best approach is to choose between Symbian C++, WRT Widgets or Qt C++ style language. The selling place for Symbian apps are at Ovi Store or unofficial stores such as Handango, Getjar and Handmark.

- Windows Phone 7

Window Phone development is now gearing up for the future and Windows Phone 7, a gorgeous interface for devices being launched in Q3 2010. Developers can start at the Windows Phone developer portal and the Getting Started page on MSDN. Apps for Windows Phone 7 are written using Silverlight for most apps or the XNA Framework for graphics based games. The free toolset Windows Phone Developer Tools Beta is required and runs on Windows Vista/Windows 7. The apps are sell at Windows Marketplace for Mobile.

2.7 APPLICATIONS TO TEACH LANGUAGE

To teach language using application can be done using multimedia. The usage of computers as learning tools can help people to learn language faster. But computers will never replace the important of play and learning materials such as paint, blocks, sand, flash cards and books but proved that using computer could increase learners' interest and help in engaging their attention toward acquiring knowledge. They study and doing research on how to introduce multimedia learning in classroom and at the same time not loses any interest and knowledge that should be gain from the students. They introduce a courseware that offer a fun and safe learning environment and encourages student to think and engage with the activities.

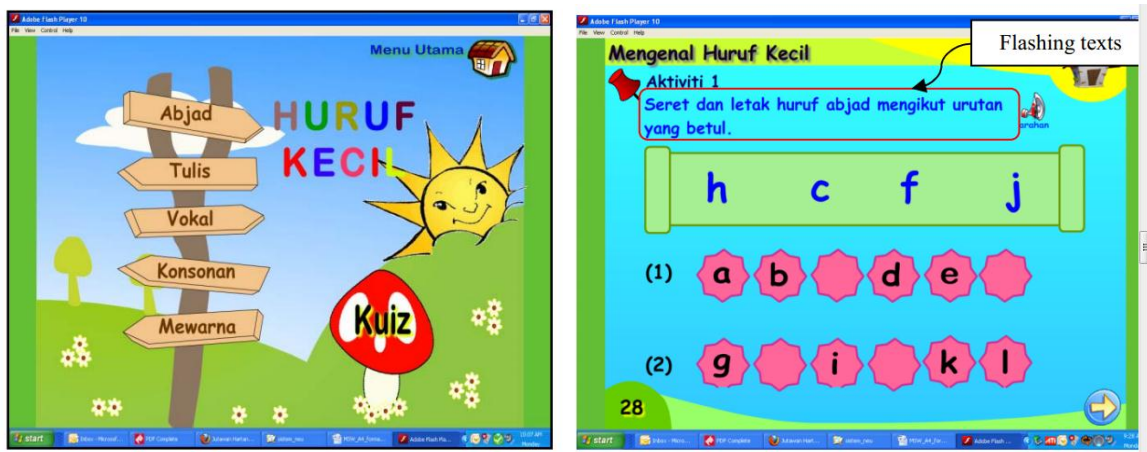


Figure 6: Multimedia teaching interface display

2.8 MIT APP INVENTOR



Figure 7 : MIT App Inventor logo

App Inventor is an application that lets user develop application for Androids base devices using a web browser and either a connected phone or emulator. The App Inventor servers store your work and help you keep track of your projects.

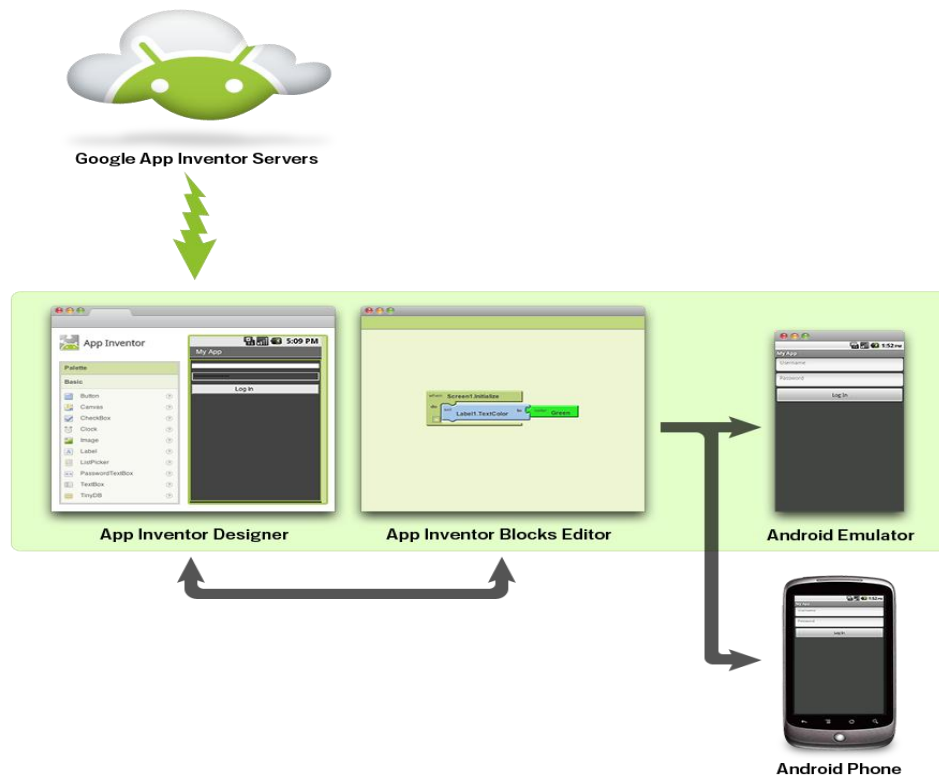


Figure 8 : App Inventor diagram

Building an app with App Inventor is by working with:

1. App Inventor Designer – is where to select the components for the app.
2. App Inventor Block Editor – where to assemble program blocks that specify how the components should behave.

The App Inventor is an easy program that let you assemble visually and fitting pieces together. There are actually no written programming steps needed to complete the application. The App Inventor is created to simplify the work of the app developers.

The app appears on the phone step-by-step as you add pieces to it, so that you can test the work as you develop the application. When the development of the app is finish then you can package your app and produce a stand-alone application to install.

There is no worrying if the developer does not have an Android phone because the App Inventor can be build using the Android emulator that acts such as an Android device.

The app inventor development environment is supported for Mac OS X, GNU/Linux, and Windows operating systems, and several popular Android phone models. Applications created with App Inventor can be installed on any Android phone.

But before the developer can use App Inventor to create his/ her own application they will need to set up their computer and install the App Inventor Setup package on their computer which can be obtain at appinventor.mit.edu.

The most important part in getting started is the App Inventor setup because if the setup is not done correctly then the App Inventor cannot run. App Inventor runs through a Web Browser. If you are using a phone, you can work with the phone connected to your computer by a USB cord. Your app will emerge on the phone bit by bit as you work. If you do not have a phone, there is a phone emulator included with the App Inventor setup package that you can use instead. When you are done building, you can package your finish app to produce an application package (Android apk file) that can be shared around

and installed on any Android phone just like any other app. To complete the setup is explain as below:

1. The first step to get started is to set up your computer that is by installing Mozilla Firefox, Apple Safari, Google Chrome or Microsoft Internet Explorer.
2. Test Java configuration which in this case need to run Java 6. The developer will need to run the AppInventor Java test which test web browser if it is capable in running Java and that the computer can launch applications with Java Web Start.
3. Install the App Inventor setup software before the App Inventor can be used. The software is provided in a package called App Inventor Setup.
4. The next step would be to go on to build the demo app (Hello Purr) with the phone or the emulator.

The App Inventor is not without its own tutorial which is new to the web site. The tutorial purpose is to learn the basics of App Inventor by working through few tutorials. The tutorials are teaches on how to do certain types of work using the App Inventor such as how to use the App Inventor and what are the basic function that the App Inventor provide for the developers.

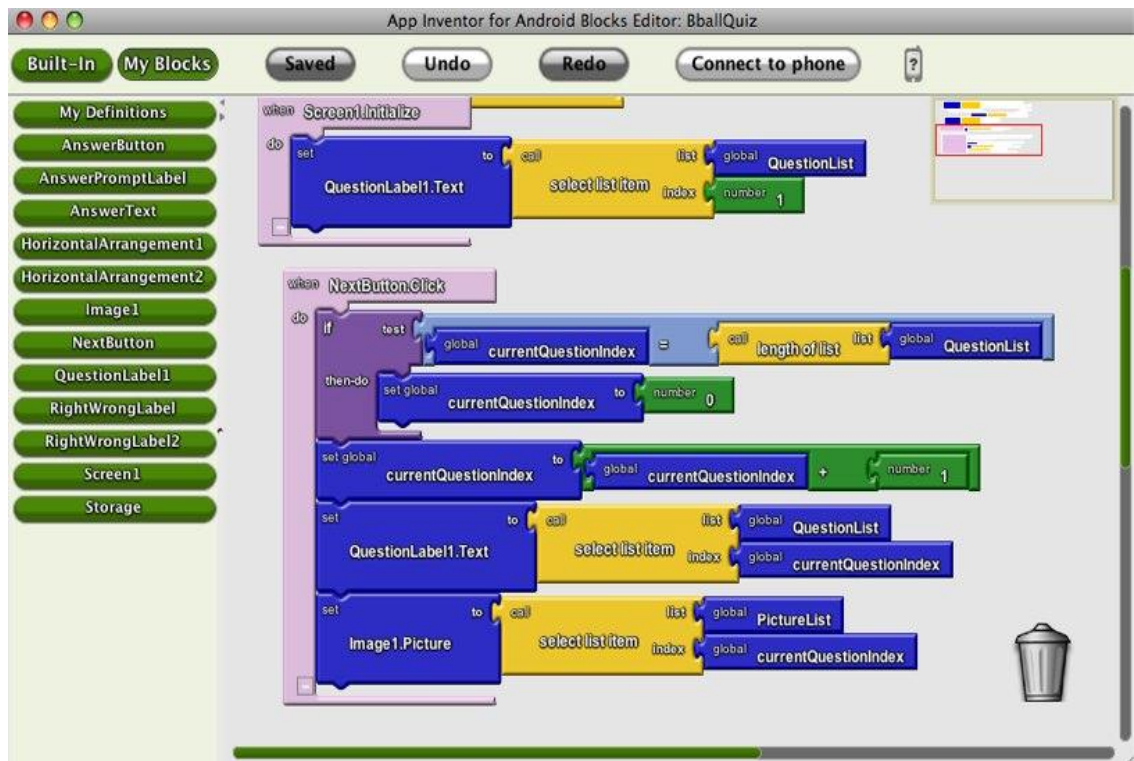


Figure 9: The framework of the App Inventor

2.9 Negeri Sembilan dialect

Negeri Sembilan dialect comes with some unique language that might be alien to others when hearing it. Some of the basic its basic language is practically the same with the standard language but is pronounce in a different manner. To really able to develop this application I need to understand some of the unique language that are being used by the Negeri Sembilan people. Below are some of the unique languages that are being use that would be included in this project:

1. Kerepot – thin
2. Gobar – blanket
3. Tak semonggah – not appropriate
4. Menjelinjang – excited
5. Humban – throw away
6. Ontok – quiet
7. Ceghabih – talk excessively
8. Bengkeng – angry
9. Jongok – visit
10. Ensot – change position
11. Godek – disturb
12. Gelinya – earrings
13. Menyungkam – trip over
14. Cokau – take away
15. Melangok – moving without direction
16. Pencalit api – matches
17. Mada – stupid
18. Hangap – breath
19. Goma – like
20. Onyang – great-grandmother

21. Koyok – arrogant
22. Pangkin – large table
23. Loghoi – destroy
24. Moncicit – sprint
25. Bongkar – get up
26. Koman – outdated
27. Senayan – Monday

CHAPTER 3: METHODOLOGY

3 METHODOLOGY

3.1 RESEARCH METHODOLOGY

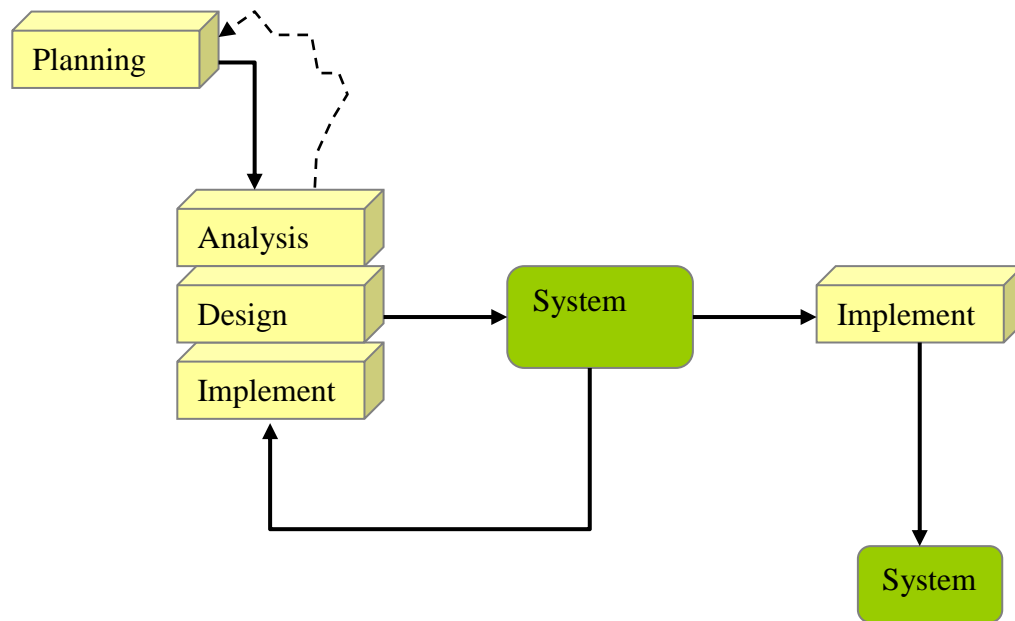


Figure 10: Methodology

This methodology is usually used when the process is likely to be changed as the project proceeds or when the stakeholder has little idea of what system to be built. All the Analysis, Design, and Implementation phases performed at the same time and on each cycle in producing a system prototype. The cycle repeated continually based on the comments until the system prototype successfully meets the requirements.

The last prototype will then be called the system. Prototyping development needs only initial basic analysis and design. Thus there is a possibility to revise the initial design

decision and start all over again from the beginning. As for the advantage of using this model is that it can deliver system quickly to users, though it not exactly meeting the requirements.

The processes are divided into four stages where it will be thoroughly followed through.

Planning – Data Gathering

In this phase, the project activity will only focus on the prospect of data gathering in regards with the project title. The main medium to gather the data and materials are from journals, billboard, research papers, web-site articles, books and survey. This is to strengthen the knowledge on this project and research scope.

The planning activities from this phase are used as a baseline to monitor the project progress by stages. A Gantt chart of the project schedule is created to ensure time is allocated efficiently for specific task and this will ensure that the project will be completed in the period of time given.

The early stage of developing a mobile application would be to learn the few development kits or tools. Due to the fact that the a student of Bachelor in Business Information System is not provide with a syllabus of learning on mobile application development in their study it is on one's self to learn it on their own to properly develop a mobile application for Android base system. Every new field of study requires a particular knowledge for a person to master it and with that knowledge is practically a new area a person needs to understand it to be able to venture into it.

Another important information search is to understand some of the 'rare' Negeri Sembilan languages that are different in pronunciation but have a same meaning with the standard language. This is crucial to actually make sure that the project will benefit the users.

Analysis – Data Analysis

This phase is mainly to analyze the activities such as problem identifying and predicting the potential problems of the project in the future are arise during this stage. The information gathered during planning stage are being analyzed therefore the literature review are done. During this stage, the author should identify the opportunity of helping the potential users through mobile application. After completing the analyzing phase, the designer should know what the prototype look like and it's performing functions. This will act as guidance to the developer to develop the project. During this phase several steps are taken into consideration. Below are the points given:

- Analyze the current applications or similar application that are related to linguistic and dialect. This is to get an idea on how the project would look like.
- The most visually and verbally aid platform to learn the language is by using the Youtube website from the internet. People tend to upload almost anything in the website so it will be a useful tool.

Design/ Development – System Development

The design phase determines how the system will work in the system environment. In this case, the system to help young generations through persuasive technologies will be developed. On this stage, the illustration of the interface is done based on the findings received.

All the gathering and info from the planning and analysis phase will be used to help in the design phase where users and developer will be involved throughout the process to ensure the most beneficial product to be produced. This is vital because the design has to be according to the user preferences.

Graphical user interface is very important when developing an application or courseware to attract the potential user to use the application. The GUI has to be able to capture the attention of the user for the user to use it with interest. Before the application is built the system flow design and design prototype are drawn into a piece of paper and evaluated by the project supervisor to ask about the suitability of the GUI.

To take into account is what hardware is going to be used to develop the project. The project will be developed using the developers own personal computer. The courseware used will be the internet web browser, Adobe Photoshop and a verbal capturing application to upload sound.

After the design part is completed the development of the project will take place. Given the design is completed the development of the prototype will be developed based on the finalized design. The prototype developed will be tested by stages in a systematic manner to make sure that it is well developed at the end.

Implementation

The most resource phase of all is implementation where the system is built, tested and installed for the users to use. This stage will be done to a few target users in order to get more information as well as their opinion on what the author had been done so far. Once the users are satisfied with the prototype, the author will install the application to the users.

3.2 PROJECT ACTIVITIES

Listed below are the project activities taken throughout the system development period:

1. **Define research problem** - For this project, the problem has been identified what type of platform would be suitable for the app to be in. Identify to create a system that will ease the user in using the system.
2. **Review concepts and theories/ Review previous research findings** - Critical analysis on the literature is conducted to have a better understanding on the research area and to review for any existing system in the market.
3. **Gather project requirements/Data Gathering** – To gather data and information on the user requirements using different methods of data collections.
4. **System Design** - System design is a phase that emphasizes on how the system should perform in order to fulfil the requirements.
5. **Development/Implementation** - The implementation stage of software development is the process of converting a system specification into an executable system. The implementation phase involves the actual development of the system.
6. **Testing** - The next stage in this process model is testing. The system needs to be tested for conformance with the system requirements. The first stage in the testing process involve unit testing. The second stage will be module testing which involve multiple units to be tested together. The next one will be the integration testing, combining all the individual modules together. Finally the whole system is tested to ensure it functions as per requirements.
7. **System Deployment** - The deployment of system involves testing the full version of system on real time in order to combine the modules of the system and test whether or not the system is functioning correctly.

Furthermore other activities are as below:

- **Thinking aloud**

The method of thinking aloud allows us to understand how the users approach the system and what considerations the users keep in mind when using the system. During the test procedure the users are asked to verbalize and describe their thoughts, feelings while interacting with the system. The main advantage of this method is a better understanding of the user's thoughts and interaction with the android system.

- **Questionnaires**

Questionnaires or survey are generally a common way to gather data and allow a quantitative analysis of results. The questionnaires that are well-designed can gather information on both the overall performance of the system as well as information on specific components of the system.

- **Qualitative interviews**

Although interviews may be different from questionnaires in the concept of their formality they should not be considered less important. Instead, they should be used in a better state that makes the best use of their strengths. It was suggested that interviews are used at the beginning and end of an evaluation, initially to gather general information to form the basis for a questionnaire and afterwards to clarify its results and fill in gaps.

3.3 METHODS OF DATA COLLECTION

Data gathering would be conducted by going to Negeri Sembilan state and potential users as listed below:

- Search for billboard at the state to recognize common words use in Negeri Sembilan dialect.
- Interview with local that are expert in the Negeri Sembilan dialect.
- Acceptance survey or questionnaires will be forwarded to the related people which are mainly smart phone users. This will include both open-end and close-end type of questions.
- Theoretical information will be gathered through review of related literature of mobile application on language specifically aiming for assistance in conversation purpose.

3.4 GANTT CHART

	Week												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Discussion with SV about project	■												
Create Gantt Chart		■											
Data collection and materials gathering			■										
Survey			■										
Data compilation				■									
Analyse or predict problems					■								
Progress report					■								
Understand the similar available application						■							
Draft the system flow						■							
Design interface and project component						■							
Develop project							■	■	■	■	■		
Project testing									■	■	■		
Poster presentation											■		
Final dissertation											■		
VIVA												■	
Technical Report													■

Table 1: Gantt chart

3.5 KEY MILESTONE

Below are the key milestone that needs to be achieved throughout bothof the semester of Final Year Project 1 (FYP 1) and Final Year Project 2 (FYP 2)

Semester 1:

Milestone	Week
Project Proposal	3
Extended Proposal	6
Proposal Defense	9
Interim Report	11

Table 2: Key milestone for FYP 1

Semester 2:

Milestone	Week
Progress Report	5
Poster Presentation	10
Dissertation	11
VIVA	12
Technical Report	13

Table 3: Key milestone for FYP 2

3.6 TOOLS

- Hardware

For this project, mobile devices such as android compatible devices will be used to demonstrate the complete system. In the development phase, a personal computer will be used as a workstation before demonstrate through mobile devices.

- Software

The main platforms for development are:

- Android development kit
- Adobe Flash CS3
- Adobe After Effects CS3
- Audacity

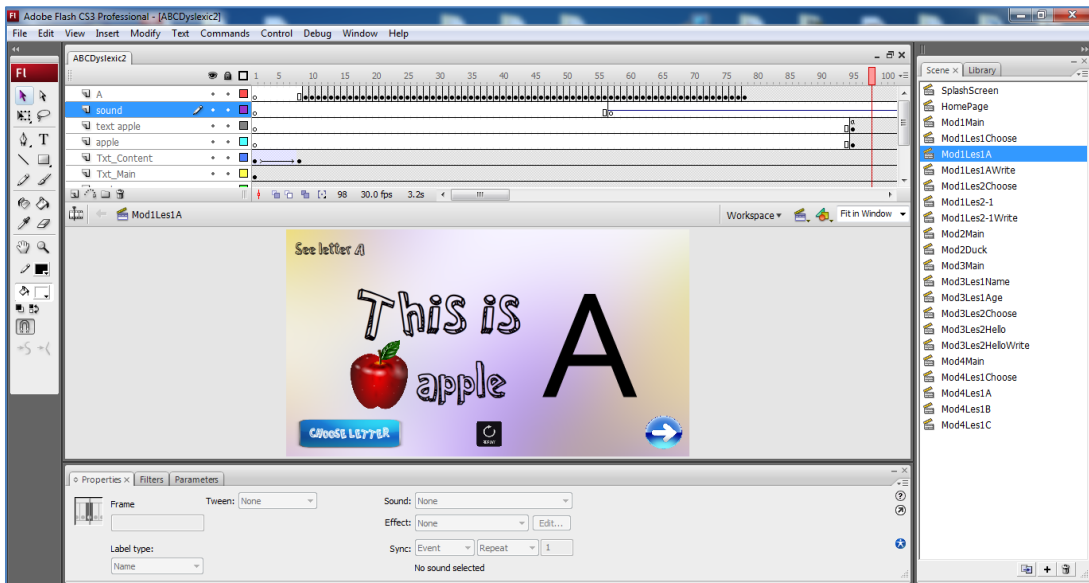


Figure 11: Adobe Flash CS3

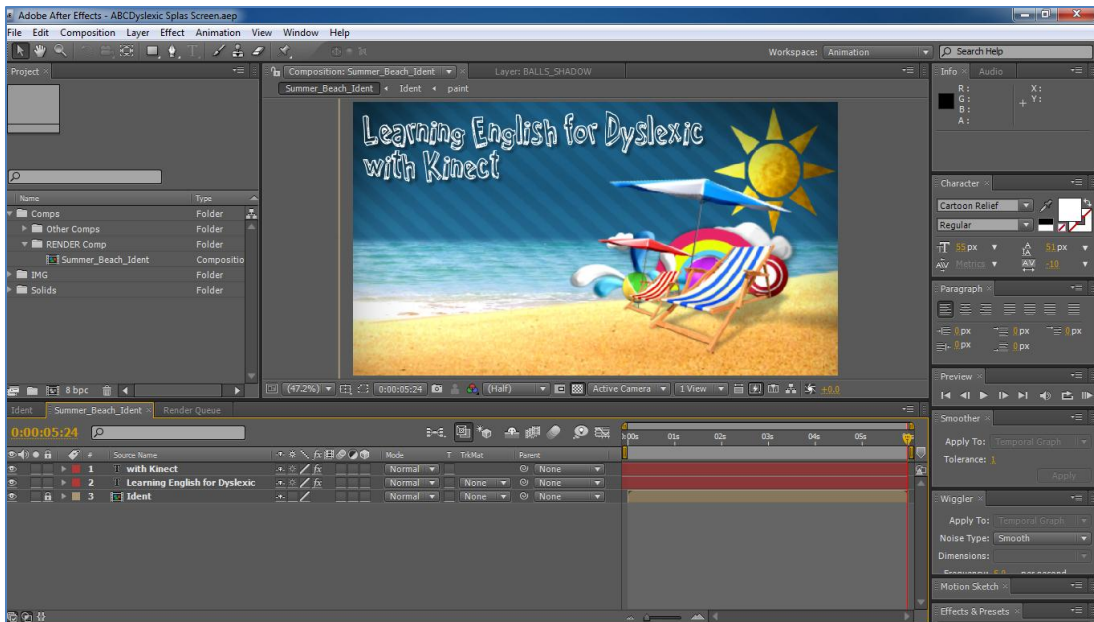


Figure 12: Adobe after Effects CS4

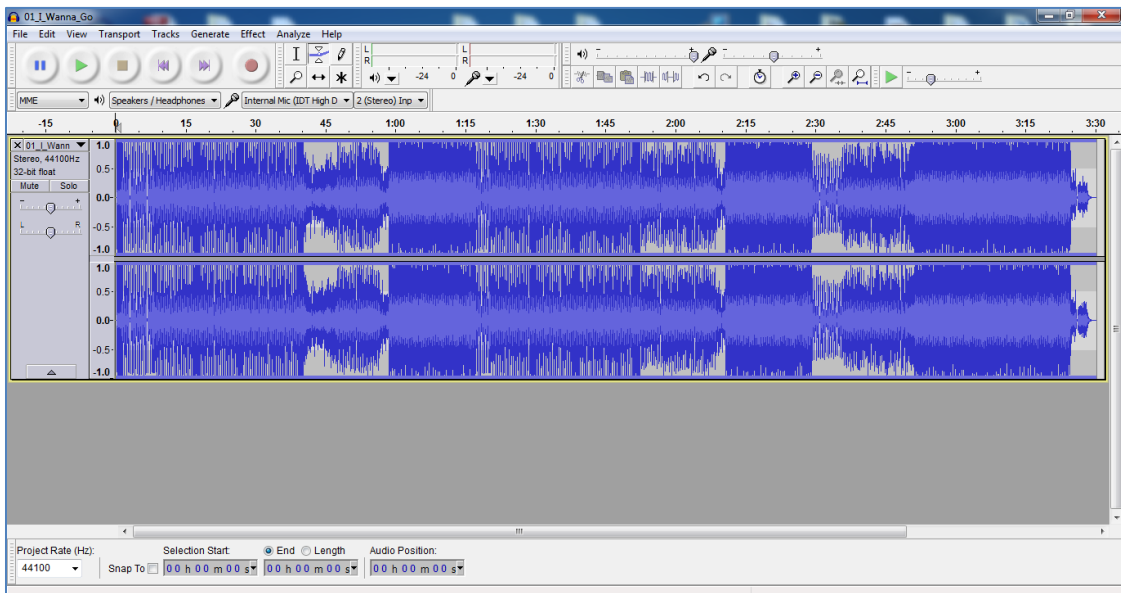


Figure 13: Audacity

CHAPTER 4: RESULT AND DISCUSSION

4 RESULT AND DISCUSSION

4.1 SURVEY

Mobile Assistant Application On Negeri Sembilan Dialect

Are you from Negeri Sembilan?

Yes

No

Do you you know the Negeri Sembilan dialect?

Yes

No

Can you converse in the Negeri Sembilan dialect?

Yes

No

Do you think the Negeri Sembilan dialect is a popular dialect?

Yes

No

Do you think that the dialects in Malaysia are becoming extinct?

Yes

No

Do you think that you will ever need to learn the Negeri Sembilan dialect?

Yes

No

Do you think that an application that will help learn the Negeri Sembilan dialect is beneficial to the society?

Yes

No

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Figure 14: Survey Form

The survey was conducted with 30 students to analyze their opinion about the Negeri Sembilan dialect. This is to gather information regarding how actually the Negeri Sembilan dialect relates to the people. The questions given are a basic YES/NO questionnaire to make easier for the correspondent students to answer.

Question 1: Are you from Negeri Sembilan?

Based on the first question, which asked the students if they are from Negeri Sembilan is to see how many of the students are from the state to make sure if there are differences in answers compared to student from other state regarding the upcoming question regarding the Negeri Sembilan dialect.

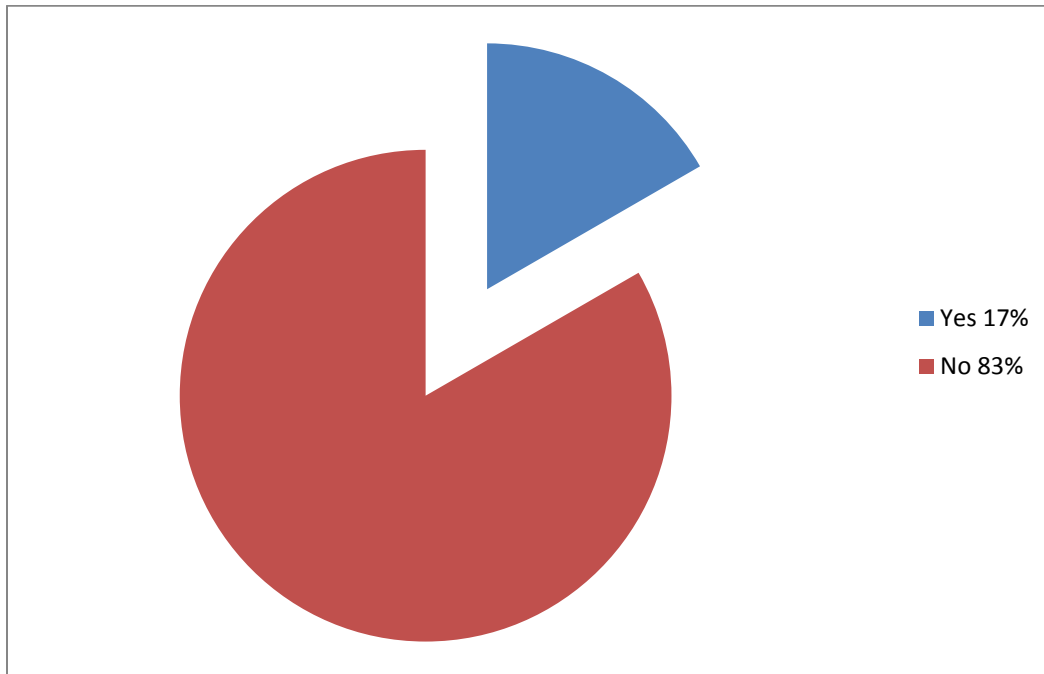


Figure 15: Responds of students for Question 1

Question 2: Do you know the Negeri Sembilan dialect?

The second question is to know if the student knows if there is a Negeri Sembilan dialect and if they basically know how the slang of the dialect will be like. Most of the student know how the sound of the Negeri Sembilan dialect. This means that they can recognize when a person is speaking in the Negeri Sembilan dialect.

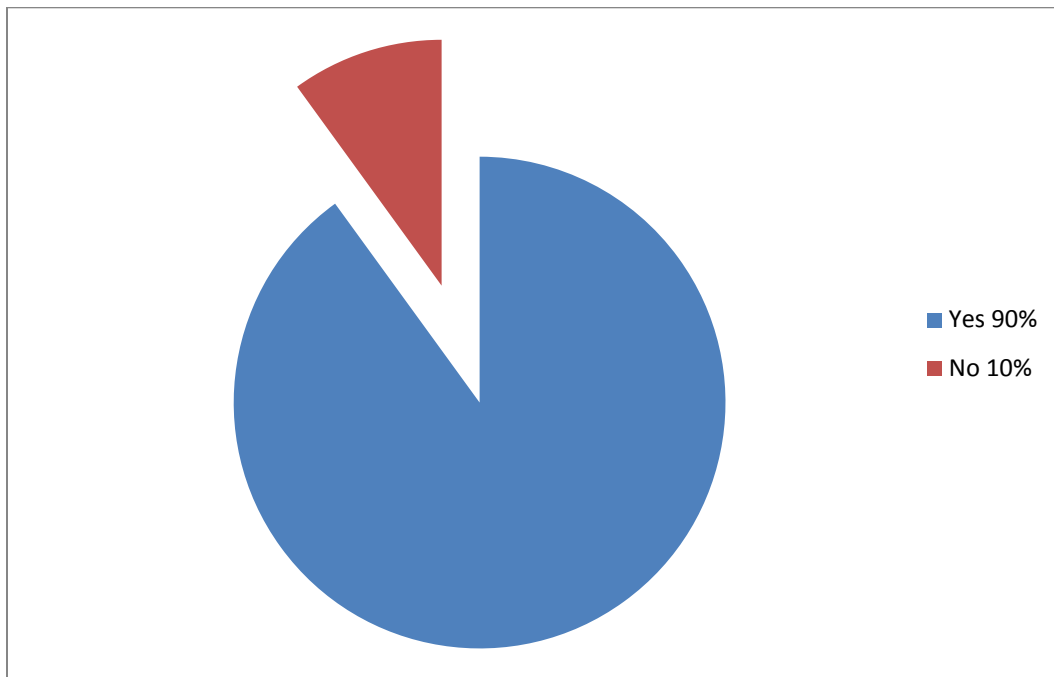


Figure 16: Responds of students for Question 2

Question 3: Can you converse in the Negeri Sembilan dialect?

The third question is to find out if the student can converse in the Negeri Sembilan dialect. Also to see the differences in answers if there is any between the Negeri Sembilan students and the student from the other states. The answers given by the student shows a negative result to how many students can converse it the dialect, only 2 students are able to converse in the Negeri Sembilan dialect. This shows that the Negeri Sembilan dialect is very uncommon to the students.

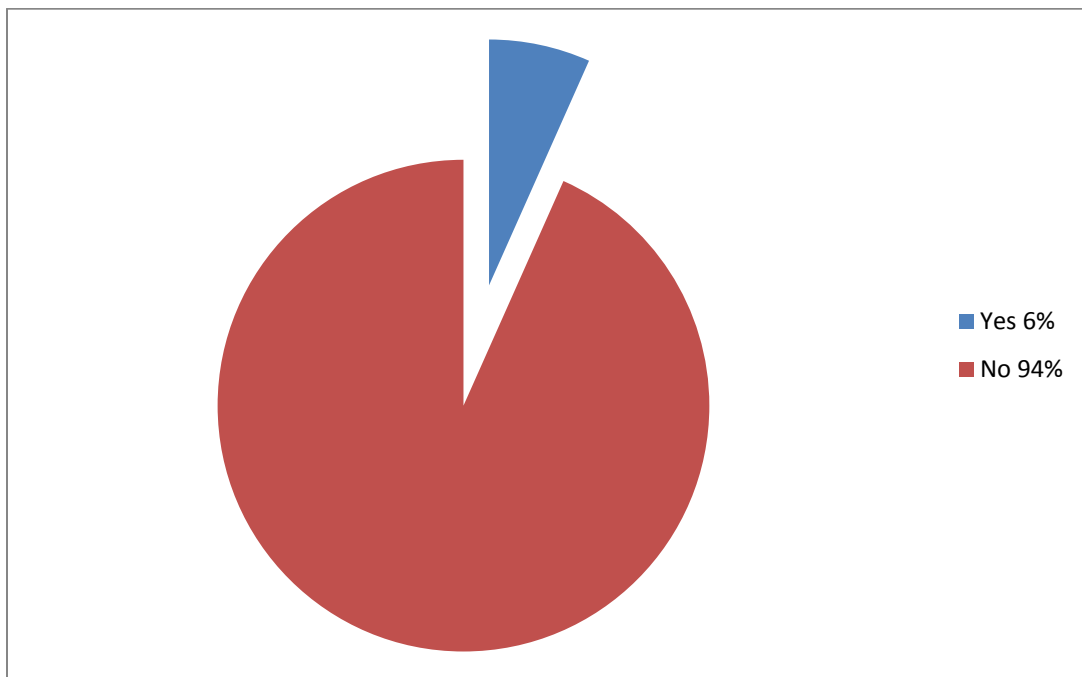


Figure 17: Responds of students for Question 3

Question 4: Do you think the Negeri Sembilan dialect is a popular dialect?

Relating to the number 4 question is actually to find out if the Negeri Sembilan dialect is popular among the student. It is to see if the dialect is popular such as the Penang and Kelantan dialect. But base on the answers obtain it is shown that the dialect is unpopular even among the Negeri Sembilan dialect. They would prefer to use the standard language compare to the Negeri Sembilan dialect. None of the students agrees that the Negeri Sembilan dialect is popular.

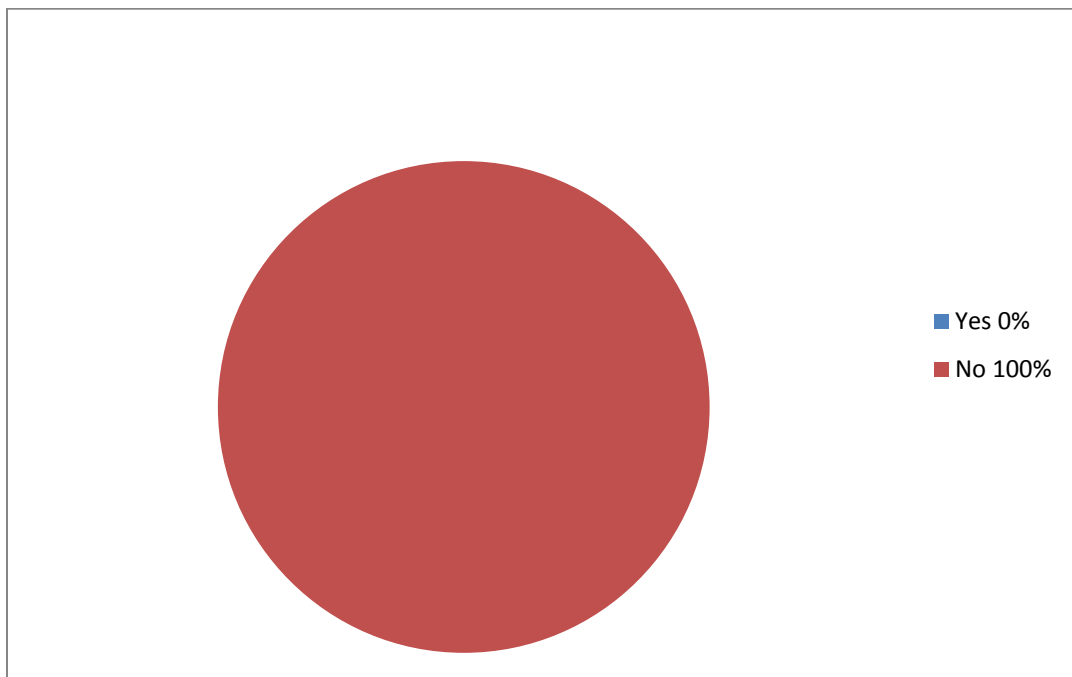


Figure 18: Responds of students for Question 4

Question 5: Do you think the dialects in Malaysia are becoming extinct?

The fifth question is asked to find out if the students think that the dialects of all the states in Malaysia are becoming extinct. Like the concern rose in the upper section of this dissertation more student belief that the dialects are becoming less practical to use in the daily life conversation. This is because most of them think that the modern day preferring the use of the standard and international language.

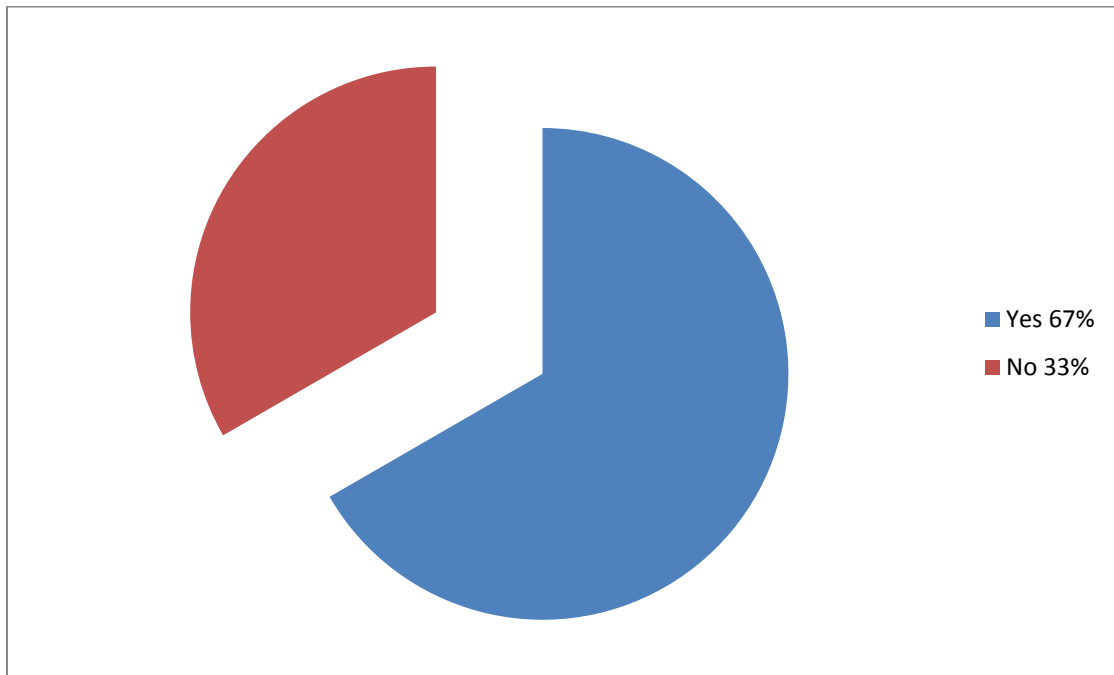


Figure 19: Responds of students for Question 5

Question 6: Do you think that you will ever need to learn the Negeri Sembilan dialect?

Question 6 asks the student if they think that they need to learn the Negeri Sembilan dialect. Most of them consider that the dialect is needed to be learn because of it is part of the Malaysian heritage. This shows the significant on the continuity of the project development due to the fact that more students agree to the question than the disagreed students.

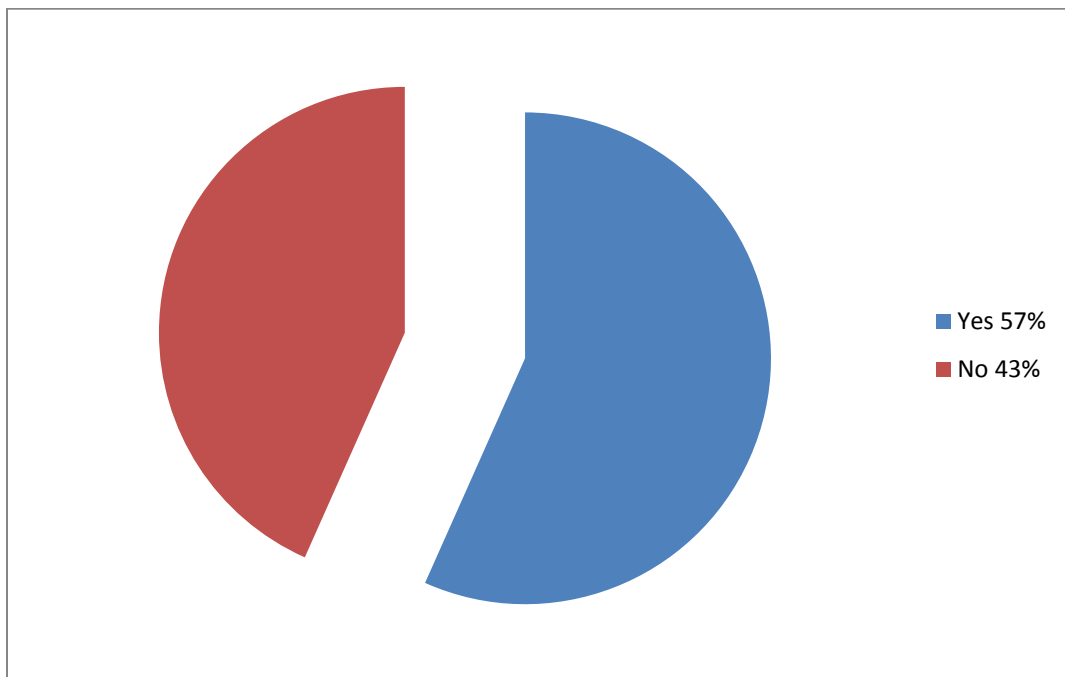


Figure 20: Responds of students for Question 6

Question 7: Do you think that an application that will help learn the Negeri Sembilan dialect is beneficial to the society?

The last question indicates the significant of the project to the society. This is to ensure that the development of the project will be beneficial to the society if it is developed. Most students believe that an application that helps in the learning of the Negeri Sembilan dialect is beneficial to the society. Among the 30 students, 24 students agree that such application is needed for the society. The main reason for their agreement on that matter is because they believe that there is no official platform to learn any dialect language and that the application is crucial to maintain the existence of the dialects in Malaysia.



Figure 21: Responds of students for Question 7

4.2 CHALLENGES AND PROBLEMS FACED DURING THE DEVELOPMENT OF PROTOTYPE

During the process of developing the prototype there are a few problems or challenges that arise during that period of time. The problems are listed below.

- **The interface does not fit accordingly to the different types of resolution available on different mobile phone.**

Due to the fact that there are many resolution sizes on different types of phone it is hard to adjust the interface to fit accordingly to different types of resolution. The courseware used which is App Inventor gives a fix resolution when the prototype is create and will not adjust to different size of resolution. This gave a headache during the testing period because with only a fix resolution size is given on the interface it does not change accordingly when use in different size. If the size of the resolution is bigger than the actual size of the original resolution there will be blank spaces on the display of the screen and if the size is smaller the interface will lose some of its display.

Only by decreasing the size of the content in the display of the prototype and using the most average resolution size does this problem could be solved.

4.3 SYSTEM USE CASE

For this use case, the user is going to be involved with the courseware which and will directly access it. The courseware will allow the user to choose activities. User main actions would be selecting the courses or activities given in the courseware.

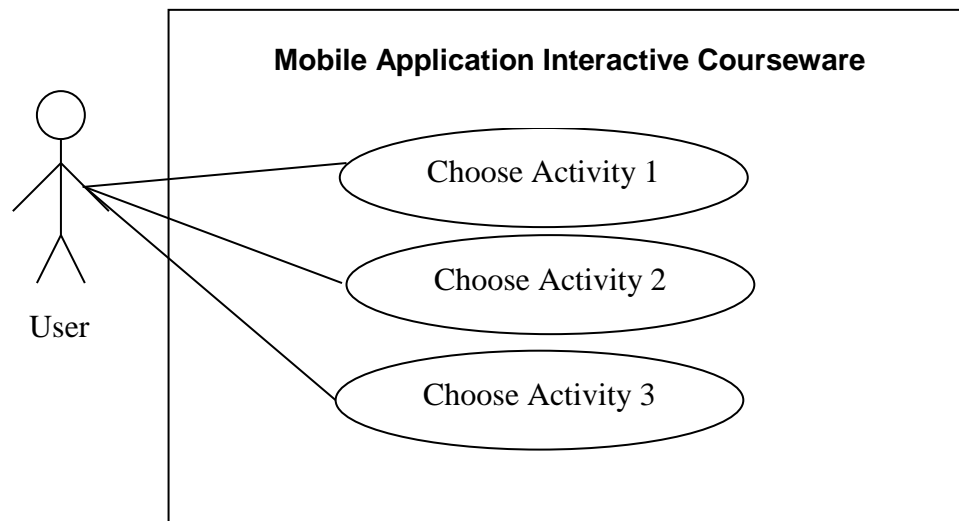


Figure 22: Use Case for prototype interface

The user can perform 3 functions within the system

1. Choose Activities 1 – A button click by user will link to Activity 1
2. Choose Activities 2 – A button click by user will link to Activity 2
3. Choose Activities 3 – A button click by user will link to Activity 3

4.4 PROTOTYPE STORYBOARD INTERFACE

1. Welcome Page

The system starts with a simple interface that contains three activity buttons, a description on the application, a header with the title of the application and a Negeri Sembilan logo.

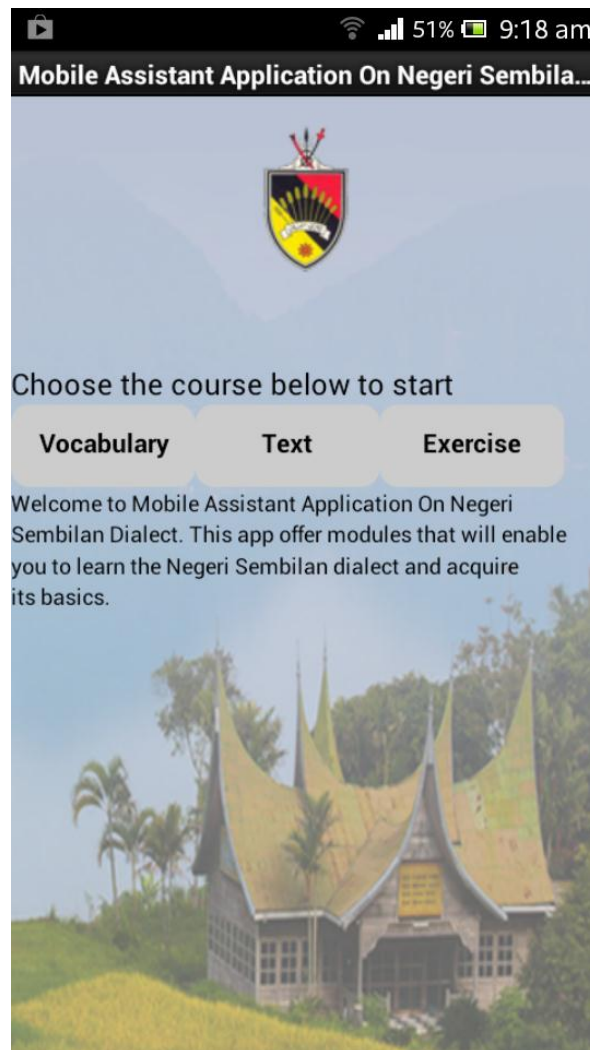


Figure 22: Screenshot of Welcome Page

Because the fact that it is the first page that the user will encounter when using this application it is important to make the interface as simple as possible to avoid confusion when using the main page. The main page act as a gateway to the other available pages just with a click of a button from the three activity button available which are the Vocabulary button, Text button and Exercise button. The background of the page is a picture of a Minangkabau house to make a feel of the Negeri Sembilan heritage. The picture is considered suitable because it relates with the application itself that aims to promote the Negeri Sembilan dialect.

2. Vocabulary Page

The Vocabulary Page is the page that opens when the Vocabulary button on the main page is pressed. The page consists of a vocabulary wording from the Negeri Sembilan dialect with its meaning in English on the right side. There is a symbol of speaker on the right hand side that will give out an audio of the pronunciation on the wording. The End button on the bottom is to return to the main page.

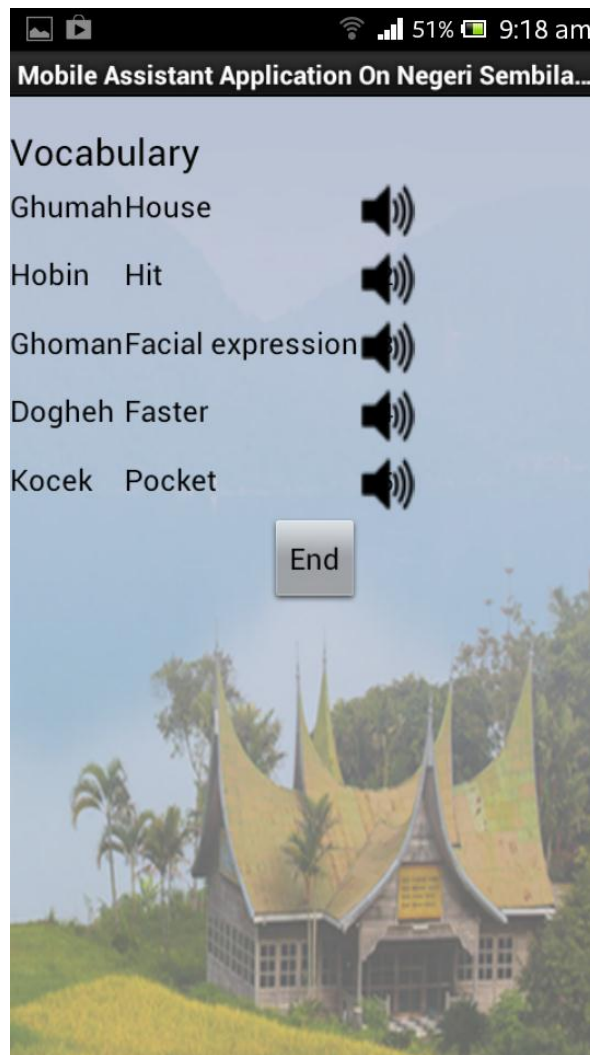


Figure 23: Screenshot of Vocabulary page

3. Text Page

The Text page will display a conversation dialog between two persons which are Ali and Abu. There are a sentence of the Negeri Sembilan dialect and a sentence translating it in English.

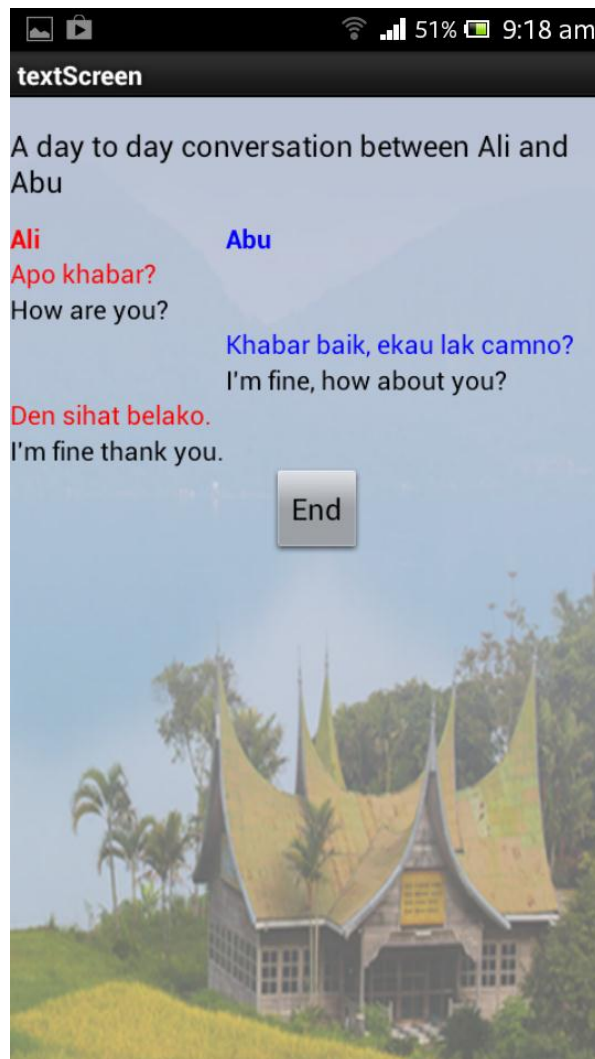


Figure 24: Screenshot of Text page

4.5 FINAL PRODUCT OF PROJECT

The final product of the project is different from the prototype due to certain improvement made. Below is a diagram on system architecture of the application.

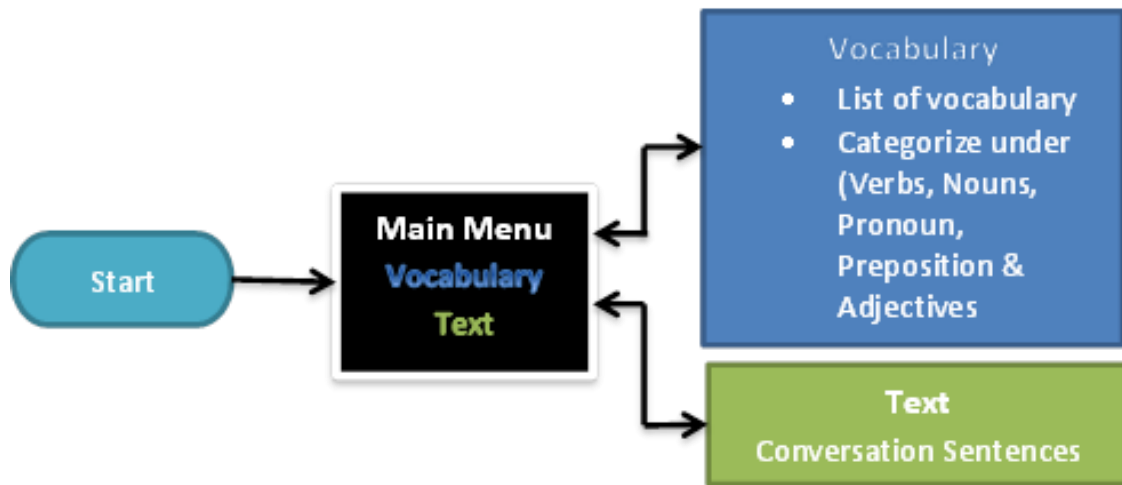
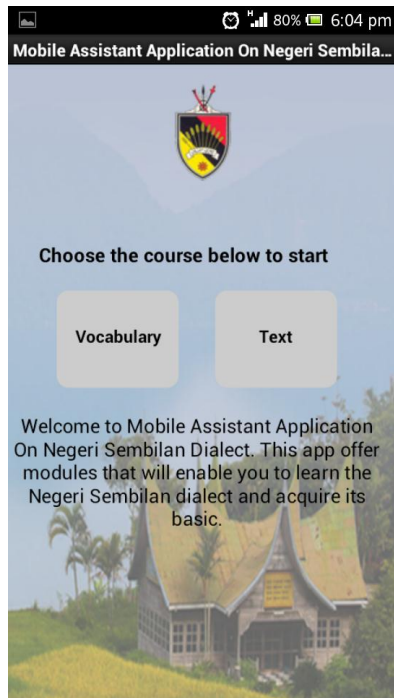


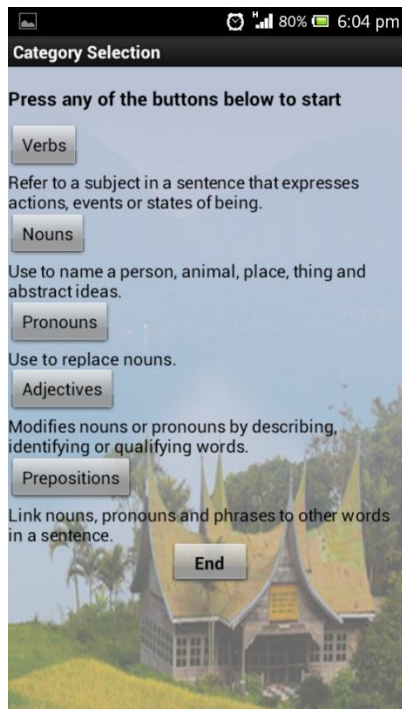
Figure 25: System architecture of application

The application start from the main menu or main page which has two section of module, the first is Vocabulary and the second one is Text section. Under Vocabulary section there is a choice for user to choose from which are Verbs, Nouns, Pronoun, Preposition and Adjective. Each of these choices is vocabularies that are divided among their own group. Under text section on the other hand show four choices which are Greeting, Buying, Asking for direction and Asking for forgiveness where under each choices user will be show a text of conversation in the Negeri Sembilan dialect with English translation in it. Below are list of the application page views.

1. Main page



2. Vocabulary page



3. Verbs page under Vocabulary section



English	Negeri Sembilan
Move	Ensot
Reach	Jewat
Pick up	Angkek
Fall	Belobau
Throw	Locut
Talk	Koba
Go	Poie
Run	Laghi
Hit	Tutoh
Fast	Dogheh
Lie	Mongak
Visit	Jongok
Splash	Simbur
Reverse	Gostan
Take	Ambik
Hear	Dongar

4. Nouns page under Vocabulary section



English	Negeri Sembilan
Cow	Lombu
Buffalo	Kobau
Class	Koleh
Wedding	Begholek
Towel	Kainsal
Car	Mentoka
Driver	Drebar
Private	Prebet
Bridge	Gerotok
Telephone	Talipon
Torch Light	Selait
Current	Karen
Blanket	Goba
Matches	Pencalit Api
Bread	Ghuti
Speaker	Spikar

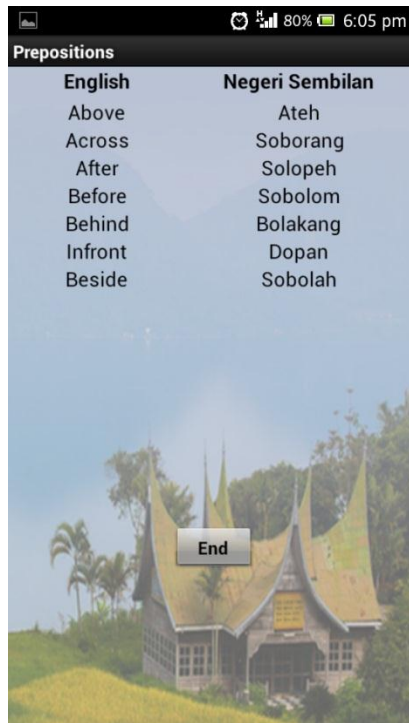
5. Pronouns page under Vocabulary section

English	Negeri Sembilan
I	Ese/ Eden
You	Ekau
Who	Sapo
Something	Sosuatu
Us	Kito

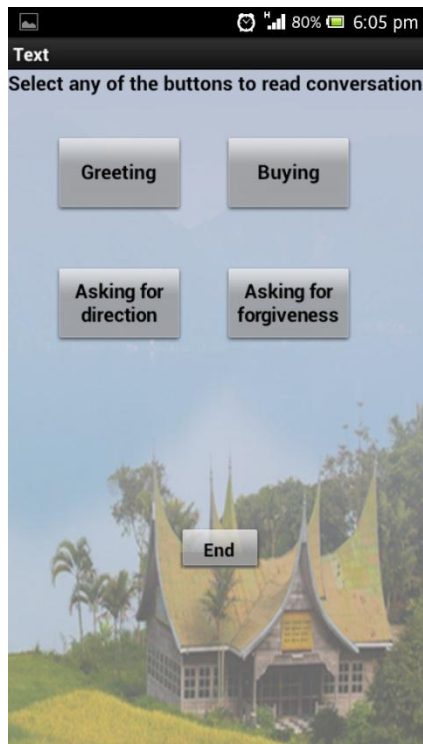
6. Adjectives page under Vocabulary section

English	Negeri Sembilan
Big	Bosa
Small	Kocik
Tired	Ponek
Fast	Copek
Slow	Lombab
Stuborn	Bega
Lazy	Poloser
Clean	Komeh
Rich	Kayo
Thick	Toba
Thin	Nipih
Smiling	Tosonyum

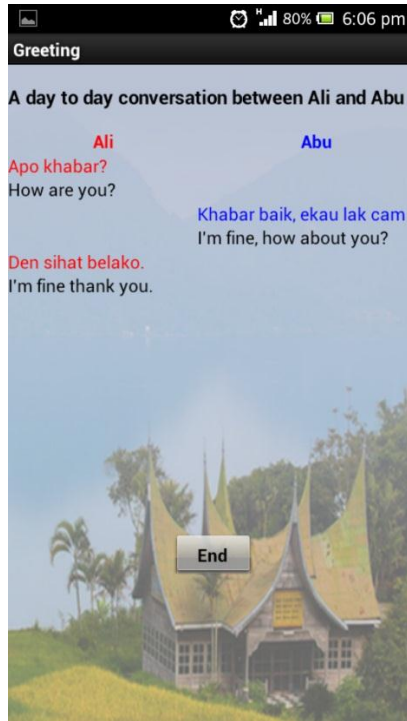
7. Preposition page under Vocabulary section



8. Text page



9. Greeting page under Text section



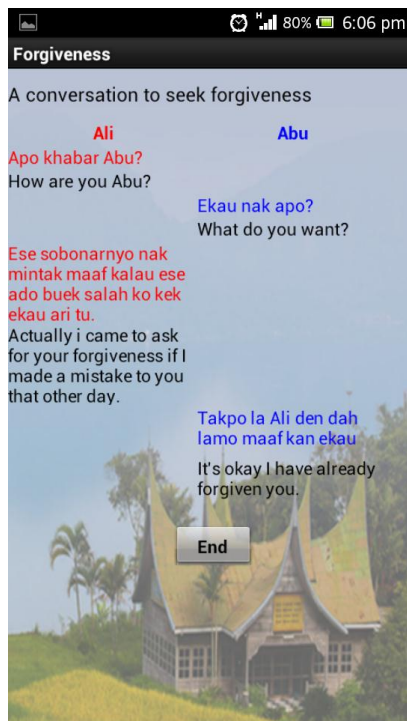
10. Buying page under Text section



11. Asking for direction page under Text section



12. Asking for forgiveness page under Text section



CHAPTER 5 CONCLUSION AND RECOMMENDATION

5 CONCLUSION AND RECOMMENDATION

5.1 RELEVENCY TO THE OBJECTIVES

As stated previously, the objective of this is to design and to develop a documentation of the proposed system. In this case, this system is primarily intended for young generation of Negeri Sembilan and the people that intend to visit the Negeri Sembilan state which will assist them in understanding and learn the Negeri Sembilan dialect. In term of relevancy, it can be concluded that it is relevant to the objectives proposed earlier where the system/ application documentation is written successfully.

With regards to the goals of developing this system in such a way that it helps to provide a more effective sharing and communication medium for user with the locals. With Mobile Assistant Application on Negeri Sembilan Dialect, outsiders of the state and young generation will have a better communication with the local and understanding the dialect. In fact, with the development of the proposed system, it helps to indirectly promote the culture and heritage of the Negeri Sembilan. Since the dialect is a proud heritage of the Negeri Sembilan people the application will help in the action of preserving the dialect for future generation to come.

In short, the proposed system does follow the objectives and scopes defined. The activities that have been conducted that include research and mostly application of theories into practices a relevant to the objectives specified.

5.2 SUGGESTED FUTURE WORK FOR EXPANSION AND CONTINUATION

In developing a system, there will always be room for improvement and expansion as nothing created by human being is perfect for the first time of development. There will be other new ideas that will help enhance the system to make it a higher achiever at the purpose of its development. For the proposed system, it can only cater for Android based platform smart phones and the other operating system smart phones would not have the privilege to use the application. Thus expanding the system into other platform would be a great idea to get more users to use the app.

In addition, this system is only for mobile users, if it is available in computerize software it would also help give non smart phone owners to use the application.

Last but not least, improvement can be made on the system features itself such as having a more vocabulary in the system than only having the commonly use words or expanding the dialect to not only the Negeri Sembilan dialect but to the other dialects that are available in Malaysia.

5.3 CONCLUSION

My final year project title ‘Mobile Assistant Application on Negeri Sembilan Dialect’ is a mobile based application that intends to help people to understand the Negeri Sembilan dialect. The project was actually intended to help to preserve the heritage of the Negeri Sembilan dialect; this is also because I was born in the capital city of Negeri Sembilan which is Seremban.

The system would basically store sufficient information on most common words, phrases and sentences used in daily conversation to be used as a guide for people when communicating with the locals of Negeri Sembilan.

The application will help preserve the dialect heritage of the Negeri Sembilan people and will not let the dialect be perished within the upcoming future. People will still have a platform for them to learn the language without any teacher to guide them in the learning process.

The user would be people of young generation of Negeri Sembilan and people that intends to visit the state. I believe that this project is a good project because there are no other applications in mobile phones that act to assist people in dialect understanding and communicating.

REFERENCES

- Aznil, F. (2008, 3 11). *Jom Belajar dialect Negeri Sembilan*. Retrieved 10 1, 2012, from Word Press: <http://5sn1smksk.wordpress.com/2008/11/03/jom-belajar-dialect-negeri-sembilan/>
- Collins, J. T. (1978). Dialect research. *Malay Dialect Research in Malaysia: The Issue Of Perspective*, 30.
- Khoury, H. E. (2012, 10 10). *iTunes Preview*. Retrieved 11 1, 2012, from iTunes Apple: <https://itunes.apple.com/us/app/keefak/id490516744?mt=8>
- Massachusetts Institute of Technology. (2012, 1 1). *Appinventor edu*. Retrieved 10 1, 2012, from MIT App Inventor: <http://appinventor.mit.edu/>
- Sufian, M. (2011, 8 18). *Belajar Loghat Nogori Part 2*. Retrieved 10 1, 2012, from Blogspot: <http://muhamadsufian89.blogspot.com/2011/08/belajar-loghat-nogori-part-2.html>
- Team Photoshop. (2011, 7 5). *Tutorials: Team Photoshop*. Retrieved 10 1, 2012, from Team Photoshop Web Site: <http://www.teamphotoshop.com/Home-1,8.html>
- Yusof, A. K. (1971-1972). Bibliography. *Dialect Baling: Sifat-sifat umum dan kumpulan teks*, 37.