

# **Malay Idioms and Proverbs Game for Android**

By

Muhammad Muizzul Fadly Bin M.Mazlin (ID: 13726)

Dissertation submitted in partial fulfillment of  
The requirements for the  
Bachelor of Technology (Hons)  
(Information Communication Technology)

September 2013

Universiti Teknologi PETRONAS  
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31750 Tronoh  
Perak Darul Ridzuan

**CERTIFICATION OF APPROVAL**

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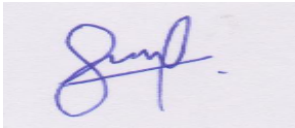
(Dr. Lukman Bin AB Rahim)

UNIVERSITI TEKNOLOGI PETRONAS  
TRONOH, PERAK

September 2013

## **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.



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Muhammad Muizzul Fadly B.M.Mazlin

## **ACKNOWLEDGEMENT**

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## **ABSTRACT**

These days, more and more technology has been used in education including in learning Malay Idioms and Proverbs. But, the current mobile applications that have been created works similarly with the reference book where student need to read them to get know the Malay Idioms and Proverbs. Therefore, a Malay Idioms and Proverbs Game will be developed to help the primary school student to learn and know Malay Idioms and Proverbs with more fun learning environment. Malay Idioms and Proverbs Game is an android mobile application system that provides the primary school student with game about Malay Idioms and Proverbs that contains the element of education so that the students can learn and play at the same time. A lot of investigations have already been made to study the current existing mobile application that related to Malay Idioms and Proverbs so that the user requirement can be meet and the scope of the project is developed a game that going to teach the primary school about the Malay Idioms and Proverbs. Inside this project, the main technology and programming used is Java together with the use of normal computer. Finally and the last, I hope that the system that I going to develop can help the primary school student to learn about Malay Idioms and Proverbs with more fun environment besides increase their interest in learning and knowing Malay Idioms and Proverbs.



## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 BACKGROUND OF STUDY**

Nowadays, the aspect of Malay proverbs and idioms are less emphasized although Malay proverb is an essential element in the Malay language criteria because the implied meaning of the proverb is deep and accurate enough to allow oral or written communication become more efficient and effective. Among the reasons for proverb to be less emphasized by younger generations are: 1) Malay proverbs are cliché language, 2) the literature belongs to old generations, 3) they do not understand the idioms well, 4) proverbs and idioms have a lot of hidden meaning, 5) there are many numbers of the proverbs and have implicit meanings[2].

But Malay proverbs and idioms are an important element in Malay language for primary school and secondary school students and are tested in the school examination such as Primary School Evaluation Test (UPSR), Lower Secondary Assessment (PMR) and Malaysian Certificate of Education (SPM). So, it is important to the students in primary school and secondary school to learn Malay proverbs and idioms to get better understanding and also to appreciate the literature language.

#### **1.2 PROBLEM STATEMENT**

The conventional way of learning Malay idioms and proverbs in the primary school are not able to retain the attention of the student because it is defines as less interactive. Therefore the author came out with the idea to develop a mobile application in android platform called Malay Idioms and Proverbs Game. This mobile application helps to overcome this problem by providing students with the effective teaching aids and tools so that the student can learn Malay idioms and proverbs in an educational and playful manner.

### **1.3 OBJECTIVE**

The author has set two objectives that need to be achieved which is: .

- 1) To make a research about the suitable games that can be implemented to attract primary school student to know and learn about Malay proverbs and idioms.
- 2) To develop an interactive application that can support teacher in the learning process of Malay idioms and proverbs so that the student can understand better.

### **1.4 SCOPE OF STUDY**

The scope of developing Malay Idioms and Proverbs Game for android is defined specifically for the primary school students. This mobile application will be developed on Android platform and it will serve as a teaching aids and material to introduce Malay idioms and proverbs to the students.

However, this application was not intended to totally replace the role of teachers, but assisting the students to learn Malay proverbs in a better way. Furthermore, the application will be based on the concept of the question and answer learning style.

### **1.5 LIMITATION**

The limitation of the application is the device that is needed to be used to display the application such as mobile phone and tablet that running android operating system. Teachers at the primary school must have one or more device so that all students can experience of using this applications. Maybe the school itself can allocate some budget to buy the device instead of buying others learning aid tools.

## **1.6 FEASIBILITY STUDIES**

### **1.6.1 Technical Feasibility**

There are a lot of benefits when doing a project based on Android Smartphone. This is proven by the research done by Gartner whereby the worldwide Smartphone sales are reaching 468 million units in 2011, increasing 57.7% from 2010 [3]. Android is becoming the most popular operating system (OS) worldwide and building on its strength to account for 49% of the Smartphone market. Therefore, there will be a good point to develop this project for Android as more people are using it.

### **1.6.2 Economic Feasibility**

The application is builds in android platform. All the software and coding is open source and no cost occurs along the development time. This application will be uploaded in Google Play and can be download for free into all smart phones that are running android operating system. As overall, this project is considered economic feasible.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 HISTORY AND BACKGROUD OF MALAY PROVERBS

In the book of Knowledge on Malay Composition (Ilmu Mengarang Melayu), Za'ba explained, "the proverb is the arrangement of short words or saying that have a broad meaning, truth, and the words choosing for the proverbs are sound goods and wise." [3]. Traditional proverbs are referred to the proverbs used in day-to-day speech or printed before the date of independence. The modern proverb referring created after that date. Proverb is a part of figurative language in the Malay culture. The beauty of the proverbs is the way of a proverb is used to build the mind [2]. The expression of Malay proverbs contained superiority thinking that derived from life experiences and the sharpness of their observations towards environmental community. There are several reasons on the creation of a proverb, such as:

- Comparison of an event with the famous story.
- Results metaphor about things and events that occur in the normal day-to-day life of the community.
- There are events on revenue of public trust.
- Derived from the use of figurative language in a certain place or time and then well-known to the public.
- Proverb also comes from the famous stories of the events that made comparisons unusual.
- Proverbs arise as a result of the first observation of things in their life.
- Proverb arising from belief in a supernatural power or the normal rules of everyday life.

There are several functions of proverbs in everyday life such as:

- Proverbs teaching proverbs as providers remind individuals about the various possibilities that will come and make the choice to act.

- Arbitrates proverb. - Intended reprimand or prohibit the making of something.

## 2.2 TYPE OF MALAY PROVERBS

According to Abdullah & Ainol (2011) [10], there are four categories of Malay proverbs which are:

- *simpulan bahasa*
- *perumpamaan*
- *pepatah*
- *bidalan*

***Simpulan bahasa*** – the easiest kind of proverbs and normally consist of two words. The literal meaning of the word combination is different than the actual meaning of the ‘*simpulan bahasa*’. Example: *Langkah kanan*; literally means *right footstep*, yet the actual meaning is *lucky*.

**Perumpamaan** – a proverb that kind of implied meaning behind the wording and the phrases started with *seolah-olah, ibarat, bak, seperti, macam, bagai* or *laksana*. Example: *bagaikan pinang dibelah dua*; literally means like betel nut split apart evenly, yet the actual meaning is compatible / equally beautiful and handsome for a pair of just married bride and bridegroom.

**Pepatah** – proverb that contains advices or teachings. Example: *Adat berperang, yang kalah jadi abu, menang jadi arang*; literally means in war, loser become ashes, winner become coal, yet the actual meaning is in war, the defeated and the winner are both losers.

**Bidalan** – phrases (*pepatah*) that started with *jangan, biar* or *ingat*. Example: *Kalau kail panjang sejengkal, lautan dalam jangan diduga*; literally means if you have a short hook, do not attempt to fish in the deep sea, yet the actual meaning is if you have little knowledge, do not dare to dream big.

## **2.3 TEACHING AND LEARNING TECHNIQUES FOR MALAY PROVERBS**

Techniques of teaching and learning in Malay subjects are varied and interesting. It is depending on the wisdom of teachers to make teaching and learning more engaging and effective.

### **i) Storytelling technique.**

This technique is a suitable approach in building proficient students besides students' interest and attention. In fact, through this approach, teachers can help students increase proficiency in the skills of listening, speaking, reading and writing among the students. Teachers only need to use a suitable proverb as the title, then by using the names of students in the class as a character, as well as moral values in the story that we want to. Teachers can also use pictures or text cards as teaching aids. When finished, the teacher can ask students to write the moral values derived from the stories of teachers and students are asked to read it.

### **ii) Drama techniques**

This technique can make teaching and learning more interesting proverb among the students and not boring. This approach is the mode of learning in teaching and learning Aids. Through this technique, students first divided into groups of several students. They will be given a title taken from a proverb, then find the meaning of the proverb, before developing a dialogue and then act out the dialogue built on the meaning of the proverb that was given to them.

### **iii) Discussion techniques.**

In the case of teaching and learning, this approach is often the preferred choice of teachers because it involves all pupils in the class with a specific allocation of responsibilities to each member. This approach would provide the opportunity and space

for students to produce their ideas to be shared, but also sharpen the mind and train them to talk. Teachers need to divide the students into small groups to discuss the topic that was given to them, and then they were asked to give a talk based on the given idiom, saying the sentence as well as list of values appropriate then presents their findings in front of the other group.

#### iv) Question and Answer technique

This technique can also be used in teaching and learning proverbs. This technique is also similar with the discussion technique, which is an approach that is very popular and very much used by the teachers in teaching and learning. This technique can be categorized as a legend or seniors among other techniques. Although this technique is considered to be the easiest, but this technique is a technique that is capable of creating a two-way interaction between students and teachers effectively. This approach aims to detect language skills among the students as well as stimulating students to think creatively, innovative, logical and critical thinking. Teachers will ask students, with saying the name of the students that do not arise a situation where there are no students to answer questions. The question that was put by a teacher must be relevant to the content taught, for example related to proverbs and students will respond accordingly.

## **2.4 MOBILE LEARNING AND GAMES APPLICATION**

Mobile learning and gaming industry has become a booming industry for smart phones application developers. The growth of the industry is too fast. This is because mobile apps do provide ways to pass waiting times, on-the-go source of entertainments and ways of connecting to other players through competing scores and sharing information. Statistics from Gartner in their report dated back in June, 2011 mentioned that total spending for mobile software was USD\$ 44.7 billion, and estimate will grow up to USD\$ 56.5 billion all over the world. Within the gaming software market, total market share for mobile game application expected to rise from 15% in 2010 to 20% in 2015 compared to gaming consoles and PC.

### **2.4.1 Android as a Mobile Development Platform**

There are two most popular operating system (OS) that operate almost in all smart phones that available today which are iOS and Android, an open source mobile operating system. The author decided to choose android operating system as the platform to build the Malay idioms and proverbs applications for some reason. One of the main reasons on why the author chose Android platform is because the tendency for android application to crash is lesser compare to iOS. Below are the data gathered from the Crittercism, a mobile application monitoring startup.



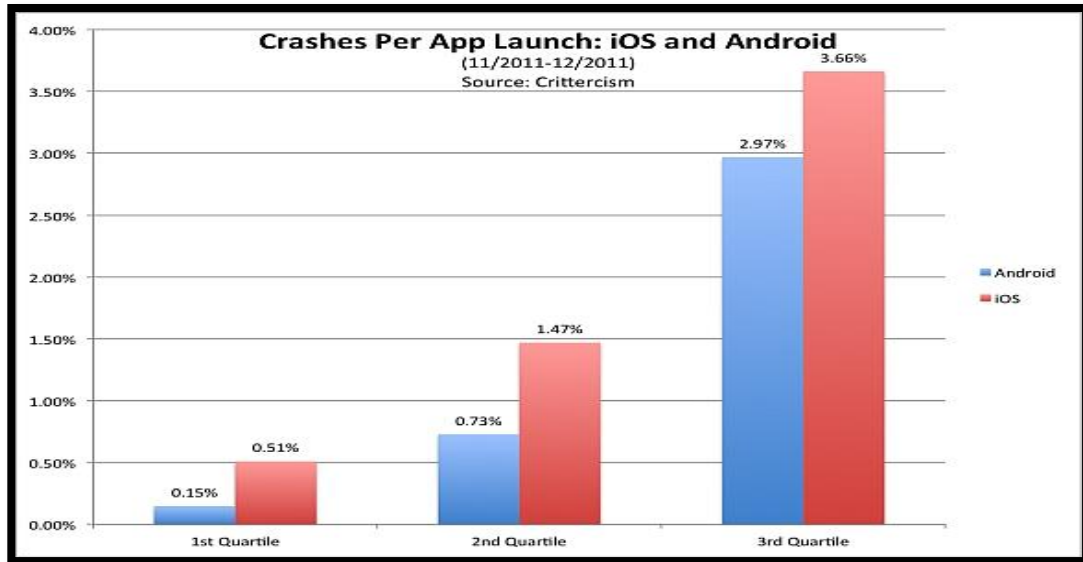


Figure 1: Data of crashed per app launch compared between iOS and Android

Basically the data shows that iOS apps crashed more frequently than comparable apps on Android. As you can see in the data presented, iOS application on iPhone, iPad and iPods Touch make up nearly 75% of total crashes in the period that the data was gathered. The researchers suggests that the reason why Android apps see far less crashes than iOS apps is because the Android platform allows developers to send out updates faster and users are able to set their Android devices to auto-update apps which allow bugs to be fixed much faster than can be done on iOS. On iOS developers pushing updates have to go through an approval process which can take weeks and there is no auto-update for users using iOS.. On a day-to-day basis we do see more app crashes on iOS than on Android.

Besides that, the Android gains a lot of user because technology platform markets tend to standardize around a single dominant platform like Windows in PCs, Facebook in social, and Google in search [6]. The developers are strongly supporting Android platform by building their apps and provide it to the Android.

# CHAPTER 3

## METHODOLOGY

### 3.1 Research and Project Development Methodology

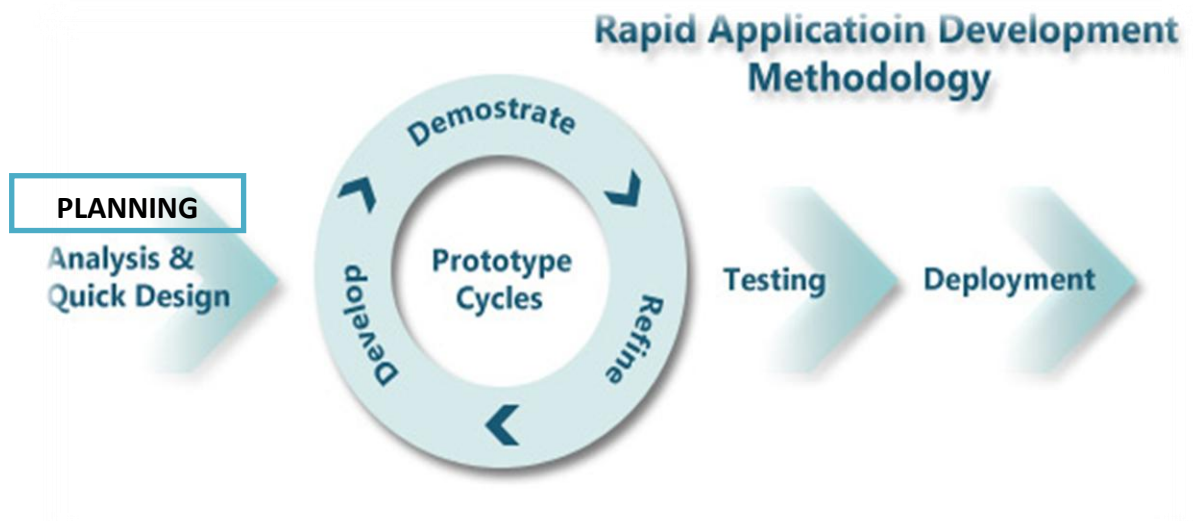


Figure 2: The Rapid Application Development Methodology

The methodology that used for this project is Rapid Application Development (RAD) methodology. RAD technique allows really "Rapid" application development, with development time limited to 30 or maximum 90 days. The RAD technique has much advantage like improve the speed of the development process through rapid prototyping. Besides, this technique emphasis on simplicity and usability of graphical user interface GUI design. More or less, cost overruns and meeting the time constraints are another advantage of implementing RAD technique and for sure RAD makes the development process become more credible because the user can actively provide inputs and feedback along the development process [8]. This may also prove feasible from the point of view of a developer. The cost is considered as low budget development but most effective.

- **Planning**  
At this level, the main problem statement is well properly identified by doing some research and study regarding the actual cases. Then the author set the achievable objective that must be realized at the end of the project development process. Followed by the further analysis and came out with the quick design.
- **Develop, Demonstrate and Refine**  
This is the phase where the prototype of the system application will be design and developed. In the same time, the demonstrate process also run simultaneously with the development process and will always be refine back to the real situation and objective of the application development. When there is a problem in development, the author can go back to the user.
- **Testing**  
Testing process will be conducted using the prototype specifically to the target user which are the primary school student from the chosen school nearly around. The result from the user acceptance test UAT will be used to improve and enhance the system application until the user satisfied with the application. It is important to get feedback from the users because they can evaluate the GUI and the content of the application by their preference. The RAD methodology give the opportunity to quicker visualization of the end-design hence allow rapid software testing and rectifying steps.
- **Deployment**  
After the user acceptance test UAT already been done and the improvement already complete, then the application is ready to be upload into the Android market such Google Play and GetJar so that it can be downloaded directly using android smart phones.

### 3.2 Project Activities

The first start to develop this project is by doing a few researches and collecting data that is relevant in helping to build this project. The author will look at all the problem rise before at all resources found to make new changes to this project. While doing the project, the author will revise to his supervisor to ask for opinion to make some changes and what to be put in this project. The author will also follow several tutorials in understanding the concept of Java language in Android and how to run it on the device. Before finalizing the whole project, a few testing will be run to see the weaknesses found in the project.

After the game prototype is finished, it will be testing into two part of test which is pre-test and post-test. In pretest, student will be given quiz on Malay Idioms and Proverbs, the result will be recorded. After that, student will playing and experience the game and post-test will be conducted after they had played the game. In post-test, the student also will be given the same quiz on Malay Idioms and Proverbs and the result will be recorded to see the effectiveness and efficiency of the game towards student in learning Malay Idioms and Proverbs.

### 3.3 Key Milestone

Table below shows the key milestone that the author needs to achieve in Final Year Project 2 (FYP 2).

<b>KEY MILESTONE</b>	<b>WEEK</b>
<b>Submission of Progress Report</b>	WEEK 4
<b>Submission of Dissertation(1<sup>st</sup> Draft)</b>	WEEK 11
<b>Online Submission of Technical Report and Dissertation</b>	WEEK 12
<b>Final Dissertation(Hard Bound)</b>	WEEK 15

Table 1: Final Year Project 2 Milestones

### 3.4 Project's Gantt chart

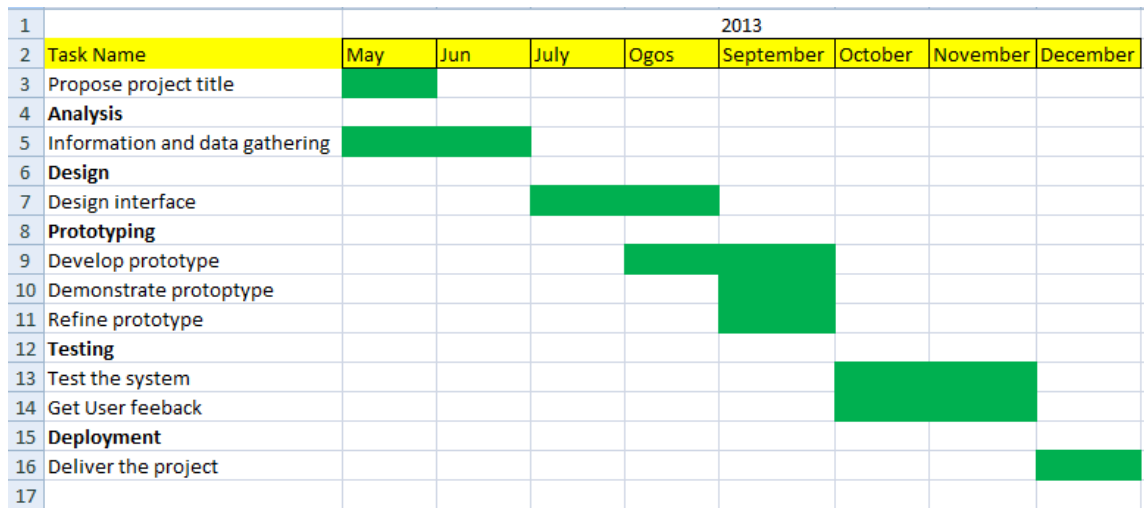


Figure 3: Gantt Chart for Final Year Project

### 3.5 Tools and Equipment

Hardware:

- Laptop COMPAQ Presario CQ35
- Samsung Galaxy Y S5360 (Android Version 2.3.5)

Software:

- Eclipses

# CHAPTER 4

## RESULT AND DISCUSSION

### 4.1 First Draft Game Plays Design

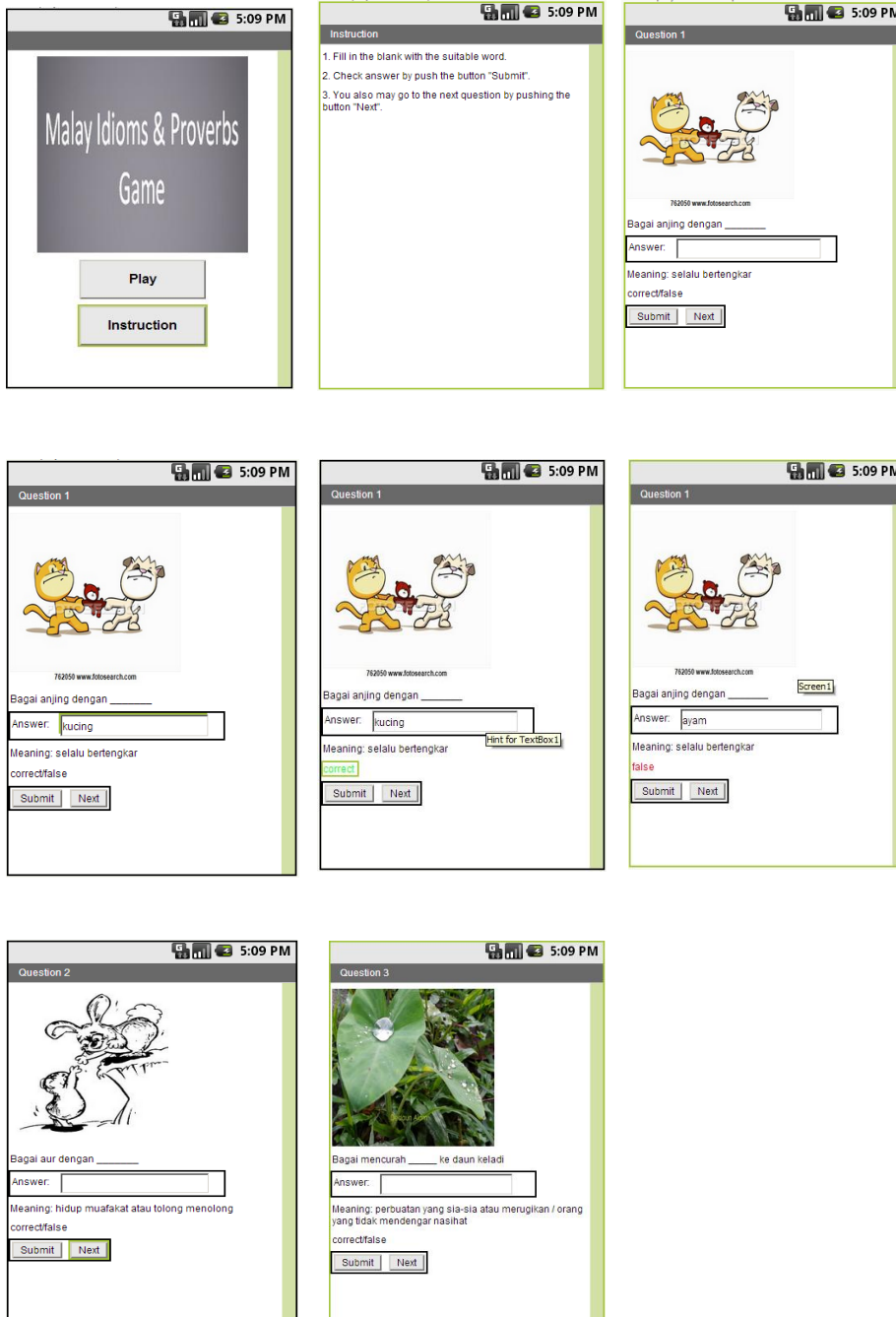


Figure 4: First Draft Game plays Design for Malay Idioms and Proverbs Game

For the first draft on Malay Idioms and Proverbs Game plays design, author only implement the concept of fill in the blank question for the student. This type of question is quiet interesting as the student will feel anxious to know the suitable word that they should put to get the correct Malay idioms and proverbs.

In the early of the game, there are certain instructions that need to be read by student before they continue the game. The instructions are 1) Fill in the blank with suitable word, 2) Check answer by pushing the button 'Submit' and 3) You also may go to the next question by pushing the button 'Next'.

After the student read the instruction, they may proceed to play the game. The student will enter the word that they think suitable for the question. Next, student needs to check the answer and if student answer right, the word 'Correct' in green color will pop up meanwhile if the student answer it wrong, the word 'Wrong' in red color will pop up.

Other than that, author do feel that the game development is still in early stage and still need to be mix with different game theory so that the game will able to attract the student to play it and able to give useful knowledge and input to them.

## 4.2 Existing Mobile Application on Malay Idioms and Proverbs.

### 1. MyPeribahasa

- Contains more than 3,800 proverbs.
- categorized alphabetically from A to Z
- The search function will allow users to find the desired proverbs easily by simply entering keywords in the provided search box.



Figure 5: Interface for MyPeribahasa Mobile Application

Resource: <http://www.windowsphone.com/en-us/store/app/myperibahasa/bfd9b5ee-5562-4393-aa6b-029a7ee13f61>



## 2. PSLE MCQs - Malay Peribahasa 1.0

- application that contains multiple choice questions on specific subject or topic
- students are given 3 lives and point system
- Each wrong answer will cost them a live.
- The correct answer will show to them immediately.
- After all 3 lives are used, the game stops and they can restart again.

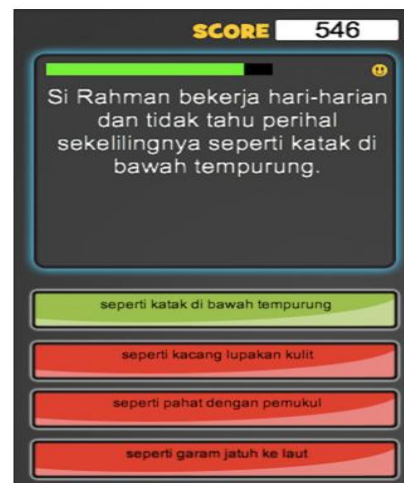
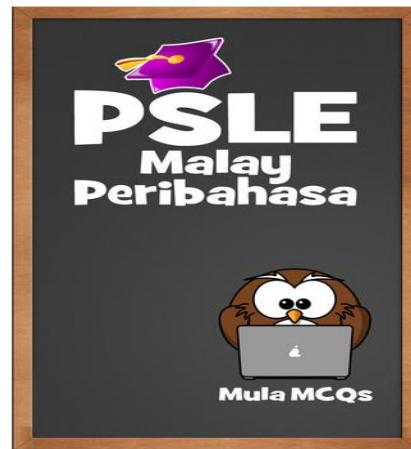


Figure 6: Interface for PSLE MCQs-Malay Peribahasa 1.0

Resource: <https://itunes.apple.com/sg/app/psle-mcqs-malay-peribahasa/id518542072?mt=8>

### 3. Peribahasa Scanner

- Capable of detecting Malay proverb from a sentences or a part of sentence.
- Currently 3000+ entries of Malay proverbs available in the database.
- Also capable of suggesting Malay proverb based on Malay sentence context.



Figure 7: Interface for Peribahasa Scanner.

Resource: <https://play.google.com/store/apps/details?id=net.kerul.peribahasa&hl=en>

After doing some observation on the existing mobile application that related to Malay idioms and proverbs, there are certain parts of the mobile application element that can be implementing by author in Malay Idioms and Proverbs Game. The elements are such as the pointer system and note on Malay Idioms and Proverbs.

For the pointer system, author wants to add the score element in the game as if the student able to get the question right, they will get certain score. With the score system, student will feel more motivated and excited to plays the game as they will try to answer the question as the best that they can so they can get the higher score.

Next is about the note on Malay Idioms and Proverbs, this note will work as reference to the student before they start play the game. With the reference provided, student will able to refer it and it should help the student to answer the question in the game better.

As for now, the author will try to come out with more interesting ideas to make the game better and suitable for student so that they can enjoy the game and can learn Malays Idioms and Proverbs with more efficient.

### **4.3 Relevancy Survey**

#### **4.3.1 Survey**

A survey that made of five questions has been published through online for targeted participant's response. The survey does not ask for personal details which are considered private such as name or age. The objectives of this survey are to observe the relevancy of using games to attract student in primary school to know and learn about Malay proverbs and idioms. Relevance of making online survey is because results obtained quickly and live results. Furthermore, participants that live far can answer the survey anywhere and anytime.

#### **4.3.2 Samples**

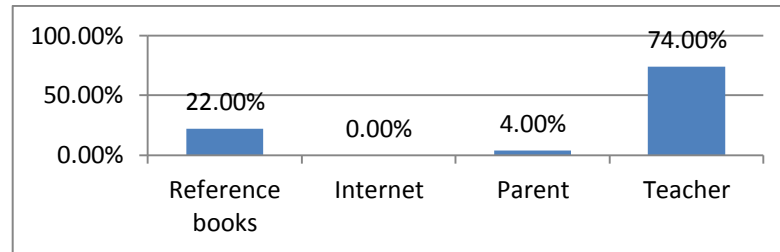
The target respondents for this survey are teachers. Author has distributed the survey through online (Facebook). The target Facebook groups are Kami Guru Malaysia, BAHAN P&P KSSR &KBSR(SJKT) and ALUMNI IPG KAMPUS BAHASA MELAYU. Most of the members of these Facebook groups are teachers and author feels that they are the one that can give correct views on the research matter. Forty-six (46) respondents have answered the survey.

#### **4.3.4 The Analysis of the Data**

. The results of the survey will be discussed in details for each of the question. Graphics were used to portrait the result such as bar graph.

### 4.3.5 Result and Analysis

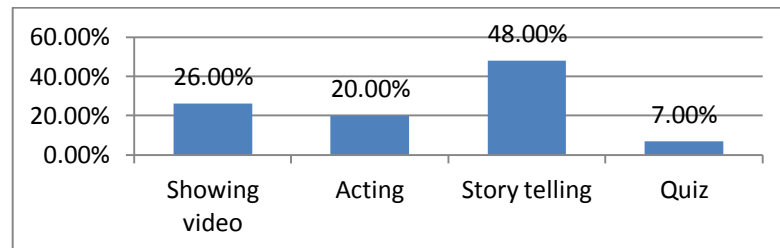
*Question 1: What source do you think the primary student usually refer to know about Malay proverb and idiom?*



**Figure A**

From figure A, 74 percent of the respondents think that the primary school students are referring to their teacher to know about Malay proverbs and idiom. This is due the students feels that the teacher is closer to them in school and teacher can guide them to learn about Malay proverbs and idioms with more effective way.

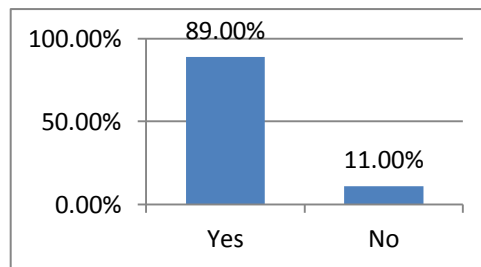
*Question 2: What type of teaching technique will be the most efficient to teach student in primary school about Malay proverb and idioms?*



**Figure B**

From figure 9, majority of the respondents answered ‘Story telling’ (48 percent). Indeed, story telling technique is one of favorite technique that used by teachers to teach the primary school student about Malay proverbs and idioms as the story will revealed the meaning of Malay proverbs and idioms used and it helps in building proficient students besides students' interest and attention.

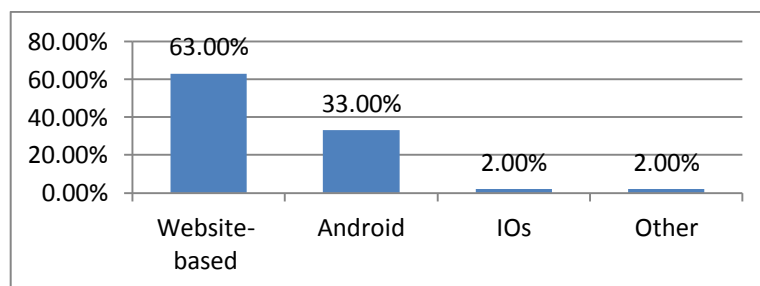
*Question 3: It is relevant to use game to teach student in primary school to learn and know about Malay proverb and idiom?*



**Figure C**

From figure 10 above, most of the respondents answer ‘Yes’. This question asks the respondent whether it is relevant to use game to teach student in primary school to learn and know about Malay proverb and idiom. This proves that the respondents felt it is relevant to use games to teach primary school student about Malay proverbs and idioms because games can attract students to learn with more fun and enjoyable situation.

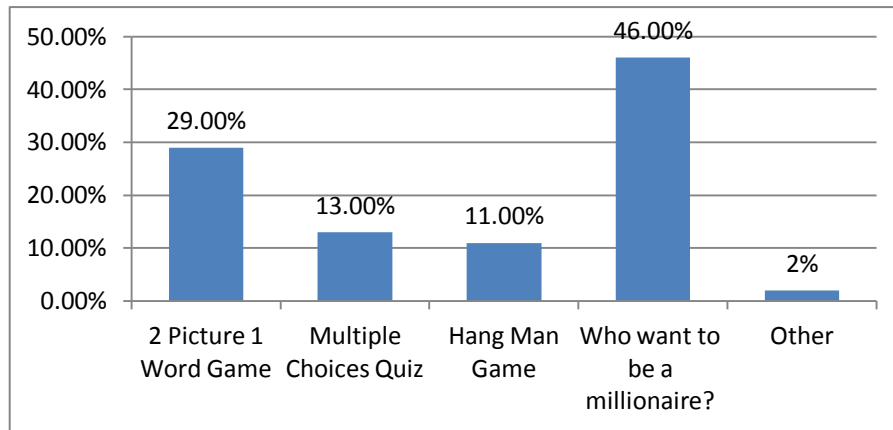
*Question 4: What the most suitable platform to build the game for Malay Proverb and Idioms Game?*



**Figure D**

From the graph in Figure D, 63 percent of the respondent felt that the most suitable platform to build and developed the game for Malay proverbs and idioms is website-based. Nevertheless, there still 33 percent respondents that feel android can be used as platform as the number of users of android is increasing by years.

Question 5: What kind of game concept that you think is suitable to be implemented in the Malay proverb and idioms game?



**Figure E**

Figure E shows that most of the respondents choose ‘Who want to be a millionaire’. The game is interesting as there are lifelines like “50:50” where computer will eliminate two incorrect answers and leaving the contestant with a choice between the correct answer and one incorrect one, “ask the audience” where audience can help the contestant will voting on the right answer, and “phone a friend’ that allow contestant to call their family or friends that can help him or her to answer the question. Author feels that more time is needed to develop this kind of game, so author decided to develop the Malay Proverbs and Idioms game based on second and third best choice from respondent which are “2 Picture 1 Word” and “Multiple Choice Quiz” that are more ideal with the range of time given to author to develop the game.

#### 4.4 Prototype Design.



Figure 8: Malay Idioms & Proverbs Game Home Interface.

For the home game interface, there are four options that user can choose:

- 1) Start option- to start the game
- 2) New Game option- to start the new game
- 3) Note option- to refer to the note
- 4) Exit option- to exit the game

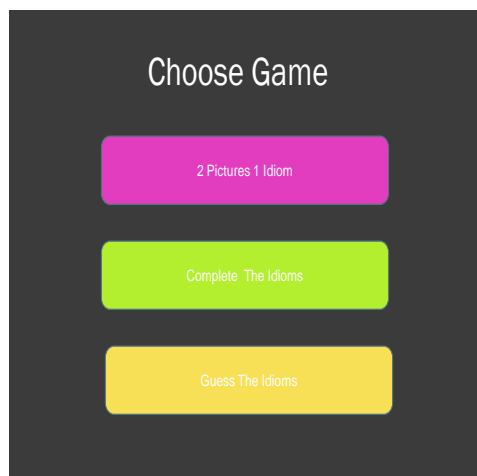


Figure 9: Choose Game Interface.



After user tab on Start option, the Choose Game interface will appeared and user can choose the game that they want to play. The games that available are:

- 1) 2 Pictures 1 Idiom
- 2) Complete The Idioms
- 3) Guess The Idioms

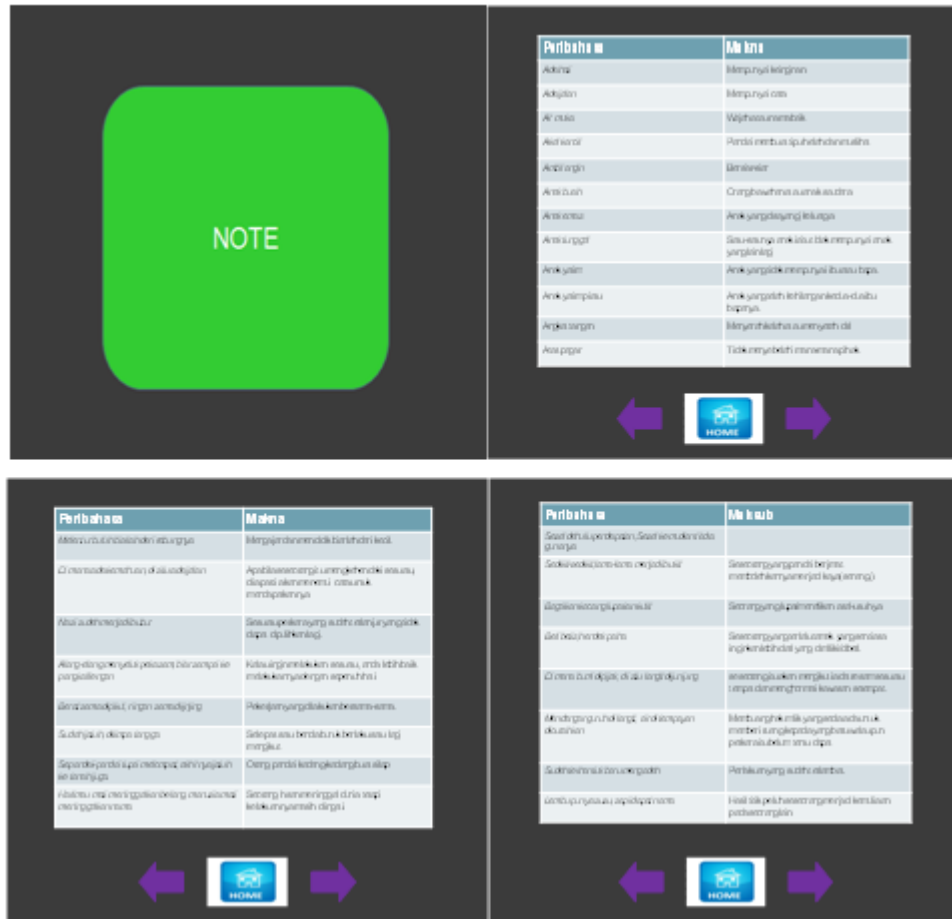


Figure 10: Note Interface.

The notes are given to the user as references. The Malay idioms and proverbs are randomly picked from the internet and books. The meaning of the idioms and proverbs also provided for each of the idioms and proverbs.

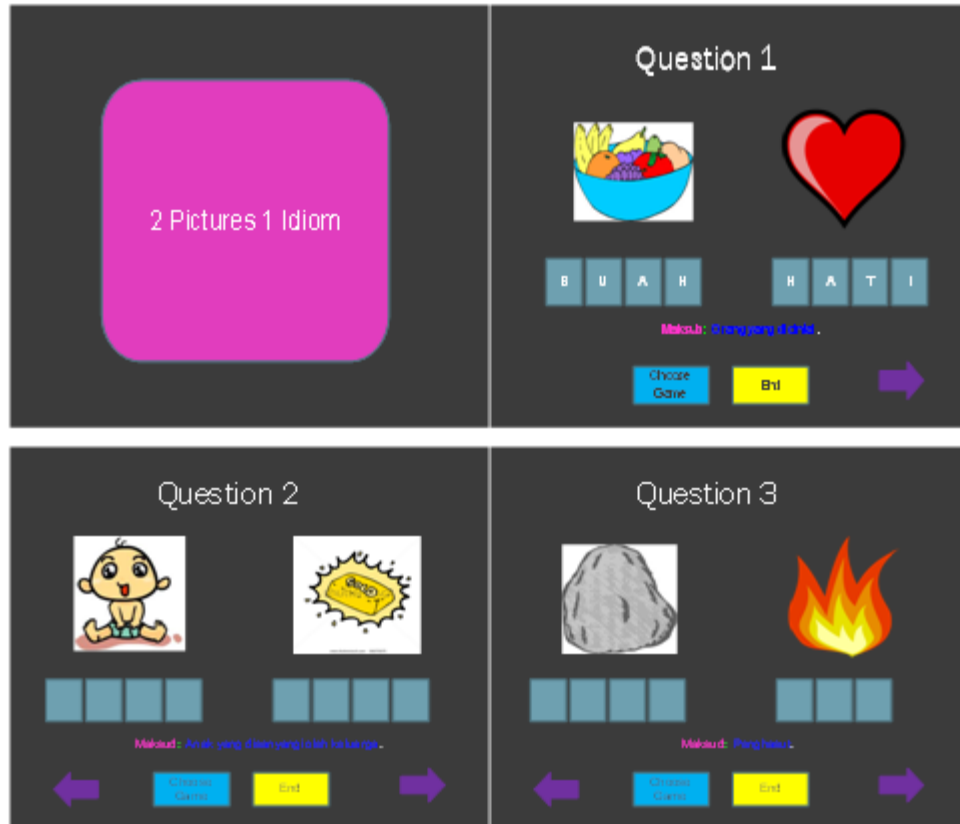


Figure 11: 2 Pictures 1 Idioms Game Interface.

For this game, user is given two pictures and meaning of the idioms as their clue and user need to fill in the word that suitable with the picture given. The words will form idioms that have suitable with the meaning given.

User can move to the next question by tab on the arrow symbol to the right and undo the question by tab on the arrow symbol to the left if they want to change their answer.

There also options given below of each question which are Choose Game option and End option. User can tab the Choose Game option if they want to choose another game to play and they can end the game by tab on the End option. After the user tab on End option, the marks for the game will appear to tell the user either the answer that input by user is right or wrong.

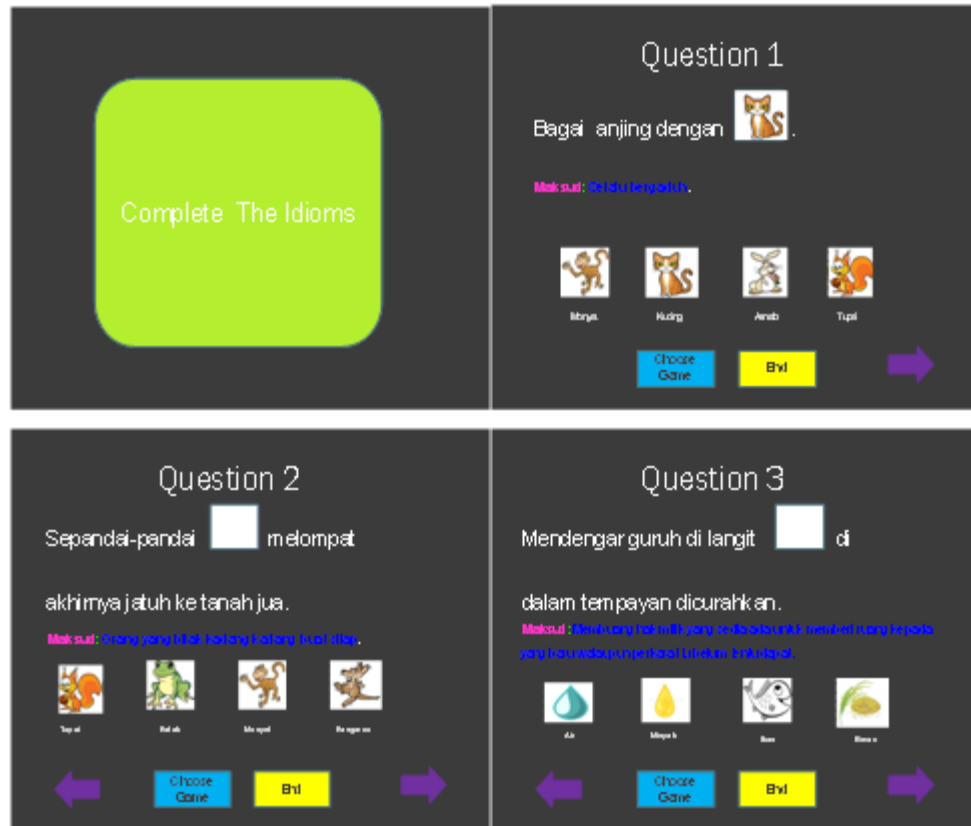


Figure 12: Complete the Idioms Game Interface

For this game, user is given four options of answers and user need to drag the picture that symbolize the word to the blank white box to complete the idioms. The meaning of the idioms is also given to help the user to answer the question correctly.

User can move to the next question by tab on the arrow symbol to the right and undo the question by tab on the arrow symbol to the left if they want to change their answer.

There also options given below of each question which are Choose Game option and End option. User can tab the Choose Game option if they want to choose another game to play and they can end the game by tab on the End option. After the user tab on End option, the marks for the game will appear to tell the user either the answer that input by user is right or wrong.

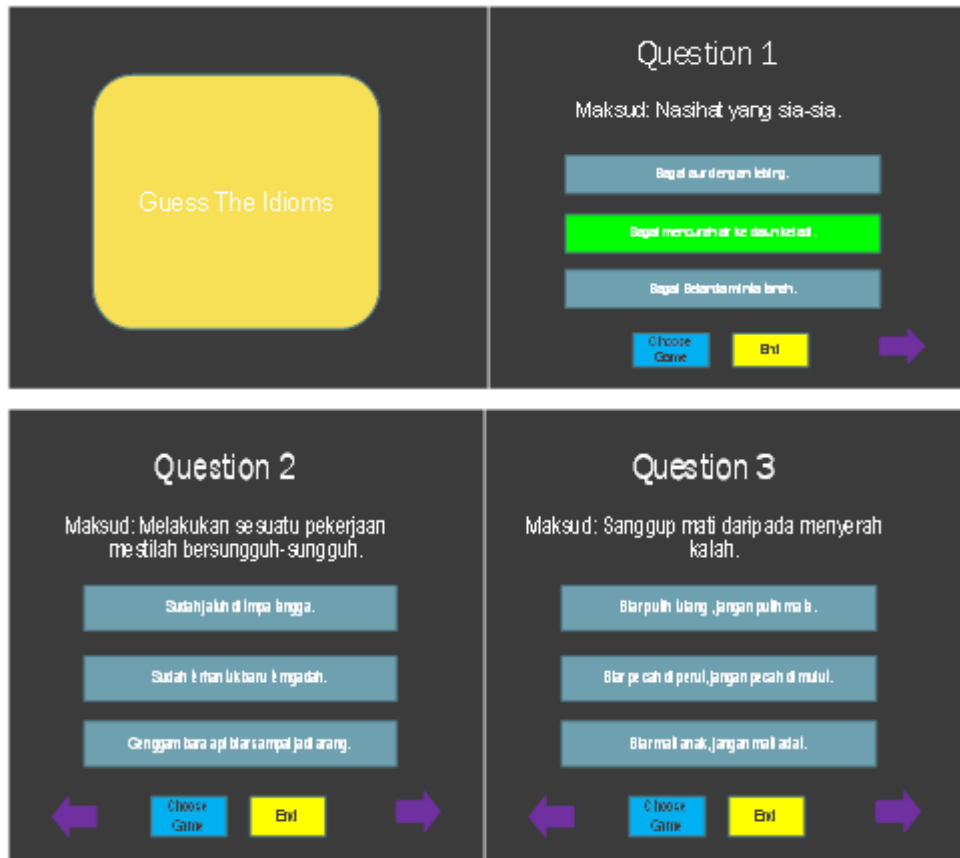


Figure 13: Guess the Idioms Game Interface

For this game, user is given three options of answer that consist of Malay Idioms and Proverb. The meaning of the idioms is given as clue and user need to choose the best idioms that suitable with the meaning given.

User can move to the next question by tab on the arrow symbol to the right and undo the question by tab on the arrow symbol to the left if they want to change their answer.

There also options given below of each question which are Choose Game option and End option. User can tab the Choose Game option if they want to choose another game to play and they can end the game by tab on the End option. After the user tab on End option, the marks for the game will appear to tell the user either the answer that input by user is right or wrong.

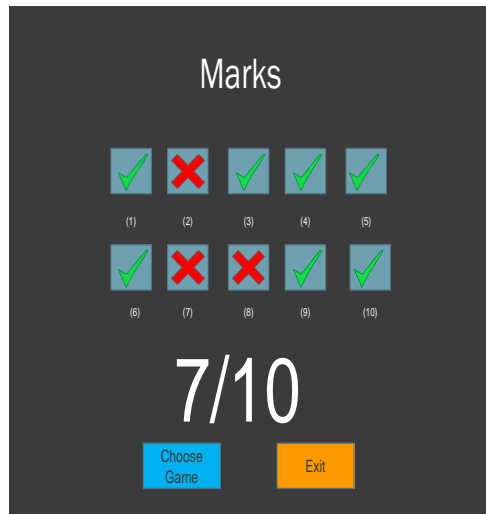


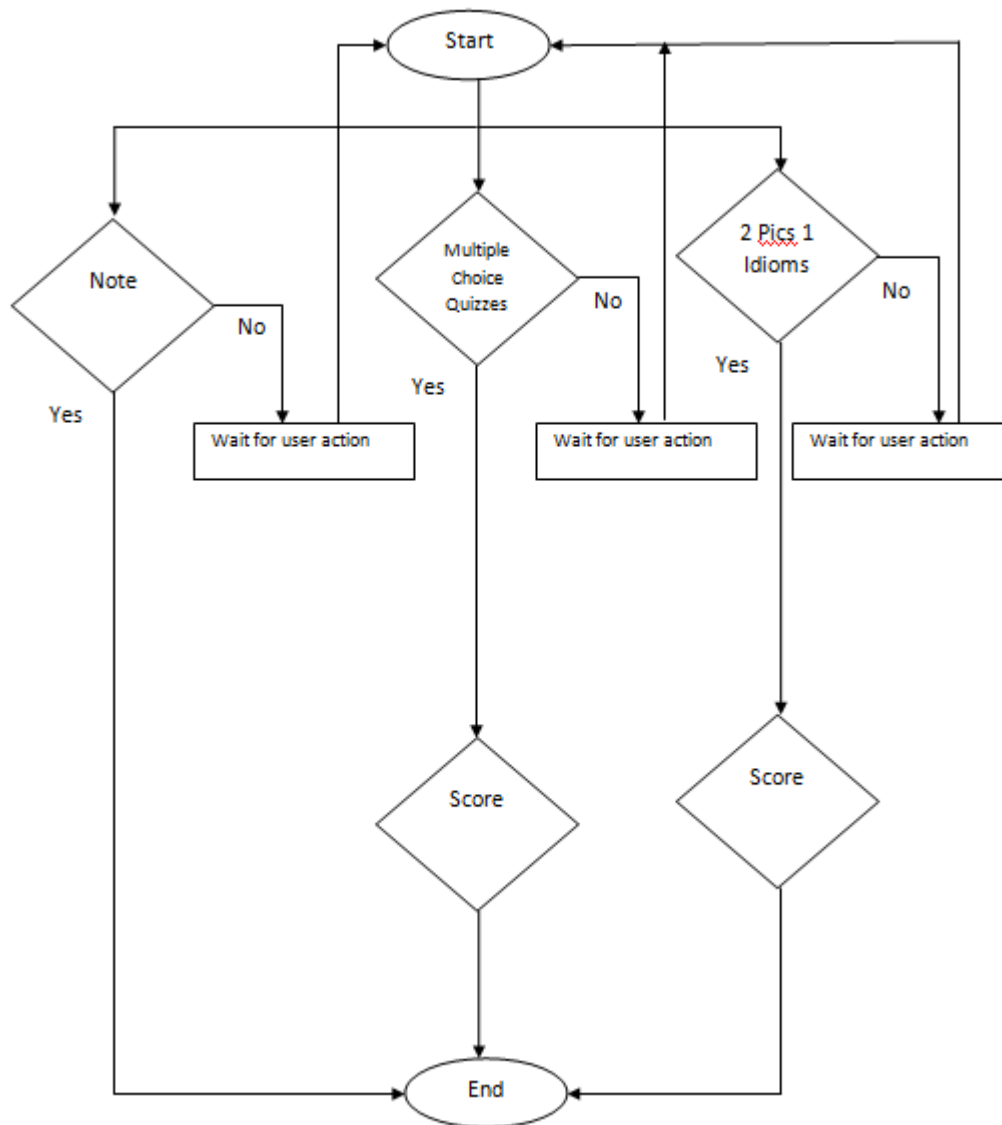
Figure 14: Marks Interface.

The Marks interface will appear after the user tab on the End option for each game. Here, the user can know the amount of the marks that they got from the game and check either the question that they answered is right or wrong. User also can go back to the question that they answered wrong by tab on the false symbol and then try to answer the question again.

If the user skips from answering the question from the game that they played, the skipped questions will be considered wrong and they will not get marks for those skipped questions.

There also options given below of each question which are Choose Game option and Exit option. User can tab the Choose Game option if they want to choose another game to play and they can exit the game by tab on the Exit option.

#### 4.5 Flowchart for Malay Idioms and Proverbs Game



## 4.6 Actual Prototype Development Interface and System

As progress, the authors only just had finish three features out of four which stated in the prototype design. The features that had been developed are Note, Multiple Choice Quiz and 2 picture 1 Idiom.

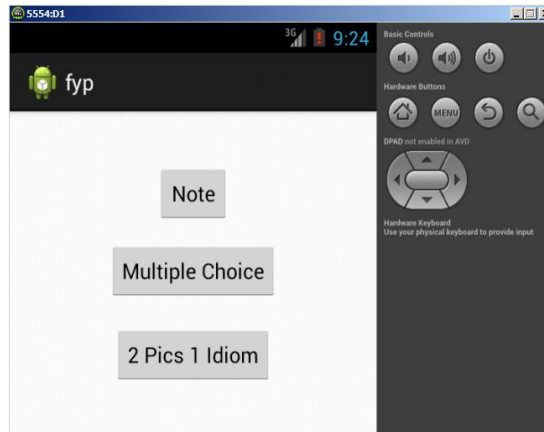


Figure 15: Home page

Codes for the interface for home page:

- MainActivity.java (can refer to appendixes part)
- activity\_main.xml (can refer to appendixes part)

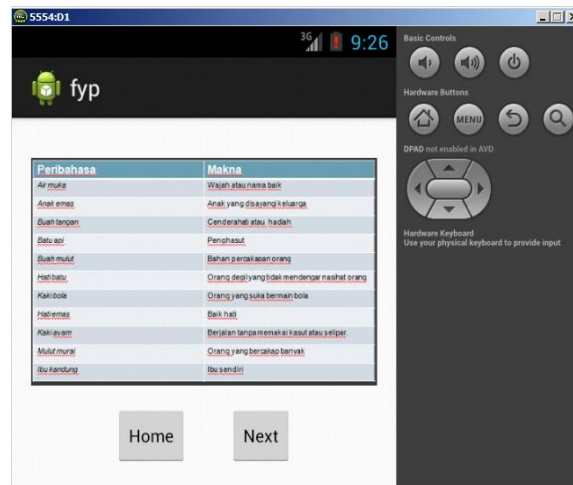


Figure 16: Note Interface

Codes for the interface for note page:

- Note.java (can refer to appendixes part)
- note.xml (can refer to appendixes part)

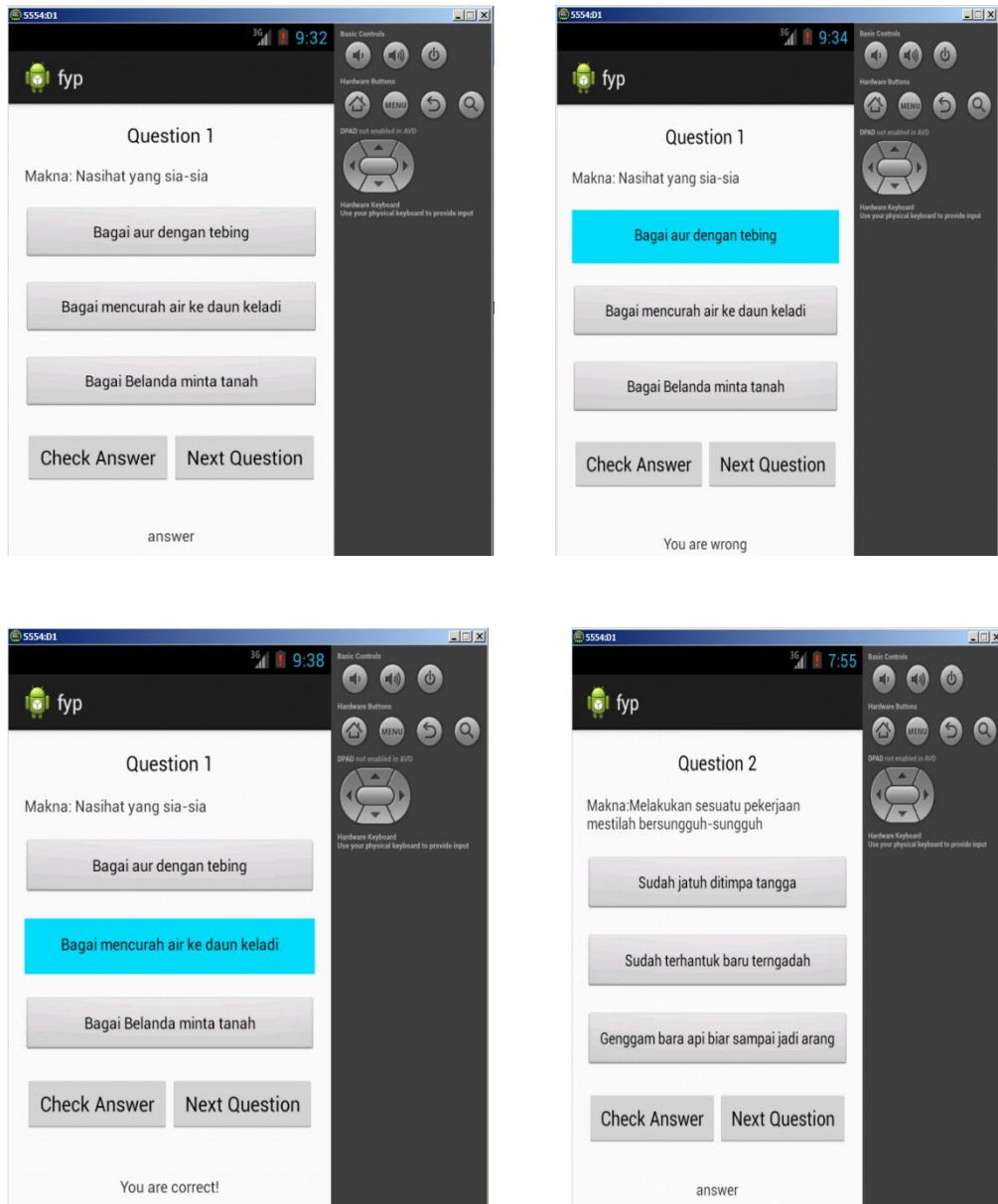


Figure 17: Multiple Choice Quiz interface

Codes for the interface of Multiple Choice Quiz:

-Multichoice.java (can refer to appendixes part)

-multichoice.xml (can refer to appendixes part)



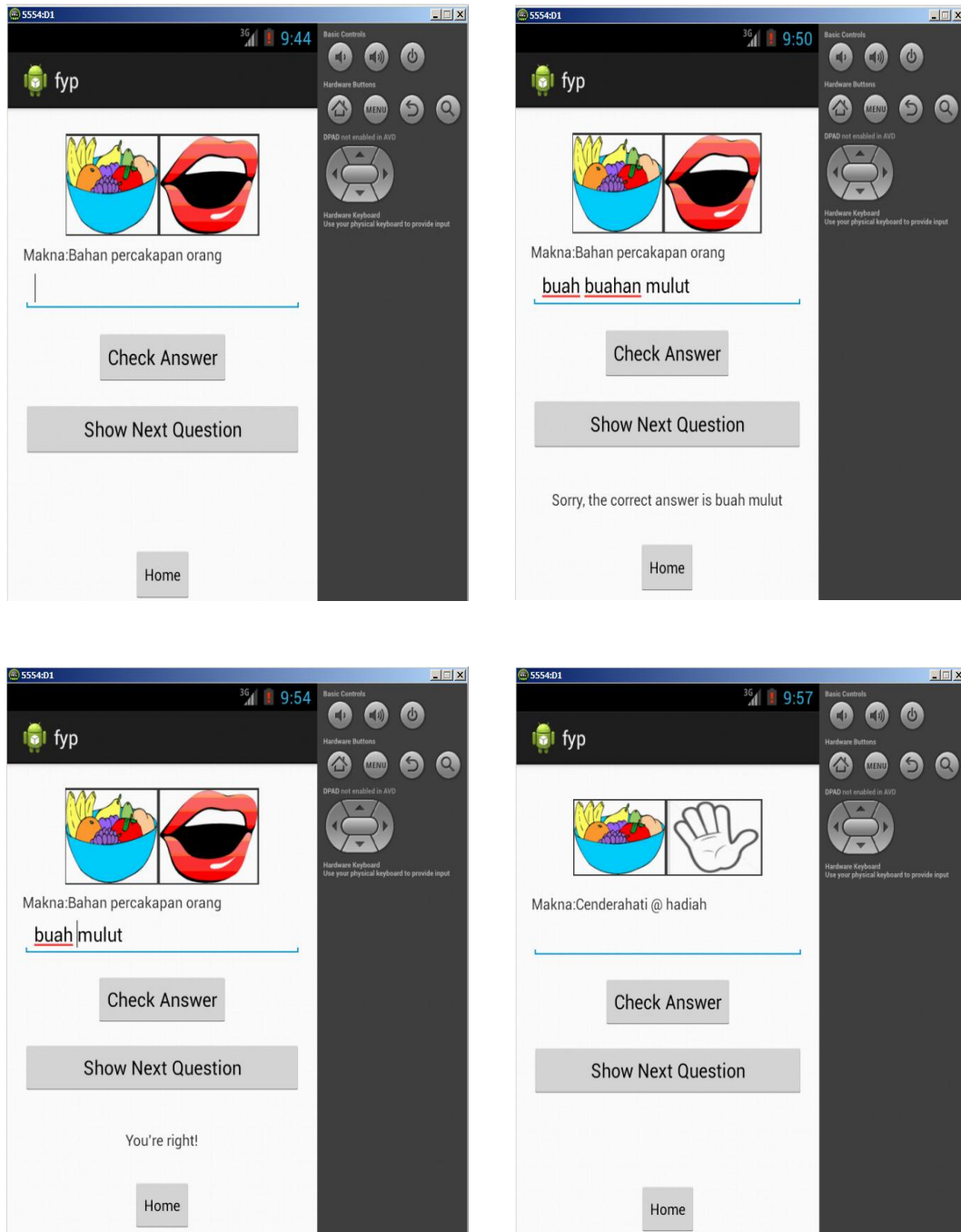


Figure 18: 2 Picture 1 Idiom interface

Codes for the interface for home page:

- twopiconeidiom.java (can refer to appendixes part)
- twopiconeidiom.xml (can refer to appendixes part)

## **CHAPTER 5**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 CONCLUSIONS**

After the prototype designs have been approved, the development phase of game can be started so that the effectiveness and efficiency of the game can be measured as soon as possible. From the study, the author very optimistic that the main objectives of the project which is to develop an interactive application that can support teacher in the learning process of Malay idioms and proverbs so that the student can understand better can be achieved by the end of FYP 2.

#### **5.2 RECOMMENDATIONS**

For future improvement of the system, the recommendations that need to be done are:

- 1 To have discussion with the primary school teacher regarding content of the applications to check whether it suitable for the student or not.
- 2 To add score point element in the game.
- 3 To create better interface for the game.
- 4 To handle Expert Testing.
- 5 To handle User Acceptance Test.

## REFERENCES

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## APPENDIXES

### AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.fyp"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >

        <activity
            android:name="com.example.fyp.MainActivity"
            android:label="@string/app_name" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>

        <activity
            android:name=".MultiChoice"
            android:label="@string/app_name" >
            <intent-filter>
                <action android:name="com.example.fyp.MultiChoice" />
                <category android:name="android.intent.category.DEFAULT" />
            </intent-filter>
        </activity>

        <activity
            android:name=".MultiChoice2"
            android:label="@string/app_name" >
            <intent-filter>
                <action android:name="com.example.fyp.MultiChoice2" />
                <category android:name="android.intent.category.DEFAULT" />
            </intent-filter>
        </activity>

        <activity
            android:name=".MultiChoice3"
            android:label="@string/app_name" >
            <intent-filter>
```

```

        <action android:name="com.example.fyp.MultiChoice3" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>

<activity
    android:name=".MultiChoice4"
    android:label="@string/app_name" >
    <intent-filter>
        <action android:name="com.example.fyp.MultiChoice4" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>

<activity
    android:name=".MultiChoice5"
    android:label="@string/app_name" >
    <intent-filter>
        <action android:name="com.example.fyp.MultiChoice5" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>

<activity
    android:name=".twopiconeidiom"
    android:label="@string/app_name" >
    <intent-filter>
        <action android:name="com.example.fyp.twopiconeidiom" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>

<activity
    android:name=".Note"
    android:label="@string/app_name" >
    <intent-filter>
        <action android:name="com.example.fyp.Note" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>

<activity
    android:name=".Note2"
    android:label="@string/app_name" >
    <intent-filter>
        <action android:name="com.example.fyp.Note2" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>

</application>

</manifest>

```

## activity\_main.xml

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >

    <Button
        android:id="@+id/homeButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="28dp"
        android:text="Note" />

    <Button
        android:id="@+id/Next"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/homeButton"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"
        android:text="Multiple Choice" />

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/Next"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="21dp"
        android:text="2 Pics 1 Idiom" />

</RelativeLayout>
```

## note.xml

```
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent" >

<RelativeLayout
    android:layout_width="match_parent"
    android:layout_height="306dp"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >

    <ImageView
        android:id="@+id/imageView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:src="@drawable/note" />

    <Button
        android:id="@+id/nextNoteButton"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/imageView1"
        android:layout_marginLeft="34dp"
        android:layout_toRightOf="@+id/homeButtonNote"
        android:text="Next" />

    <Button
        android:id="@+id/homeButtonNote"
        style="?android:attr/buttonStyleSmall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/imageView1"
        android:layout_below="@+id/imageView1"
        android:layout_marginLeft="69dp"
        android:text="Home" />

</RelativeLayout>

</ScrollView>
```

## multichoice.xml

```
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent" >

<RelativeLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >

<TextView
    android:id="@+id/question1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="39dp"
    android:text="Makna: Nasihat yang sia-sia" />

<Button
    android:id="@+id/btnQuiz1"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/question1"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="20dp"
    android:background="@drawable/mybutton"
    android:text="Bagai aur dengan tebing" />

<Button
    android:id="@+id/btnQuiz2"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/btnQuiz1"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="20dp"
    android:background="@drawable/mybutton"
    android:text="Bagai mencurah air ke daun keladi" />

<Button
    android:id="@+id/btnQuiz3"
    style="?android:attr/buttonStyleSmall"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/btnQuiz2"
    android:layout_centerHorizontal="true"
```



```
    android:layout_marginTop="20dp"
    android:background="@drawable/mybutton"
    android:text="Bagai Belanda minta tanah" />
```

```
<LinearLayout
    android:id="@+id/LinearTop"
    android:layout_centerInParent="true"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@id/btnQuiz3"
    android:layout_marginTop="20dp"
    android:weightSum="2">

    <Button
        android:layout_weight="1"
        android:id="@+id/checkAnswer"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:text="Check Answer" />

    <Button
        android:layout_weight="1"
        android:id="@+id/nextQuestion"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:text="Next Question"
        android:onClick="nextQuestion"/>
</LinearLayout>

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/LinearTop"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="37dp"
    android:text="answer" />

<TextView
    android:id="@+id/HintTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:text="Question 1"
    android:textAppearance="?android:attr/textAppearanceMedium" />

</RelativeLayout>

</ScrollView>
```

## twopiconeidiom.xml

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >
```

```
<TextView
    android:id="@+id/AnswerTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/QuestionButton"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="32dp"
    android:text="" />
```

```
<EditText
    android:id="@+id/AnswerText"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/QuestionButton"
    android:layout_below="@+id/ImageQuestionView"
    android:layout_marginTop="20dp"
    android:ems="10" >
```

```
<requestFocus />
</EditText>
```

```
<ImageView
    android:id="@+id/ImageQuestionView"
    android:layout_width="200dp"
    android:layout_height="100dp"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true" />
```

```
<Button
    android:id="@+id/AnswerButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/AnswerText"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="15dp"
    android:text="Check Answer" />
```

```
<Button
    android:id="@+id/QuestionButton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/AnswerButton"
    android:layout_centerHorizontal="true"
```

```
android:layout_marginTop="14dp"  
android:text="Show Next Question" />
```

```
<Button  
    android:id="@+id/homeButtonThree"  
    style="?android:attr/buttonStyleSmall"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_alignParentBottom="true"  
    android:layout_centerHorizontal="true"  
    android:layout_marginBottom="18dp"  
    android:text="Home" />
```

```
<TextView  
    android:id="@+id/HintTextView"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_below="@+id/ImageQuestionView"  
    android:layout_centerHorizontal="true"  
    android:textAppearance="?android:attr/textAppearanceSmall" />
```

### MainActivity.java

```
package com.example.fyp;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class MainActivity extends Activity {
    Button multiChoice,twoPicOneIdiom,noteButton;

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        multiChoice = (Button)findViewById(R.id.Next);
        multiChoice.setOnClickListener(new OnClickListener() {

            public void onClick(View v) {
                startActivity(new
Intent("com.example.fyp.MultiChoice"));
            }
        });

        twoPicOneIdiom =(Button)findViewById(R.id.button3);
        twoPicOneIdiom.setOnClickListener(new OnClickListener() {
            public void onClick(View v) {
```

```

        startActivity(new
Intent("com.example.fyp.twopiconeidiom"));
    }
});

noteButton =(Button)findViewById(R.id.homeButton);
noteButton.setOnClickListener(new OnClickListener() {
    public void onClick(View v) {
        startActivity(new Intent("com.example.fyp.Note"));
    }
});
}

public boolean onCreateOptionsMenu(Menu menu) {
    getMenuInflater().inflate(R.menu.main, menu);
    return true;
}
}
}

```

### Note.java

```
package com.example.fyp;

import android.app.Activity;

import android.content.Intent;

import android.os.Bundle;

import android.view.Menu;

import android.view.View;

import android.view.View.OnClickListener;

import android.widget.Button;

public class Note extends Activity {

    Button homePage,nextNote;

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.note);

        homePage = (Button)findViewById(R.id.homeButtonNote);

        homePage.setOnClickListener(new OnClickListener() {

            public void onClick(View v) {

                startActivity(new Intent(Note.this,

MainActivity.class));

            }

        });

        nextNote = (Button)findViewById(R.id.nextNoteButton);

        nextNote.setOnClickListener(new OnClickListener() {

            public void onClick(View v) {

                startActivity(new Intent("com.example.fyp.Note2"));

            }

        });

    }

}
```

```
        }  
    });  
}  
  
public boolean onCreateOptionsMenu(Menu menu) {  
  
    getMenuInflater().inflate(R.menu.main, menu);  
    return true;  
}  
  
}
```

### MultiChoice.java

```
package com.example.fyp;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.MotionEvent;
import android.view.View;
import android.view.View.OnClickListener;
import android.view.View.OnTouchListener;
import android.widget.Button;
import android.widget.TextView;

public class MultiChoice extends Activity {

    Button checkAnswer, correctAns, nextPage, falseAnswer, falseAnswer2;
    TextView displayAns;
    boolean check=false;

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.multichoice);
        displayAns = (TextView)findViewById(R.id.textView2);

        falseAnswer = (Button) findViewById(R.id.btnQuiz1);
        falseAnswer2 = (Button) findViewById(R.id.btnQuiz3);
        falseAnswer.setOnTouchListener(new OnTouchListener() {

            @Override

            public boolean onTouch(View arg0, MotionEvent arg1) {

                if (correctAns.isPressed())
```



```

        correctAns.setPressed(false);
    if (falseAnswer2.isPressed())
        falseAnswer2.setPressed(false);

    falseAnswer.setPressed(true);
    check = false;
    return true;
}
});

falseAnswer2.setOnTouchListener(new OnTouchListener() {

    @Override
    public boolean onTouch(View v, MotionEvent event) {
        if (falseAnswer.isPressed())
            falseAnswer.setPressed(false);
        if (correctAns.isPressed())
            correctAns.setPressed(false);

        falseAnswer2.setPressed(true);
        check = false;
        return true;
    }
});

correctAns = (Button)findViewById(R.id.btnQuiz2);
correctAns.setOnClickListener(new OnClickListener() {
    public void onClick(View v) {

```

```

        correctAns.setPressed(true);
        check = true;
    }
});

correctAns.setOnTouchListener(new OnTouchListener() {

@Override
public boolean onTouch(View v, MotionEvent event) {
    correctAns.setPressed(true);
    if (falseAnswer.isPressed())
        falseAnswer.setPressed(false);
    if (falseAnswer2.isPressed())
        falseAnswer2.setPressed(false);
    check = true;
    return true;
}
});

checkAnswer = (Button)findViewById(R.id.checkAnswer);
checkAnswer.setOnClickListener(new OnClickListener() {

    public void onClick(View arg0) {
        if (check==true)
        {
            displayAns.setText("You are correct!");

```

```

        }
        else
        {
            displayAns.setText("You are wrong");
        }
    }
});

nextPage = (Button)findViewById(R.id.nextQuestion);
nextPage.setOnClickListener(new OnClickListener() {
    public void onClick(View arg0) {
        startActivity(new
Intent("com.example.fyp.MultiChoice2"));
    }
});
}

public boolean onCreateOptionsMenu(Menu menu) {
    getMenuInflater().inflate(R.menu.main, menu);
    return true;
}

}
}

```

twopiconeidiom.java

```
package com.example.fyp;

import android.os.Bundle;

import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageView;
import android.widget.TextView;

public class twopiconeidiom extends Activity {

    private int currentImages;
    private String [] answers;
    private Button answerButton;
    private Button questionButton;
    private ImageView imageView;
    private TextView answerView;
    private EditText answerText;
    private TextView hintView;

    Button homeButton3;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.twopiconeidiom);
        init();

        homeButton3 = (Button)findViewById(R.id.homeButtonThree);
        homeButton3.setOnClickListener(new OnClickListener() {

            public void onClick(View v) {
                startActivity(new Intent(twopiconeidiom.this,
MainActivity.class));
            }
        });
    }

    public void init(){

        answers = new String[]{"mulut murai","buah mulut","buah
tangan","kaki ayam","kaki bola"};

        answerButton = (Button)findViewById(R.id.AnswerButton);
```

```

questionButton = (Button)findViewById(R.id.QuestionButton);
imageView = (ImageView) findViewById(R.id.ImageQuestionView);
answerView = (TextView) findViewById(R.id.AnswerTextView);
answerText = (EditText) findViewById(R.id.AnswerText);
hintView = (TextView) findViewById(R.id.HintTextView);

answerButton.setOnClickListener(new OnClickListener(){
@Override
public void onClick(View v) {
checkAnswer();
}});

questionButton.setOnClickListener(new OnClickListener(){
@Override
public void onClick(View v) {
showImages();
}
});
showImages();
}

/*
 * This method
 * 1: increment currentQuestion index
 * 2: check if it is equal to the size of the array and rest
if necessary
 * 3: display the question at currentQuestion index in
question view
 * 4: Empty answer view
 */
public void showImages()
{

if(currentImages == 0) {

        imageView.setImageResource(R.drawable.buahmulut);
        hintView.setText("Makna:Bahan percakapan orang");
        currentImages++;
    }
else if(currentImages == 1) {

        imageView.setImageResource(R.drawable.buahtangan);
        hintView.setText("Makna:Cenderahati @ hadiah");
        currentImages++;
    }
else if(currentImages == 2){

        imageView.setImageResource(R.drawable.kakiayam);
        hintView.setText("Makna:Berjalan tanpa memakai kasut atau
selipan");
        currentImages++;
    }
}

```

```

    }
    else if(currentImages == 3) {

        imageView.setImageResource(R.drawable.kakibola);
        hintView.setText("Makna:Orang yang suka bermain bola");
        currentImages++;
    }
    else{

        imageView.setImageResource(R.drawable.mulutmurai);
        hintView.setText("Makna:Orang yang bercakap banyak");
        currentImages = 0;

    }

    answerView.setText("");
    answerText.setText("");

}

public boolean isCorrect(String answer)
{
    return (answer.equalsIgnoreCase(answers[currentImages]));
}
/* this method :
* 1: Read the text ( answer) from the answerTextEdit
* 2: call the isCorrect method
* 3: display the appropriate message.
*/
public void checkAnswer()
{
    String answer = answerText.getText().toString();
    if(isCorrect(answer))
        answerView.setText("You're right!");
    else
        answerView.setText("Sorry, the correct answer is
"+answers[currentImages]);
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is
present.
    getMenuInflater().inflate(R.menu.main, menu);
    return true;
}
}

```