DECLARATION

I hereby that work in this project is our own that have been duly acknowledge. This project is a present is presentation of our original work. Wherever contribution of others is involved, every effort is made to indicate this clearly, with due reference to literature and acknowledge of collaborative research and discussion.

Date: _____

Muhammad Ikmal Shah Noor Azmi
AM1709003246

ACKNOWLEDGEMENT

Assalamualaikum,

First of all, thank to Allah S.W.T Alhamdulillah with his bless I have complete my final year project. I would like to express my sincere gratitude to my supportive supervisor, Mohd Fitry Bin Yahya for the continuous support of my final year project for his patience, motivation, enthusiasm and immerse knowledge. His gratitude helped me a lot in all the time of writing this report and consult during the game development. I could not have imagined having a better supervisor for my final year project.

Besides that, I would like to thanks to the authority of Kolej Universiti Poly-Tech MARA Kuala Lumpur (KUPTM KL) for providing us with a good conductive facilities and also environment to complete this project very well.

I would like to thanks to all my friends that help a lot during this game development process and thanks for the cooperative and very brilliant ideas for this project. Mostly, thanks for the effort, time, moral support to ensure this game works well and also for the stimulating discussions, for the sleepless night were working together before deadlines.

The most important, I would like to convey my grateful thanks to my family for their support me spiritually throughout our life as well as in financial and moral support. Also to the lecturer who have given many helpful suggestion and help.

Thank you.

ABSTRACT

On the seventh semester, I have been given a task to complete my final year project. Hence, I have decided to develop an education games called Malaysia Culture Game as my final year project. Aim the play and learn concept by creating a new method of learning history subject with combination of visual and auditory method. The use of educational games in an academic context seems to be a superb alternative to traditional learning activities. This is where the idea to develop a Malaysia Culture Game came. This is the education game that teach about the history of traditional game in Malaysia. The traditional method in learning history subject are based on reading and exercise. Other than that, traditional method also required to memorize the history content from the textbook. Besides, the traditional method is outdated with using a same sources and method for a decade. That are the reason I decided to develop this education game and also in our modern era we need improve our education system follow the improvement of our technology.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This project is an educational game. The purpose of creating this game is to provide one of the education methods through the game platform. It helps attract users to enjoy playing the game and at the same time learn something through the game. Students can use this game as one of the sources to learn about history instead of reading a book or other book sources.

This game was named as Malaysia Culture Game. This game teaches about the culture that exists in Malaysia such as Malay, Chinese, India etc. This game also teaches about the history of the culture in Malaysia. It can help students to know more about our cultural history. However, not only for the student also can be one of the methods to show our Malaysia culture to another country.

This game is a type of medium that would benefit a student who currently at the institute weather our local or not citizen students because history is one of the subjects that teaches in the institute. This game will help to cover one of the chapter*s* about Malaysia Culture. Furthermore, by creating this game it can be one of the methods to expose Malaysia culture to a foreigner that immigrate to live in Malaysia and continue their studies in the institute. Besides, they also need to take Malaysia history class because of it compulsory subject for all courses.

While developing this game, I will use the Prototype methodology because it allows flexibility and interactivity in the development process of the video game. This method is suitable because keep the risks as low as possible, can start with the core features and allow fast change. Besides, I can get the prototype of the project quickly.

1.2 Problem Statement

1.2.1 All resources of learning are the base on reading books.

All resource of knowledge is always base in book and reading. That is the cons and problem learning method nowadays. People start to expand the same goes to technology in our country. The learning method should follow the progress of our technology.

1.2.2 Lack of motivation in learning.

Motivation is the key to learning. It creates a new experience for a student to learn. Student nowadays learn just to pass the exam and some of it lost track to manage their self into the subject. That leads to a lack of motivation.

1.2.3 The learning method is outdated.

The learning method that using these days start to outdated the era of modern with technology. We need to start to find a new way to improve the learning method so it follows the flow of the era of a student nowadays.

1.3 Project Objective

1.3.1 Multimedia software will provide a learning approach other than books.

Learning can be applying for a lot of methods. Multimedia is one of the methods to improve our education. Moreover, in this modern era where everything is more related to IT and technology. Learning is not only into verbal style with consist of reading and writing. Learning can come in visual such as using video and image. Also, in aural that consist of using sound such as music. So creating this educational game with a combination of visual and aural it will provide a new learning approach other than only reading book.

1.3.2 Motivate to learn the culture, ethics and history of Malaysia.

History is an important subject that need in our life. That is why it is a compulsory subject in every institute. Nowadays, students have no interest to discover or learn about history. This is because the lack of motivation in learning, mostly in history subjects. Usually, history is more to reading the textbook as the reference to learn and it starts make student lost interest and lost their motivation to learn more about history. So, creating this educational game will bring their motivation to learn. It enhances student to learn more about history subject. Students will have fun playing the game at the same time gained their knowledge.

1.3.3 Create a new platform of learning.

Game can be a new platform of learning whether related to academic or skills. However, this is one of the methods that can approach the youngers nowadays. It universal where everyone knows how to use it with the advance technology that existed nowadays. That make educational games one of the new platform to learn.

1.4 Project Scope

Culture in Malaysia Game will be developed for local and foreign students in Kolej Universiti Poly-Tech MARA to learn about history and culture. Besides, the main objective to be one of the learning sources other than the book. Furthermore, students nowadays more interested in technology rather than books. Moreover, the student is more to visual learning method instead of verbal method that more to books.

The game first shows the main menu to start the game. Then it will show the level or chapter users want to play for this culture games user can choose what culture they want to learn and play the game such as Malay, Chinese, India and etc. Every level or chapter will have a different storyline and scenes to tell the story and history of every culture. If all the level or chapter is completed it will show the conclusion or synopsis of the game and the learning outcome that gained from the game.

The research area to develop this game is on Kolej Universiti Poly-Tech MARA. The reason is student find out not interested to learn and hard to understand. Mostly for foreign students that currently study here. Student finds not interested in this subject because it required a lot of reading and research mostly in books.

1.5 Significant of the study

The significance of the study about why I wanted to develop an educational game that will teach user to learn about Malaysia History. I look into the problem statement and wanted to fix the problem by creating a new platform of study in educational game. User will experience a new way of learning.

Other than that, I have discovered that student is more interested in visual and auditory method when come to learning a history subject. Besides, it is also helps every culture to learn about history of culture in Malaysia.

1.6 Project Requirement

Hardware Requirement

Operating System	Windows 10 Home 64-bit
Processor	Intel Core i5-8265U
RAM	4GB
Graphic Card	NVIDIA GeForce MX250

Software Requirement

- **Adobe Animate CC 2019**

    Adobe Animate is a computer animation program that developed by Adobe System. However, it formerly designs from Adobe Flash Professional, Macromedia Flash and Futuresplash Animator. It was release December 11, 2018. It used for design animation television programs, online video, websites, web applications, rich internet applications and video games. The program also offers support for raster graphics, rich text, audio and video embedding, and ActionScript scripting. Furthermore, the ActionScript that use in this program are ActionScript 3.0.

- **Adobe Illustrator CC 2019**

    Adobe Illustrator is a computer application creating drawings, illustrations, and artwork. It was released March 19, 1987 and continues to be updated. Furthermore, Adobe Illustrator is widely used by graphic designers, web designers, visual artists, and professional illustrators throughout the world to create high quality artwork. Adobe Illustrator was reviewed as the best vector graphics editing program in 2018 by PC Magazine.

1.7 Conclusion

In conclusion, this project aims to give a new experience of learning in-game base. These types of games will not replace books or teaching methods, but instead give a different approach to learning and how students are taught. In this modern era, education should be more advance to follow the progress of technology. The quote by Clay P. Bedford (n.d) is one to think about when considering the use of educational games, "You can teach a student a lesson for a day but if you can teach him to learn by creating curiosity, he will continue the learning process as long as he lives" (n.p). Students will remember these learning tools and how they were taught. Educational games are the new learning tool.

"Malaysia Culture Game" is develop by using Adobe Animate CC 2019 that can run smoothly in specific laptop or PC. Adobe Animate using an ActionScript 3.0. ActionScript 3.0 is a powerful, object-oriented programming language that signifies an important step in the evolution of the capabilities of the Flash Player runtime.

Methodology that being used to develop the system is Prototype Methodology. After do some research, the reason choosing this methodology because it suitable for a fast progress of the project. We can see how the progress of the project clearly.

Lastly, for future of the game development, developer have to managed all the game quality so that it is good enough for user to used. However, this Final Year Project, developer can implement all lesson and knowledge that have gained when developer start study as Computer Science student. I hope that "Malaysia Culture Game" can be one of the new method of learning.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter, developer search other software or system to give idea to create the Malaysia Culture Game. Developer need at least 3 case study as a references. Developer can see what the advantage and disadvantages of other software or system as a guide to create the education game.

2.2 Previous Case Study

2.2.1 Mario Time's Machine
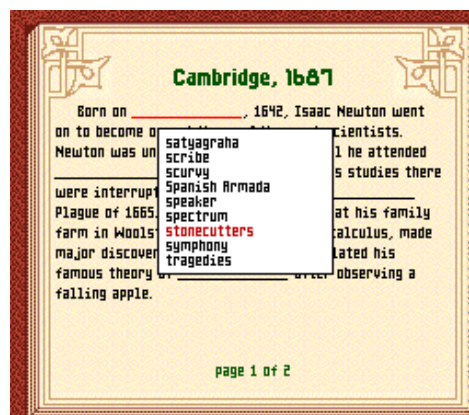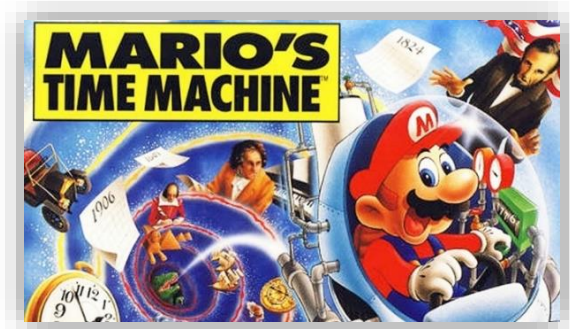
(Figure 2.1: Mario's Time Machine)

Mario's Time Machine is an education game that focuses on teaching human history. This game concept is the player Mario need to return all the history artifact in the correct year. This concept is interested because every chosen year have their own history and games to attract user. This will attract user more because it not pointed in one game concept only but it exposes user with many mission and history. Besides, in every year that the player Mario at the player will required to answer some question such as fill in the blank just like the Figure 2.1: Mario's Time Machine Gameplay.

2.2.2 Fairy Tales by Amaya Kids
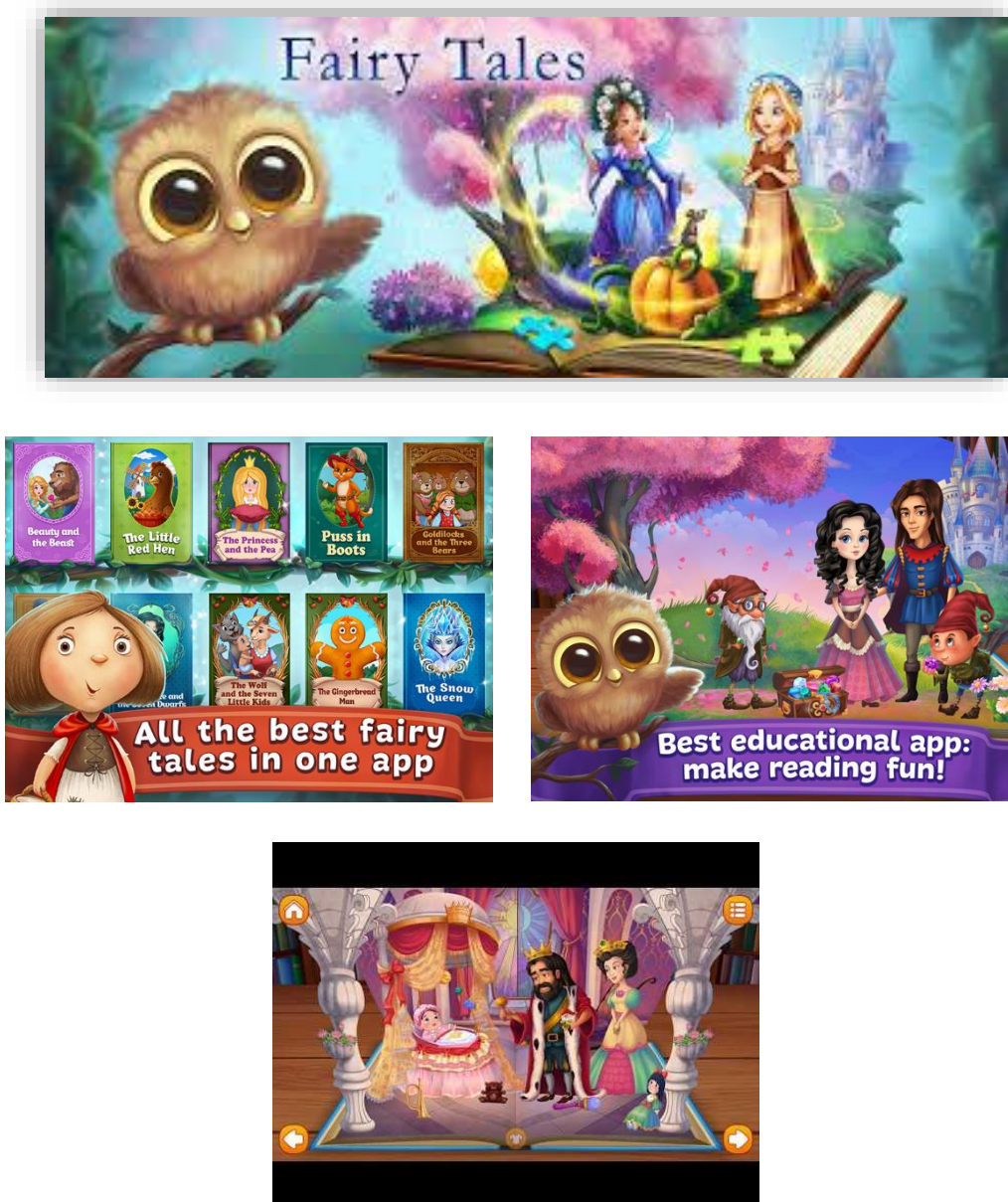
(Figure 2.2: Fairy Tales by Amaya Kids)

Fairy Tales from AmayaKids is a education game in mobile apps based. The game concept are user can choose the book they want and the game will read and at the same time play an animation while the story begin. It is on of the concept that use the auditory and visual method to educated the user. The details of the animation and good background sound and effect givr more interest for user to play and learn. This concept also can be apply in learnig history subject.

2.2.3 A Short History of the World

(Figure 2.3: A Short History of the World)

A short history of the world is a flash education game that teach a history of the world while solving the puzzle. Equip with all 36 mini games, each one covering a different period in history from the Ice Age to present day. User will be given 4 health when the game start. Every mini game has it mission and time limit. User need to complete the mission before the times up to stay survive. This concept is fun for player because it has many mini games and did not have to wait and know the story line of the game to play. The youngster will interest to this concept more than a story game mode.

2.3 Comparison and Analysis

Topic	Mario's Time Machine	Fairy Tales by Amaya Kids	A Short History of the World
Game Themes	Human History	Kids Fairy Tales Storybook	Short brief history of world
Music and Sound Effect	Good and simple sound effect	Better quality music and sound effect	Simple music but better sound effect
Graphic and Animation	Graphic pixel but good animation flow frame by frame	More quality graphic and animation	Medium rate in graphic and animation
Method of Education	Every mission consist history and fill in the blank question.	Storytelling and animation of story	Mini games and times limit

(Table 2.1: Comparison and Analysis between existing systems)

Based on Table 2.1, I can compare between the three of the previous case studies based on their game theme, music and sound effect, graphic and animation. I can analyze how to evaluate their performance and develop a new education games with these comparisons. Besides, it will offer user with a new experience.

2.4 Discussion

2.4.1 Game Themes

The game themes need to choose wisely because it shows the identity of the game. Furthermore, it also a guide on how the story line of the game will follow. Besides, a good theme will create a good story for user to play and learn. It also will help the game be more interested and user will not get bored. The game themes I will follow from the game "A Short History of the World" that will show the brief of the history of the Malaysia culture traditional games.

2.4.2 Music and Sound Effect

For upcoming features, music and sound effect are one of the important key to create a great game. The music for the game need to be suite with the themes because it related with identity of the game. User will understand what the game all about just by the theme and music. However, the sound effect in the game also need to be synchronize with the game time line and function. The sound need to be at the right time and moment. Furthermore, the music and sound I decide choose from "Mario's Time Machine" game. The sound is good and simple. Average and it will not use a lot of space when developing the game.

2.4.3 Graphic and Animation

This features are the first key of creating a game. Graphic of the game need to decide whether to be pixel, 2-dimension or 3-dimension. The basic graphic is 2-dimension because it easy to organize and design. However, the animation also the key of the game project. The animation will show the movement and motion of the game character, button, background and others that related to motion.

2.4.4 Method of Education

To create an educational game, it must have the method to educate the user while playing the games. Furthermore, from my observation the method of education that apply in "Mario's Time Machine" and "A Short History of the World" are the good combination of method to teach about history subject. The combination brings the new idea of how the "Malaysia Culture Game" should be. The game will have the categories of culture history and every culture include with different kind of mini games.

2.5 Conclusion

Literature review is important because in this process developer need to make a research to make a comparison and identify the suitable system for the task. Besides, literature review can help developer to now the strength and weakness of the software, system or game. In this chapter, we can conclude that how important literature review in process of develop a project.

Furthermore, from literature review I notice to create the educational games that consist the game theme from the game "A Short History of the World" and show the brief of the history. However, the music and sound are from "Mario's Time Machine" game. That have good and simple sound. Besides, it suitable with the graphic that will be a 2-dimension game base. Lastly, the education method will be the combination from "Mario's Time Machine" that consist history for every chapter and "A Short History of the World" that include different kind of mini games.

CHAPTER 3

METHODOLOGY

3.1 Introduction

A methodology is a repeatable process with project-specific methods, best practices, rules, guidelines, templates, checklists, and other features for building quality systems that are manageable and deliver value to the organization. The methodology can be used and reused any number of times. The key phrase here is the repeatable process of doing projects the same way each time. To think of this another way, a methodology is a roadmap to get you where you want to go.

However, in this project I using Prototype methodology. Prototype methodology is defined as a Software Development model in which a prototype is built, test, and then reworked when needed until an acceptable prototype is achieved. It also creates a base to produce the final system.

3.2 Application Development Methodology
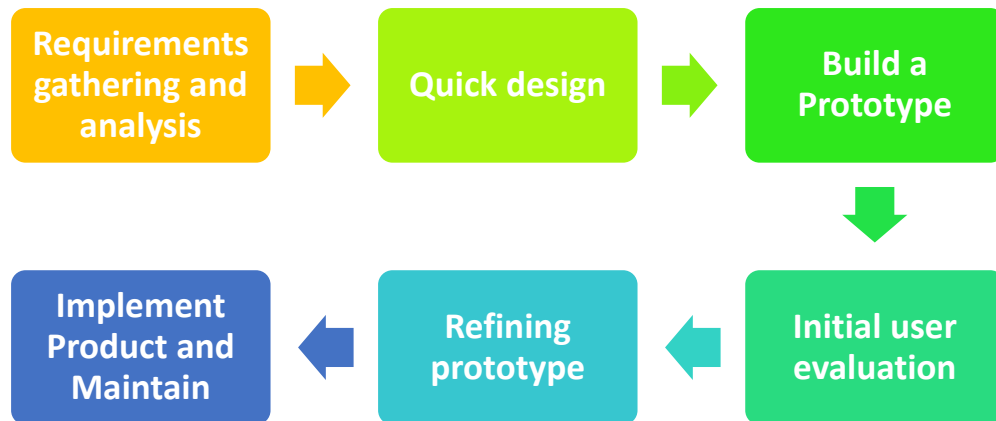
(Figure 3.1: Prototype Model)

1) **Requirements gathering and analysis**

A prototyping model starts with requirement analysis. In this phase, the requirements of the software are defined in detail. During the process, the users of the software are interviewed or create questionnaire to know what their expectation from the software. In this phase we start give the project questionnaire to the user in the range of age 13 and above. We use Google forms to create the questionnaire, send to the user and get the result.

2) **Quick design**

The second phase is a preliminary design or a quick design. In this stage, a simple design of the system is created. However, it is not a complete design. We create the quick design of the game to see the idea of the game. The quick design helps in developing the prototype. It starts from the menu interface, game categories and game function. The prototype is not fully function and design.

3) **Build a Prototype**

In this phase, an actual prototype is designed based on the information gathered from a quick design. We start to continue the design to be more specific from what it should be and user expectation. In this phase, the design is detail and the game a start fully functional. The prototype need to be done before go to the next phase.

4) Initial user evaluation

     In this stage, the proposed software is presented to the client or user for an initial evaluation. Besides, from this evaluation it helps us to find out the strength and weaknesses of the working model. Comment and suggestion are collected from the user by answering the questionnaire that provide for reviewing the prototype model.

5) Refining prototype

     After the evaluation, if the user is not happy with the current prototype, we need to refine the prototype according to the user's feedback and suggestions. This phase will not over until all the requirements specified by the user are met. Once the user is satisfied with the developed prototype, a final system is developed based on the approved final prototype.

6) Implement Product and Maintain

     Once the final system is developed based on the final prototype, it is thoroughly tested and deployed to production. The system undergoes routine maintenance for minimizing downtime and prevent large-scale failures.
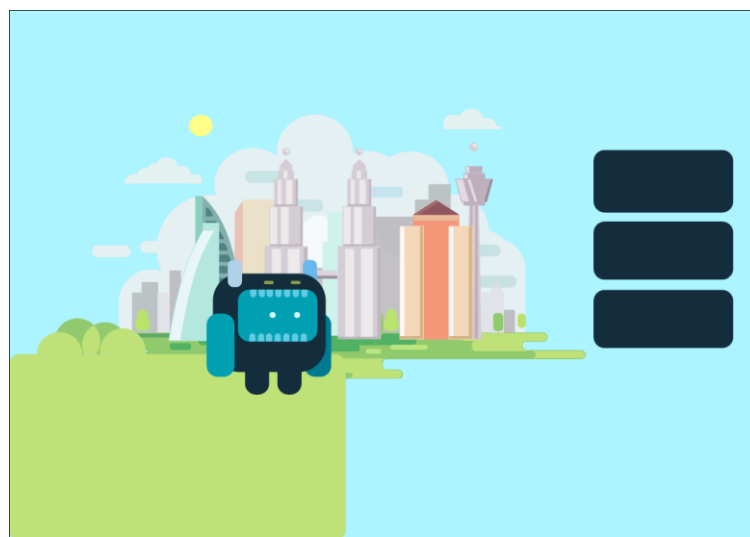
3.3 Application Design

3.3.1 Conceptual Model Design

A conceptual model is representation of the system or software. Which are used to help people know, understand, or simulate a subject the model represents. It also known as mental model with it processing of information essential of how things in our surrounding environment work.

3.3.1.1 First Concept Design

(Figure 3.2: First Model)

In the first model, I do the quick design of the interface for the game menu. This model is to see the structure of the game. In this model, I put the KLCC and KL Tower in the background to represent Malaysia. The reason I put the KLCC and KL Tower design as a background are because it the most common symbol that all people from the world know where it belongs and what is it. Besides, Kuala Lumpur is one of the popular place in Malaysia. Furthermore, the background color that I choose for this model is light blue. The color is supposing represent the sky to synchronize with the KLCC and KL Tower background. Finally, the button design in this model are just an empty rectangle to see the suitable place to put the button for the menu interface. However, the button for this model already input with a code of button function.

3.3.1.2 Second Concept Design

(Figure 3.3: Second Model)

After the discussion with my Supervisor and review from the client. The interface for the game start to upgrade and change. First, we start from the background. I add some effect for the background color by put some gradient to see the changing color from the bottom to the top of the frame. It gives more texture for the clouds. Besides, it helps synchronize the KLCC background design. Second, the button starts to change from rectangle into hexagon shape. Before this the rectangle design got a comment that it looks so basic and client not interested with the design. After making a research, I create a new design of the button. It looks more unique and neat from before. Furthermore, I add some new design such as tree, grass and grown to make the interface more alive.

3.3.1.3 Final Concept Design

(Figure 3.4: Final Model)

This final model I start to be more detail and add more design. In this model, I put more effort at detailing such as the title font. The title font before this wider. So I make it smaller so it gives more space for other design. Other than that, I add the character such make the interface friendlier. This interested the user with the game. The character waving and moving as if the game approach the user to play. This model has come to achieve the objective of the project. Start from the scratch in the first model, add improvement in second model and detailing in the final model.

3.3.2 Flow-Chart Design

A flowchart is an algorithm that depicts a process, system or computer algorithm. The purpose of a flow chart is to provide people with a common language or reference point when dealing with a project or process. It uses simple geometric symbols and arrows to define the relationship between the software. Example the rectangle symbol represents a process, diamond symbol indicates a decision, parallelogram represent input or output and an oval represent a start or end point of the software. However, the arrows a line of connector that shows the relationship between the representative shapes. They can range from simple hand drawn chart to comprehensive computer drawn diagrams depicting multiple step and routes.
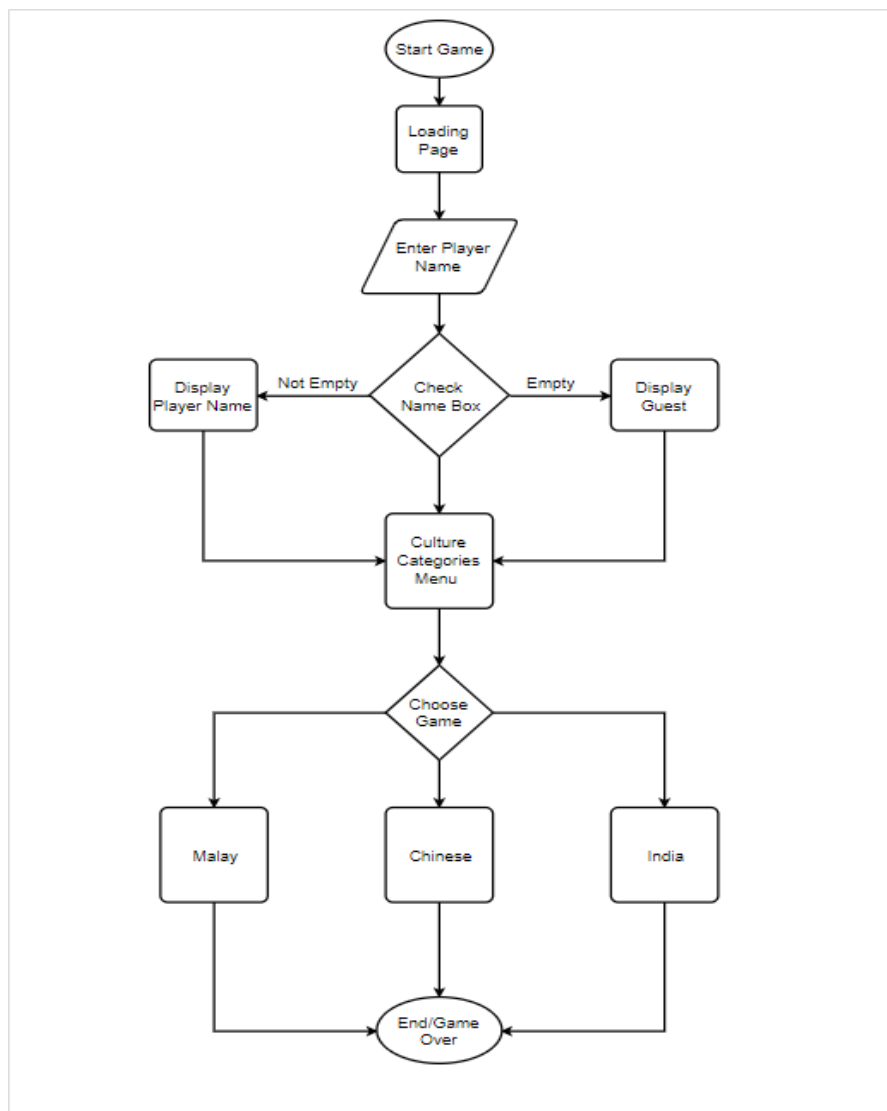

(Figure 3.5: Flowchart)

3.3.3 Storyboard Design

Storyboard is a graphic organizer that provided for the view of the software project with a high level view. However, the storyboard also helps the developer to organize the project and keep up the progress of the project. Developer know how to arrange the work and visualize the sequence of user stories. It can be digital or physical.
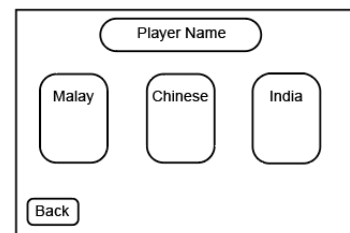
3.3.3.1 Graph Storyboard
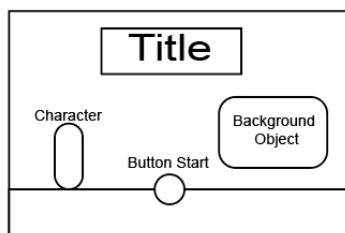
The first scene, the start menu there will be character with the background object for the bacground. However for the start button will be place in the middle. Easy for user to notice.
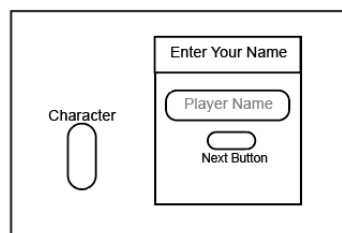
In this scene there will be a input box for use or player to enter their name. At the left side it will show the game character that will introduce itself.

This scene will display the player name from the previous scene. It will display to the user the button categories of culture game. Every category button have the label name of the culture. At the bottom of the scene there will be a back button to get back to previous scene.
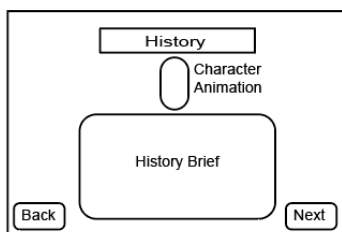
After the game been selected from previous scene, it will show the brief of history from the selected culture game. At the bottom will have back and next button. Next button to proceed to other scene and back to previous scene.
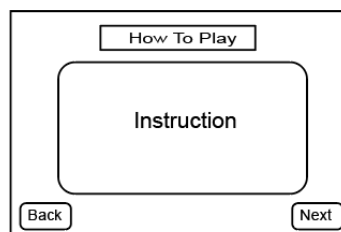
This scene it will show the instruction on how to play the game. There will be a title and the instruction section will be show the object or character in the game.
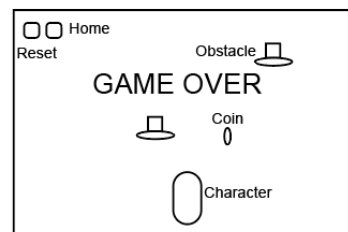
This scene will be the gameplay of the game. It will be obstacle and coin to collect point. Also, there will be a reset and home button for every game. Furthermore, if the character hit the obstacles it will display a "GAME OVER" text.

3.3.3.2 Complete Design

3.4 Conclusion

Methodology is one of the key prospect in this project. In this project, I use Prototype methodology. Using the Prototype methodology, it helps developer to organize the project in the short time because it provides a quick design and prototype. This help the developer to see the actual product that need to present to the client or user. Furthermore, I manage to see the design on how the game should be present by follow step by step phase in the Prototype methodology.

Finally, the important major reason of using Prototype methodology are we get to know the feedback from the client or user before we proceed to project to the final phase with implement the product and maintain. This help the developer to improve the software and know the strength and weakness of the software. Besides, it helps developer fulfill client and user demand.

CHAPTER 4

FINDING AND RESULT

4.1 Introduction

In this chapter, it discussed on finding and result. After the system has been developed. I must be test by the user to make sure that the software efficient and at the same time get the feedback or comment from the user after the review. By that, I am able to improve the software weakness and achieve the objective of the project before implement and maintain the software. Besides, I can apply the idea's from the client or user from the review to fulfill what user's or client's needs.

4.2 System Evaluation

4.2.1 Coding and Interface Evaluation

Developers need to evaluate the coding and certify that the coding were created will not face by any errors such as syntax error, run-time error, logical error and more. It is evaluating from the beginning of developing the software until the very end of combining all component into the software. Other than that, the function codes to make sure the game running. The function that will link to the keypad to move the character. All this function, developer need to find the solution in using the right keyword, method and calculation.

However, developer also need to evaluate the interface design. The color palette and theme of developing educational game need to synchronize so it will bring the more alive and interest the user or client. Developer need to certify the color, icon, character design, background and button design. Besides that, the music applies in the game also need to be suitable with the storyline and design. Need to make sure the coding is linked with the music to make sure it the music play once the software start.

The reason developer evaluate the coding and interface design is because developer wanted to avoid any complicated problem that will hold us to achieve the project objective.

4.2.2 Module Evaluation

In module evaluation it provides the dynamic modification of the user. Each modules contains the information needed. In this module evaluation, questionnaire that has been done will be explained. The questionnaire is important in every project because to test the software and get the feedback from the user. The questionnaire is given to the respondent after they have test or tried our software. We will know what the user requirement that need to change in our software.

4.2.3 System Evaluation

The evaluation of the performance is from the perspective of both developers and user of the project. Other evaluation should be make from the hardware and software that the developer and user used for this software. This section evaluates the design and implementations of the software.

Criteria	Detail
Game Interface	The design of the game software to be evaluated by user or client.
User Experience	The experience of the user during using the software.
Information	The information displayed in the software.

*(Table 4.2: Criteria of the software evaluation)*

The evaluation will follow the above criteria during the testing period. Tester will be given a task before evaluating in the form of questionnaire. Each feedback is being noted in order to update the software.

4.2.3.1 User Feedback

From this point, user feedback is being recorded from our questionnaire test. The result of the feedback is as shown below.
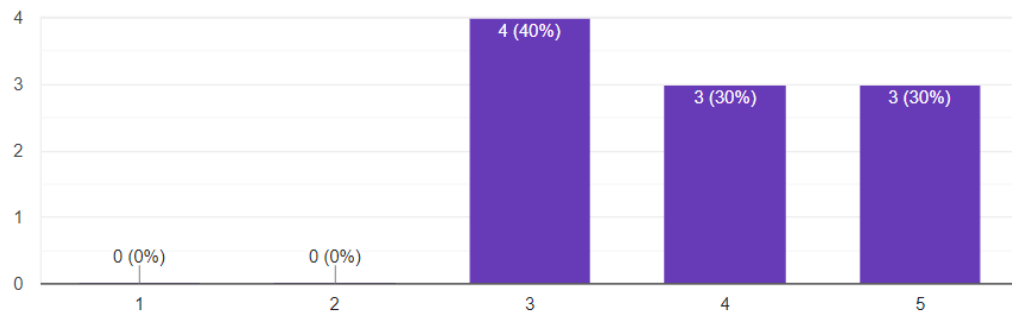
(Figure 4.1: Rate for the game character design)
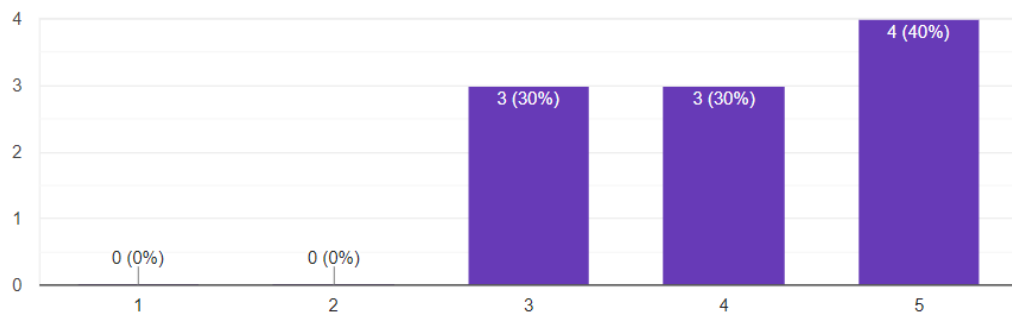
(Figure 4.2: Rate for the design of the menu interface)

Rate the music and sound effect of the game.
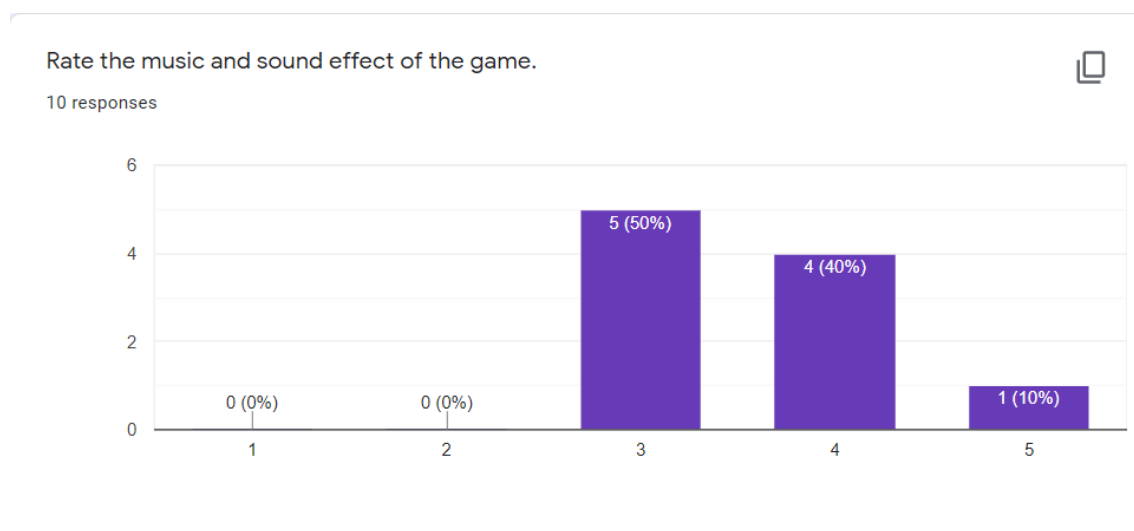
10 responses

(Figure 4.3: Rate for the music and sound effect of the game)

Rate the instruction of the game.
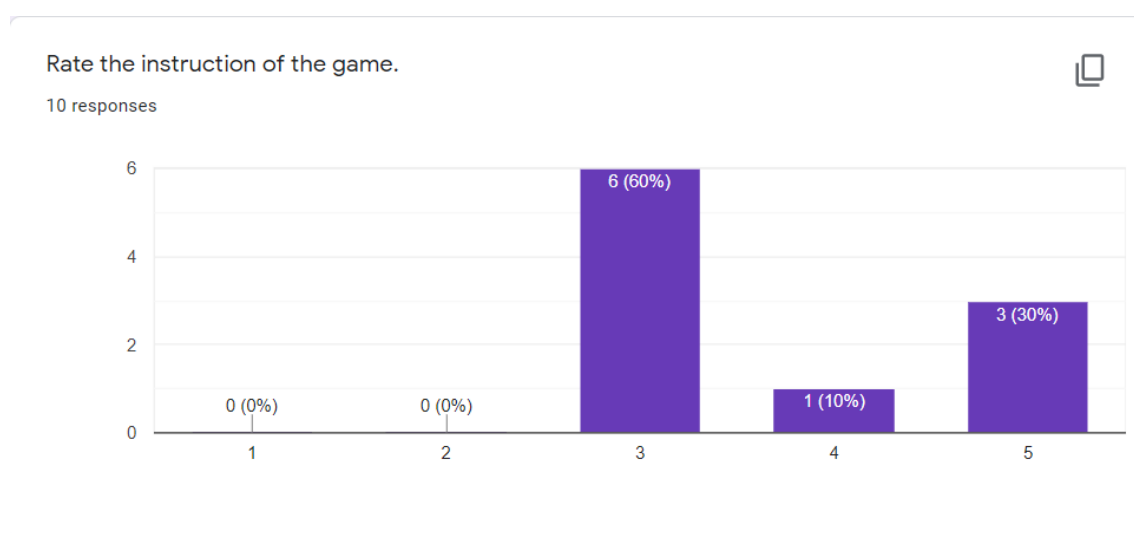
10 responses

(Figure 4.4: Rate the instruction of the game)
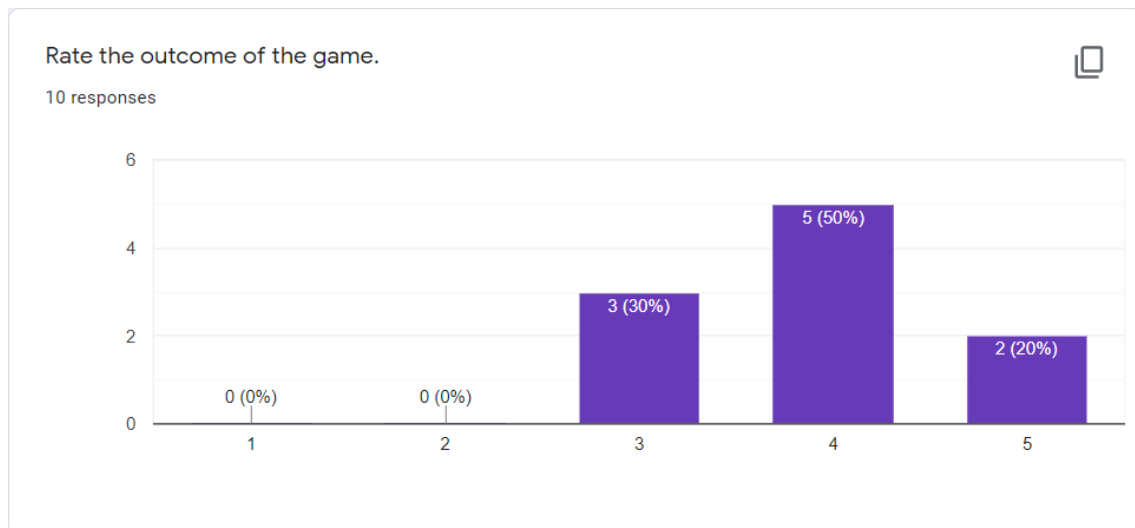
(Figure 4.5: Rate outcome of the game)
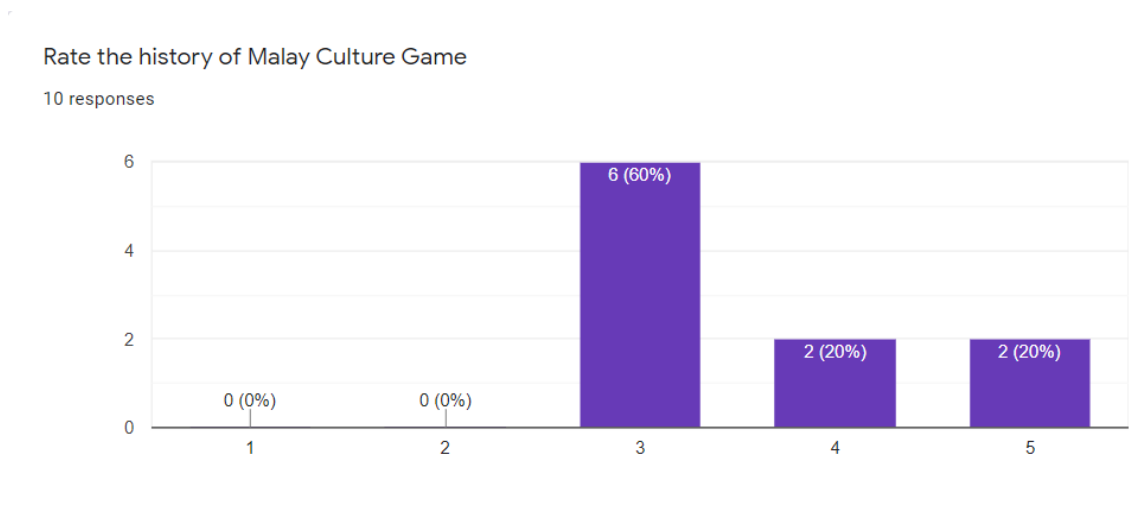
(Figure 4.6: Rate the history of Malay Culture Game)
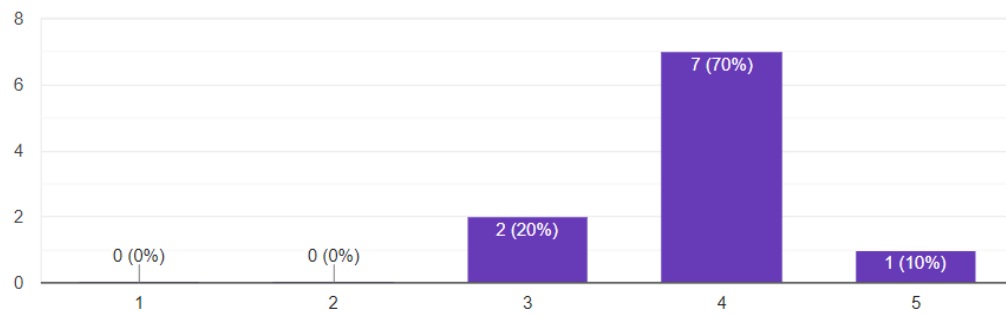
(Figure 4.7: Rate the history of Chinese Culture Game)

(Figure 4.8: Rate the history of India Culture Game)

Rate the Malay Games.

10 responses
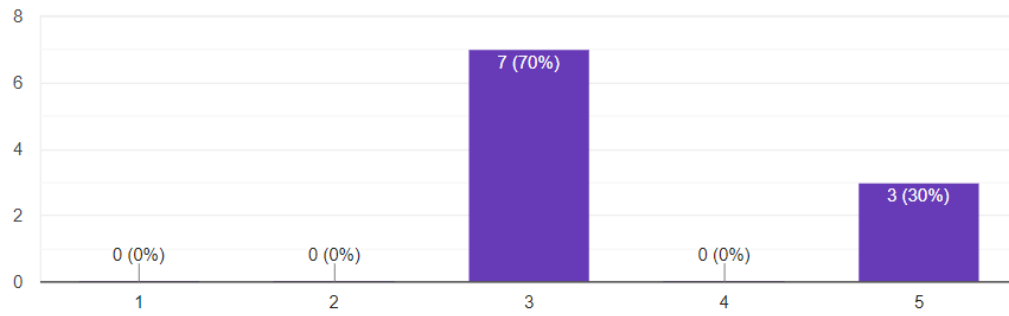
(Figure 4.9: Rate the Malay Games)

Rate the Chinese Games.

10 responses
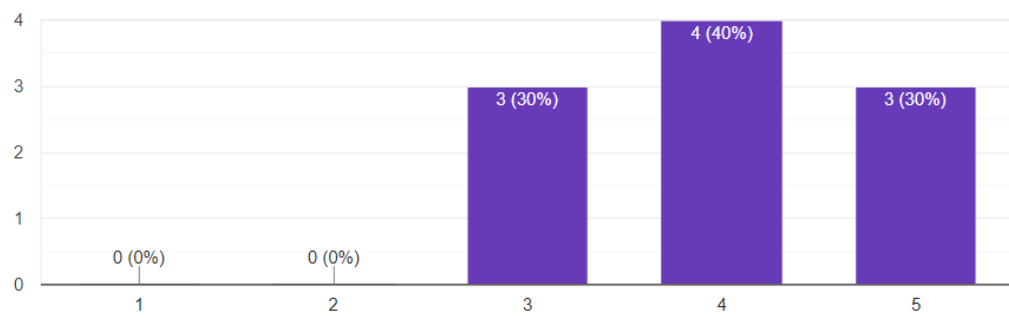
(Figure 4.10: Rate the Chinese Games)

Rate the India Games.

10 responses
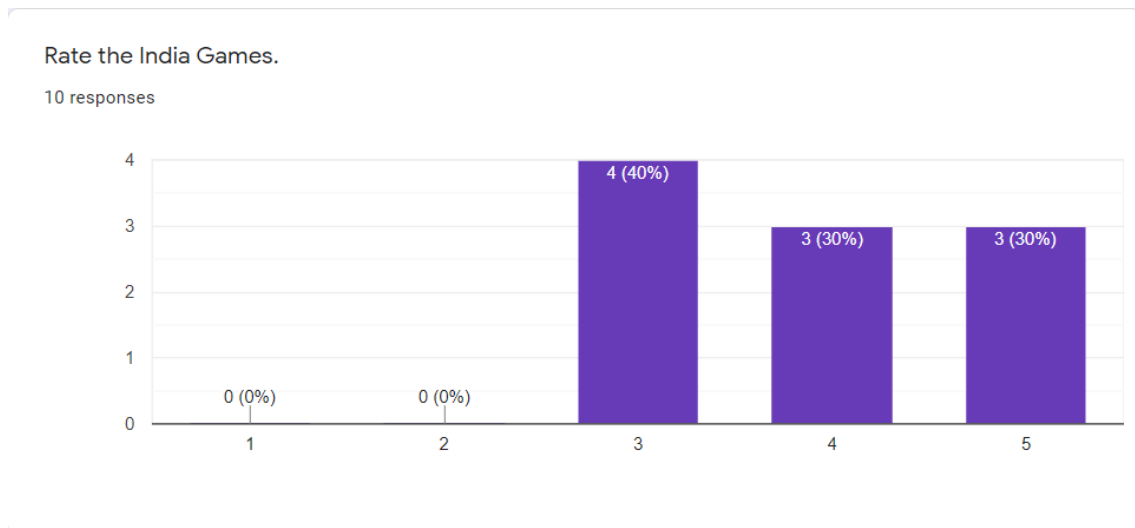
(Figure 4.11: Rate the India Games)

4.2.3.2 Analysis of User Feedback

Following the result of the user feedback, analysis is done on how the result are obtained. The result analysis will then be taken to consider the new upgrade of the software.

Result	Description	Analysis	Finding
Question 1	Rate for the game character design	We found that 40% of them give rating 3, 30% rating 4 and another 30% rating 5 for character design.	Most of the respondent found the design of character are average.
Question 2	Rate for the design of the menu interface	We found that 40% of them give rating 5, 30% rating 4 and another 30% rating 3 for the menu interface.	Most of the respondent like the menu interface design.

Question 3	Rate for the music and sound effect of the game	We found that 50% of them give rating 3, 40% rating 4 and another 10% rating 5 for the music and sound effect.	Most of the respondent found the music and sound effect are average.
Question 4	Rate the instruction of the game	We found that 60% of them give rating 3, 10% rating 4 and another 30% rating 5 for instruction information.	Most of the respondent rate the music and sound effect are average.
Question 5	Rate outcome of the game	We found that 30% of them give rating 3, 50% rating 4 and another 20% rating 5 for outcome.	Most of the respondent received the outcome of the game.
Question 6	Rate the history of Malay Culture Game	We found that 60% of them give rating 3, 20% rating 4 and another 20% rating 5 for Malay History.	Most of the respondent rate the history of Malay are average.
Question 7	Rate the history of Chinese Culture Game	We found that 20% of them give rating 3, 70% rating 4 and another 10% rating 5 for Chinese History.	Most of the respondent interested at history of Chinese.

Question 8	Rate the history of India Culture Game	We found that 40% of them give rating 3, 50% rating 4 and another 10% rating 5 for India History.	Most of the respondent interested at history of India.
Question 9	Rate the Malay Games	We found that 70% of them give rating 3 and another 30% rating 5 for Malay Games.	Most of the respondent rate average for Malay Games.
Question 10	Rate the Chinese Games	We found that 30% of them give rating 3, 40% rating 4 and another 30% rating 5 for Chinese Games.	Most of the respondent interested at Chinese Games.
Question 11	Rate the India Games	We found that 40% of them give rating 3, 30% rating 4 and another 30% rating 5 for India Games.	Most of the respondent rate average for India Games.

(Table 4.1: Analysis of User Feedback)

4.3 Installation and Testing

Installation and testing are to ensure that the software can be installed and function properly. Adobe Animate CC is the software that been used as to develop the component and educational game by developer for "Malaysia Culture Game". Also, to design the component in the game, developer use Adobe Illustrator CC to design everything such as character, background, obstacles and others.

As for the software testing, developer will test the software to identify if there any problems face by user. Moreover, software testing can help developer to receive idea and know user requirement. It shows the result on how user using the software. Whether the game crash or lagging and make sure there is no bug.

4.4 Conclusion

As conclusion, in this chapter we have discovered few types of evaluation. Evaluation been done in order to prevent any error. The evaluation testing is determining the user requirement and organization the system nicely. Furthermore, user feedback becomes important stages to knowing if the software is ready to release or not. It also will give the idea to developer on how the real environment work. Implementation always will suggest that something might be wrong. Documentation will be highlighted for the first time since developer will have to refer to documentation not only for troubleshooting but also for future development.

For the next chapter, it will be the conclusion for the whole chapter. In the chapter developer will explain about the development constraint, recommendation and also future work for the system.

CHAPTER 5

FINDING AND RESULT

5.1 Introduction

In this chapter, we going to summarize the whole development process of this project thus discusses the project development constraint and the plan for future development of the system. In order to fulfill the project objectives, I must face many kinds of obstacles which took a lot of time to solved. Developer realize that to challenge itself to try create new thing in order to gain new experience I and knowledge is part of life. Therefore, Malaysia Culture Game has reached the objective targets that had been set earlier in the beginning of the development of the project. Developer hope that the software has been made will help user to learn about Malaysia culture history and be one of the education platform.

5.2 Development Constraints

Project development is a difficult task as a developer. It took knowledge and skill to create the system with the objective. As developer trying to complete our task within the given time period, developer face many kind of constraints. Some of the constraint took a month to be solved. Below is the problem that developer been faced:

5.2.1 Lack of knowledge

The language that been used in this software is ActionScript 3.0 (AS3). This language only applies in Adobe Flash and Adobe Animate. This language I had never learned or heard before. So, I started to learn the basic in the first week of project timeline. There are many function, keyword and calculation that need to study before start the development. However, I manage to understand and get used to it in the period of developing.

5.2.2 Lack of experience

Developer have created many systems and software before, but this project it gives the developer to think different from before. Developer have a lack of experience of using new software such as Adobe Illustrator. This software to create or design. It is a new experience for developer with it have to learn on how to design art work. Developer start to learn about color palette, the designing shape meaning and so on that related to designing.

5.3 Recommendations and Future Work

5.3.1 Upgrade the game to be mobile game base.

Nowadays, mobile game base is more popular and easy to access. Upgrade the Malaysia Culture Game into mobile application game will bring more interested for user to play and use. Besides, it will easy for user to access rather than using a laptop or desktop to play the game. User will be able to play the game no matter where and when.

5.3.2 Make a career mode game that will have more storyline.

Furthermore, create a story mode for the game will bring more interest for user to play. There will be more story and information to educate the user while playing the game. Besides, it will attract user more if the history chapter in the textbook will be the storyline for the game. Every chapter will have a different story and information for user to learn.

5.4 Conclusion

As the final conclusion of this project, Information Technology usage has become part of human life and it helps human life becomes much easier. All phase of development was conceived using methodologies and how the system is executing successfully by fulfill the objective of the project.

Other than that, I manage to list out the challenge and future enhancement of my software. From there, I can try improves all these things and become a better software in future. Our software is basically an educational game that teach user about history of Malaysia culture in game base form with consist visual and auditory learning method.

Lastly, our development constrains happen during I develop the software. All the constraints I list out for my future look when I want to improve my software. While for the future work. I list them to make an enhancement later. So by using this documentation, it can guide me when I having a problem in maintaining and using the software.

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APPENDIX

Appendix A – Questionnaire

Data Gathering Questionnaire

Gender *

◯ Male

◯ Female

Age *

◯ 13-20

◯ 21-29

◯ 30 an above

Do you know about the History of Malaysia Culture? *

◯ Yes

◯ No

:::

What type of method do you prefer in learning about history? *

◯ Reading Books

◯ Education Games

Do you refer education game be one of the new education method? *

◯ Yes

◯ No

Learn about history in game based help improve your knowledge? *

◯ Yes

◯ No

:::

Do you think education game about culture will interest more people to learn about Malaysia Culture? *

◯ Yes

◯ No

With type of learning method do you more prefer learn about History? *

◯ Reading

◯ Visual(Image, video etc)

Feedback Questionnaire

Rate for the game character design. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Great

⋮⋮⋮

Rate the design of the menu interface. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Great

Rate the music and sound effect of the game. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Great

Rate the instruction of the game. *

	1	2	3	4	5	
Not Clear	○	○	○	○	○	Clear

Rate the outcome of the game. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Great

Rate the history of Malay Culture Game *

	1	2	3	4	5	
Poor	○	○	○	○	○	Great

Rate the history of Chinese Culture Game. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Great

Rate the history of India Culture Game *

	1	2	3	4	5	
Poor	○	○	○	○	○	Great

Rate the Malay Games. *

	1	2	3	4	5	
Not Interesting	○	○	○	○	○	Interesting

Rate the Chinese Games. *

	1	2	3	4	5	
Not Interesting	○	○	○	○	○	Interesting

Rate the India Games. *

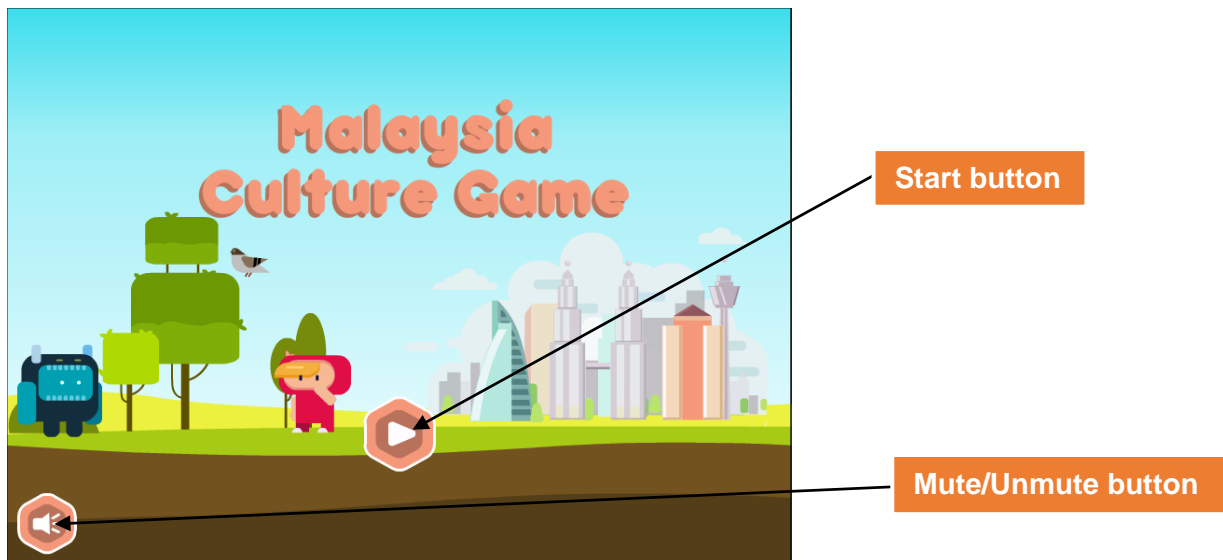|	1	2	3	4	5	
Not Interesting	○	○	○	○	○	Interesting

Appendix B – User Manual

User Manual for User

Getting Started

How to start playing the game.

Home Page

- In main menu page, there will be a start button at the bottom.
- To start the game just click the play button.
- To mute the music just click at the bottom left button.

After the start button has been click, it will go and proceed to the next page.

Player Name Page

- In the next page it will show a text box to enter player name.
- Player required to enter the name.
- Click Let's Go button to proceed to next page.
- Click the Back button to go to Home page.
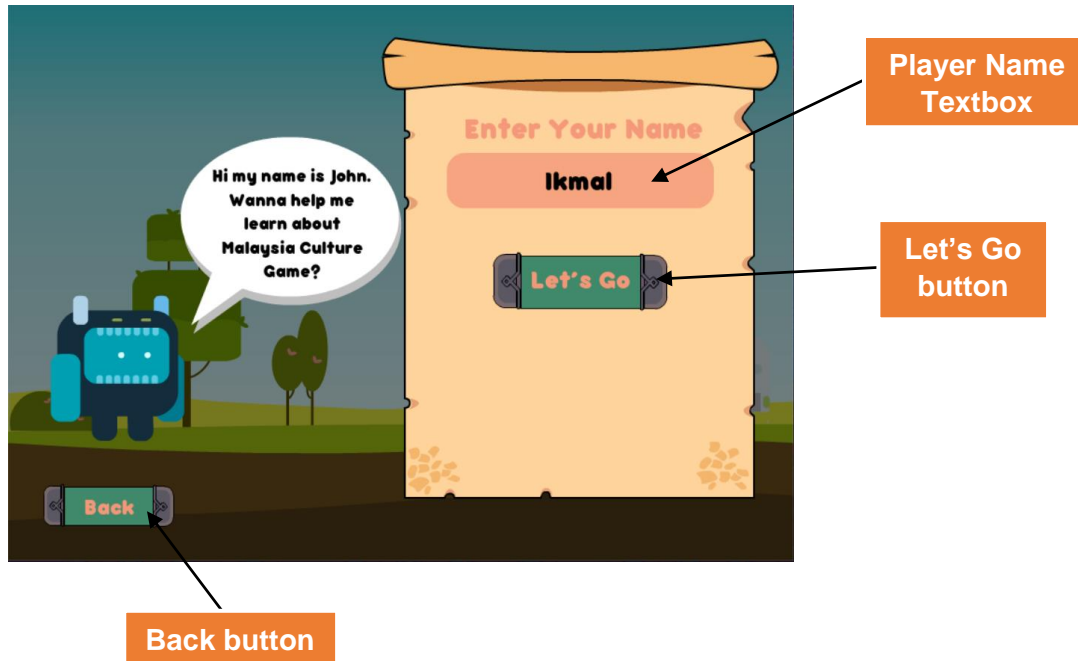
Loading Page

- After click the Let's Go button it will proceed to loading screen.
- Wait until the loading bar to complete.
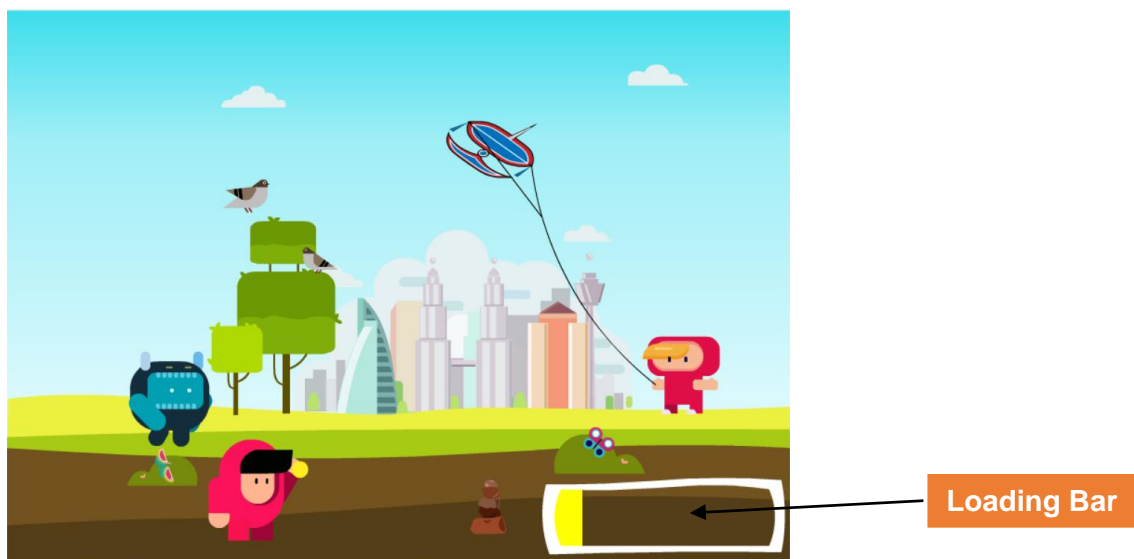
Culture Menu Game

- Player name is display on top of the page.

- In this menu, player can choose the culture game that player want to play.

- Just click the Malay, Chinese or India button to play the game.

- Click the Back button to go back to Player Name page.

Game List by Culture

- After player choose the culture it will display game that have in the culture player choose.
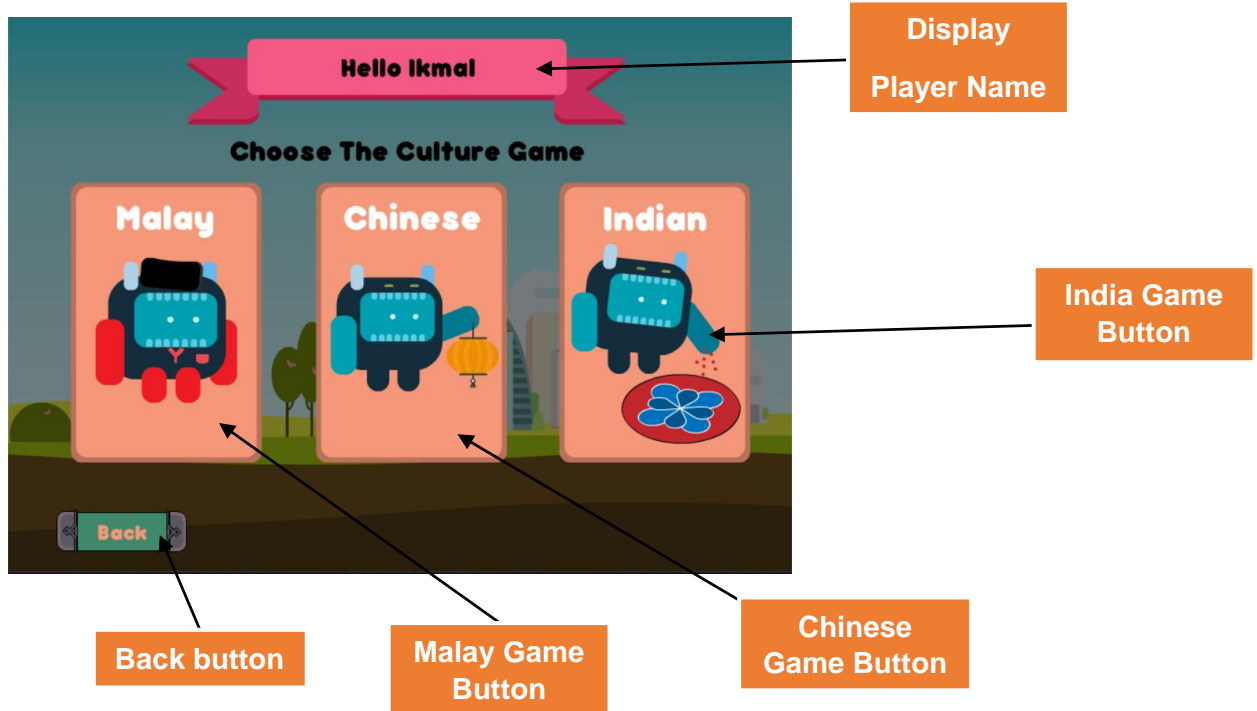- Choose the game that player want to play by click the button.
- Click the Back button to go back to Culture Menu page.

Game Button
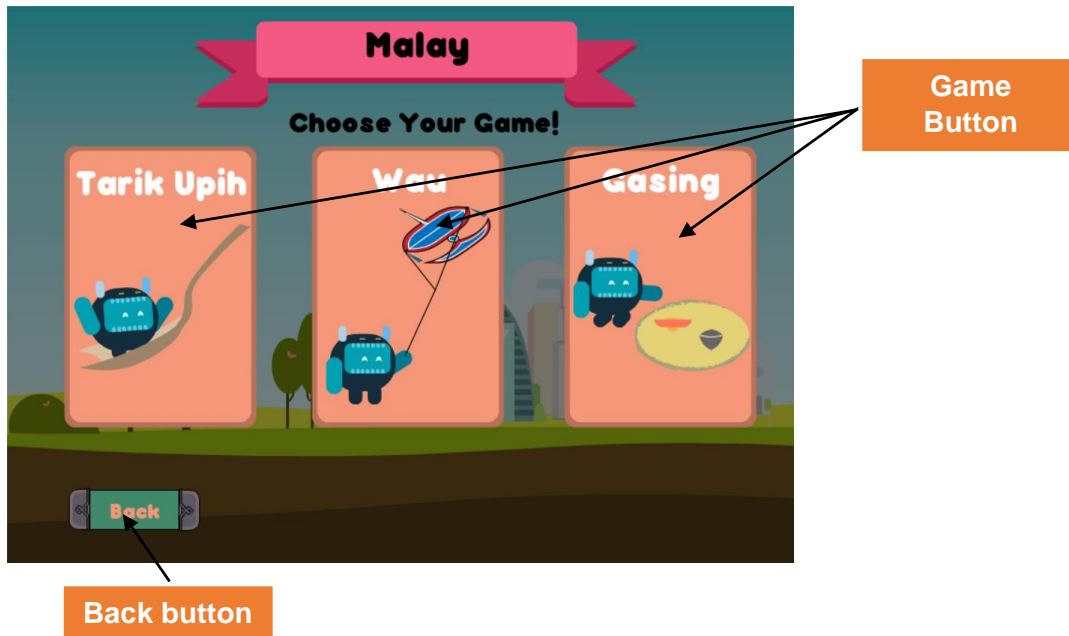
Back button

History of Game

- After player choose the game. It will go to next page and display history of game.
- Back button is to go back to Game List Menu.
- Next button is to go to Instruction page.

Next button

Back button

Instruction of Game

- This page will show the instruction on how to play the game.
- Back button is to go back to History of Game.
- Next button is to go to the Gameplay.

Back button

Next button

Gameplay

- Player can start play the choose game.
- There reset button to restart the game.
- Home button to go back to Game List page.

Reset button

Home button
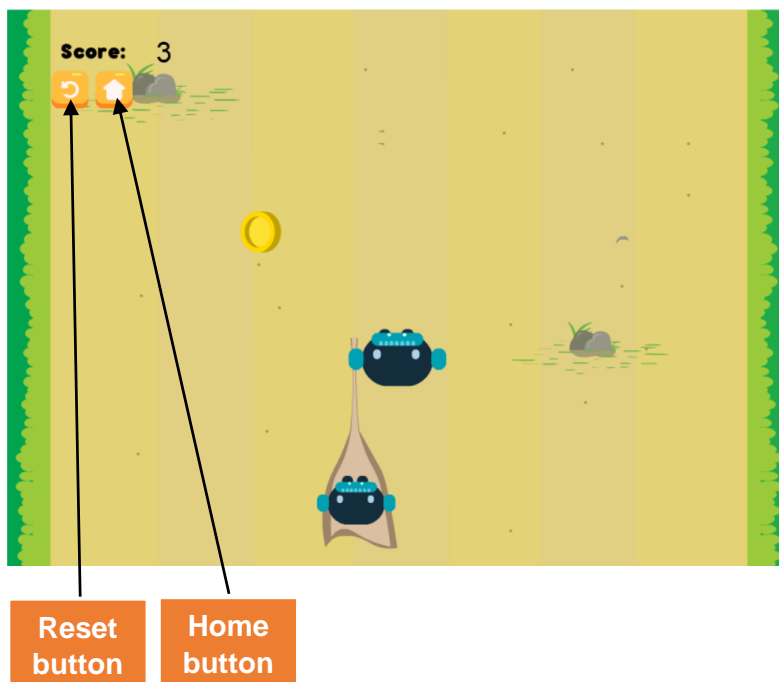
Game Over

- If player lose the game, it will show the "Game Over"
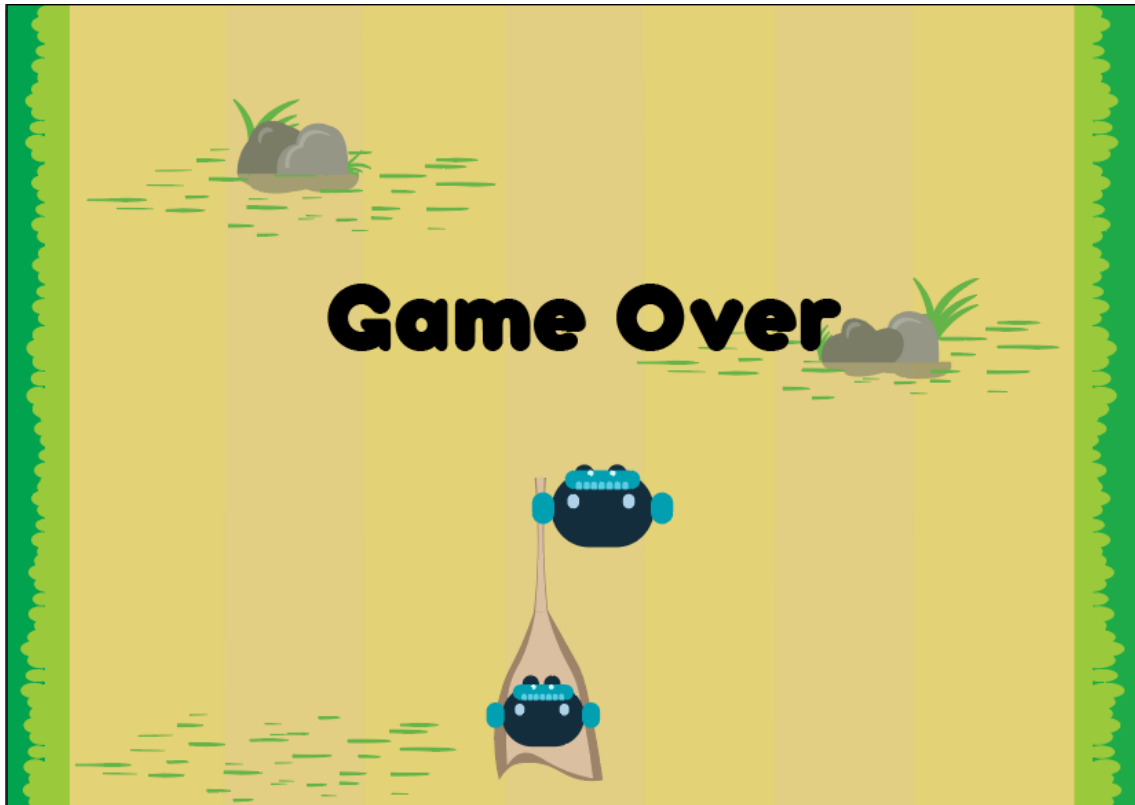
Appendix C – Turnitin Result

Final Draft Report

ORIGINALITY REPORT

10%	10%	1%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.guru99.com Internet Source	4%
2	www.informit.com Internet Source	1%
3	www.coursehero.com Internet Source	1%
4	banglatricks99.blogspot.com Internet Source	1%
5	elib.dlr.de Internet Source	1%
6	www.agitraining.com Internet Source	<1%
7	whatis.techtarget.com Internet Source	<1%
8	www.allgamesfree.com Internet Source	<1%
9	interactiveknowledge.com Internet Source	<1%

Appendix D – Progress Report

KOLEJ UNIVERSITI POLY-TECH MARA KUALA LUMPUR

PROJECT

TSE3214

Project Title   :   Malaysia Culture Game

Student Name :   Muhammad Ikmal Shah Noor Azmi

Matrix Number: AM1709003246

Supervisor   :   Mohd Fitry Bin Yahya

Progress Report 01

During the development process, I have started on the production modelling of the story. Below are some of the things that I have done:

1. Briefing about the theme of the game.

2. Briefing about what culture in Malaysia can be apply in the game.

3. Review on the traditional game based on culture in Malaysia.

4. Review the history of every traditional games.

5. Discuss about the project proposal.

Above are the tasks I have managed to complete so far. For the next following weeks, I have planned to review the quick design of the game. From the review, I can manage to improvise the game.

Prepared by,   Checked by,

_____   _____

(Muhammad Ikmal Shah Noor Azmi)   (Mohd Fitry Bin Yahya)

AM1709003246   Project Supervisor

KOLEJ UNIVERSITI POLY-TECH MARA KUALA LUMPUR

PROJECT

TSE3214

Project Title   :   Malaysia Culture Game

Student Name :   Muhammad Ikmal Shah Noor Azmi

Matrix Number: AM1709003246

Supervisor   :   Mohd Fitry Bin Yahya

Progress Report 02

During the development process, I have started on the production modelling of the story. Below are some of the things that I have done:

1. Show the quick design of the game.

2. Review the character and background design.

3. Learn on how to move to character and body movement.

Above are the tasks I have managed to complete so far. For the next following weeks, I have planned to show the prototype of the game with a complete design and function.

Prepared by,   Checked by,

_____   _____

(Muhammad Ikmal Shah Noor Azmi)   (Mohd Fitry Bin Yahya)

AM1709003246   Project Supervisor

KOLEJ UNIVERSITI POLY-TECH MARA KUALA LUMPUR

PROJECT

TSE3214

Project Title   :   Malaysia Culture Game

Student Name :   Muhammad Ikmal Shah Noor Azmi

Matrix Number: AM1709003246

Supervisor   :   Mohd Fitry Bin Yahya

Progress Report 03

During the development process, I have started on the production modelling of the story. Below are some of the things that I have done:

1. I show the prototype of the game with a complete design and function.

2. Get a review from Supervisor about the prototype.

3. Discuss about questionnaire for testing phase.

Above are the tasks I have managed to complete so far. For the next following weeks, I have planned to show the complete project of the game. In the next meeting, the game should be complete with the improvement of design, functionality and achieve the project objective.

Prepared by,   Checked by,

_____   _____

(Muhammad Ikmal Shah Noor Azmi)   (Mohd Fitry Bin Yahya)
AM1709003246   Project Supervisor

KOLEJ UNIVERSITI POLY-TECH MARA KUALA LUMPUR

PROJECT

TSE3214

Project Title   :   Malaysia Culture Game

Student Name :   Muhammad Ikmal Shah Noor Azmi

Matrix Number: AM1709003246

Supervisor   :   Mohd Fitry Bin Yahya

Progress Report 04

During the last two weeks, I have completed the prototype of the game. Below are some of the things that I have done:

1. Show the complete project of the game.

2. Review the game design and functionality.

3. Focus on detail of the game design and information.

4. Briefing ideas to put the error handling.

Above are the tasks I have managed to complete so far. For the next following weeks, I have planned to briefing about the project presentation. Need to make a preparation on project slide and poster.

Prepared by,   Checked by,

_____   _____

(Muhammad Ikmal Shah Noor Azmi)   (Mohd Fitry Bin Yahya)

AM1709003246   Project Supervisor

KOLEJ UNIVERSITI POLY-TECH MARA KUALA LUMPUR

PROJECT

TSE3214

Project Title   :   Malaysia Culture Game

Student Name :   Muhammad Ikmal Shah Noor Azmi

Matrix Number: AM1709003246

Supervisor   :   Mohd Fitry Bin Yahya

Progress Report 05

During the final week, I have started on the production of presentation. Below are some of the things that I have done:

1. Final review on the project.

2. Briefing on the slide presentation.

3. Review the poster design and information.

Above are the tasks I have managed to complete for this project. For the next following weeks, it will be a presentation for the final year project. Thank you to the Supervisor Sir Fitry for the ideas, reviews and guideline to completed this project.

Prepared by,   Checked by,

_____   _____

(Muhammad Ikmal Shah Noor Azmi)   (Mohd Fitry Bin Yahya)

AM1709003246   Project Supervisor