Educational Game Prototype: History of Japanese Occupation in Malaysia

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By

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ABSTRAK

Permainan komputer di kalangan remaja kini telah menjadi budaya yang tidak dapat dipisahkan. Melalui penggunaan rangkaian jalur lebar dan budaya penggunaan teknologi maklumat di kalangan masyarakat Malaysia, mahasiswa dan generasi muda masa kini telah terlibat dengan permainan komputer sejak usia muda. Sebelum ini, permainan komputer hanya dianggap sebagai media hiburan untuk pelajar dan remaja tanpa memberikan ganjaran kepada mereka. Namun kebelakangan ini, pelbagai usaha telah dilakukan untuk menghidupkan permainan komputer yang diserap ke dalam kelas supaya pembelajaran lebih menarik dan boleh diikuti oleh pelajar. Oleh yang demikian, projek ini dicadangkan bagi membina satu prototaip permainan komputer yang memenuhi kehendak pelajar. Satu permainan komputer pembelajaran akan dibangunkan dengan mengintergrasi keseronokan dan pembelajaran bagi subjek sejarah tingkatan 3. Keperluan permainan komputer dan teori bagaimana hendak mengintergrasi permainan di dalam pembelajaran akan dikenalpasti. Kemudian prototaip tersebut akan diuji menggunakan ujian *black box* untuk mengenal pasti fungsinya. Dari aspek pembangunan, Model MUDPY oleh Sharda akan digunakan sebagai metodologi utama projek ini. Kesimpulanya pelajar bukan sahaja dapat bermain permaian komputer malahan dapat belajar sejarah Malaysia pada masa yang sama.

ABSTRACT

Computer games among teenagers have now become a culture that cannot be separated. Through the use of broadband and civilizing of IT usage among the Malaysian community, students and young people has now been exposed to computer games since a young age. Before this, computer game is perceived as only a medium for students and teenagers to seek pleasure without giving any benefit to them. But lately, various attempts have been arranged to enable a computer game to be incorporated into the class learning to make learning more interesting and accessible to students. For that regard, this project is proposed and to develop a computer games prototype that meets these requirements. A prototype in the form of educational games will be developed to integrate fun and learning, and it is for the history subject for form 3. To achieve these goals, the need for educational games and the theories how to integrate games into learning will be identified. Later on the prototype will be tested using the black box testing to ensure the functionality. Overall for the development, MUDPY model by Sharda will be employed as the main methodology for this project. At the end, these students will not only have computer games that provide pleasure alone, but they can also learn the history of Malaysia at the same time.

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TABLE OF CONTENTS

PERMISSION TO USE	I
ABSTRAK	II
ABSTRACT	III
ACKNOWLEDGEMENT	IV
LIST OF TABLE	VII
LIST OF FIGURE	VIII
CHAPTER ONE : INTRODUCTION	
1.1 Background	1
1.2 Problem Statement	3
1.3 Research Question	4
1.4 Research Objectives	5
1.5 Scope	7
1.6 Significance of The Project	8
CHAPTER TWO : LITERATURE REVIEW	
2.1 Introduction	9
2.2 Game	9
2.3 Educational Game	11
2.4 Games and Learning	12
2.5 Learning Outcome	14
CHAPTER THREE : METHODOLOGY	
3.1 Introduction	17
3.2 Phase	19
3.2.1 Concept	19
3.2.2 Goals	19
3.2.3 Requirements	20
3.2.4 Specification	22
3.2.5 Production	23

CHAPTER 4 : PROTOTYPE DEVELOPMENT AND FINDINGS

4.1 Introduction 26

4.2 Phase 1 : Plan 28

4.2.1 E-Brainstorming 29

4.2.2 Interview 29

4.2.3 Observation 31

4.2.4 Findings on Plan Phase 31

4.3 Phase 2 : Design 32

4.3.1 Character Design 32

4.3.2 Storyboard 34

4.3.3 Task Modeling 36

4.3.4 Game Navigation 37

4.4 Phase 3: Produce 38

4.4.1 Content Gathering 38

4.4.2 Integrations 39

4.4.3 Testing 43

CHAPTER FIVE : CONCLUSION

5.1 Introduction 49

5.2 Conclusion 49

5.3 Contribution of The Study 51

5.3.1 To System Developers 51

5.3.2 To Ministry of Education 52

5.4 Problems and Limitations 52

5.5 Recommendations 52

REFERENCES

LIST OF TABLES

Table 1.1: Research Question

Table 2.1: Game in School

Table 2.2 : An Overview of the Studies into the Effectiveness of Educational Use of Computer Games

Table 4.1 : Findings on Plan Phase

Table 4.2 : Game Prototype Sprites

Table 4.3 : Game Prototype object

Table 4.4 : Game Prototype Scripts, Sounds and Backgrounds

Table 4.5: Descriptive Analysis of Perceived Usefulness

Table 4.6: Descriptive Analysis of Ease of Use

LIST OF FIGURES

Figure 3.1 : MUDPY Model (Sharda, 2004)

Figure 4.1 : The Outcomes Diagram for Educational Game Prototype

Figure 4.1 : Antagonist Character

Figure 4.2 : Protogonist Character

Figure 4.3: Welcome Screen

Figure 4.4: Player engage with enemy

Figure 4.5: Pop up question

Figure 4.6: High Score

Figure 4.7: Task Modeling

Figure 4.8 : Game Prototype Navigation

Figure 4.9: Room in Game Maker

Figure 4.10: Screen Shot of the Game Prototype

Figure 4.11: Mean of PUEU test

Figure 4.12: Median of PUEU test

Figure 4.13 : Mode of the PUEU test

Figure 4.14: The Standard Error on PUEU Test

Figure 4.15: Conclusion

CHAPTER 1

INTRODUCTION

1.1 Background

Malaysian Government through the National Key Economic Areas (NKEA) has stated that the education sector will play an important role as a major education centre of a choice and a pivotal hub in the global education network (National Key Economics Area, 2010). Government also wants to improve the educational outcome in Malaysia by building the competitive workforce. In order to achieve that, government is now focusing in developing high performing schools programme and trying to lifts the performance of all schools in the system. To become k-economy based country, Malaysia through strategic ICT Roadmap was mooted by the National Information Technology Council and re-iterated in the 9thMalaysia Plan (MOSTI, 2007). ICT as an enabler was first mentioned on 6th Malaysia Plan (MP) mainly in the manufacturing sector. In the 7th MP, government has started to include e-learning as a key in their agenda. While in the 8th MP, smart school had been introduced to produce national k-workers to meet the demand in the vision 2020. In the 9th MP,

Malaysia starts to recognize the importance of the digital content development in education under the application of multimedia digital content development strategies.

Education is an important part of human life. Through education, human learn and increase their knowledge. In this globalization and technological world, education has serious implications for the nature and purpose (Tinio, 2002). One of the implications is the uses of the ICT in education. Chang (2002) says the concept of ICT includes system that enable information gathering, management, manipulation, access, and communication in various forms. Educational games become more popular in the education area. Game is defined as a physical or mental contest with goal or objective, played according to a framework or rules which determined what a player can and cannot do in a game world (Baranowski, Buday, Thompson, & Baranowski, 2008). Meanwhile, an educational game is defined as one designed for learning, is a subset of both play and fun. It is a melding of educational content, learning principles, and computer games (Prensky, 2001).

On the other hand, history subject is important to the nation because history can enlighten the student about the country's nation-building process (Nation News, 2010). Nor Azan & Wong (2008) described that history learning is also vital for students' intellectual, spiritual, emotional and physical development. The main problem of history learning is that students and teachers perceived history as a boring subject and it is difficult to memorized facts (Nor Azan & Wong, 2008).

1.2 Problem Statement

History subject in Malaysia is a core subject in the Kurikulum Bersepadu Sekolah Menengah (KBSM). It is mandatory to be learned by all students on an ongoing basis for five years. Thus, the history curriculum for Junior Secondary Schools (SMR) must have continuity in Senior Secondary Schools (SMA), so foundations of knowledge, values and skills learned and experience gained can be strengthened and developed further (Bahagian Perkembangan Kurikulum, 2002).

According to Azwan et al (2005), Curriculum Development Division reported that history subject is known as a 'dead' and boring subject. It is because the society assumed that history subject doesn't have commercial value. Students also don't show much interest in learning the subject. Students assume history subject as bored because they have to memorize all facts in the text book without understanding those facts, concept, time and historical events (Rozita & Zaliza, 2005).

A study conducted by Nor Azan & Wong (2008) finds that the most crucial part for students in learning history is because the difficulty in memorizing historical fact. This problem contributed 70.6 % of overall problem. 44.5% of student has no interest in history because of teaching media such as boring text books. Another 15.8 % student has no interest due to teachers' boring teaching method. Meanwhile the lack of teaching aid/material used by the teacher contributed 16.5% of student perception in history learning. The third most percentage is student did not get clear description about historical events. Another problem stated by the student is lack of history references and did not understand history context. The same study also found

that 27.7% students spent less than one hour per weeks to play a digital game and 16.4% played for one hour per week.

Prensky (2001) said that with the right development and use, an educational game can be a great tool in education. Later studies found that games have attractive elements which promote motivation and engagement in a study (Baek, 2008). Computer games are exciting, fast paced, compelling and rewarding compared to schools where students think of it as slow and boring. They are also more appealing to students compared to classroom-based strategies and provide an ideal learning environment for students (Virvou, Katsinis, & Manos, 2005). Realizing the important impacts of educational games in history learning in school, this study will evaluate the use of educational games prototype in enhancing the learning process.

1.3 Research Question

In order the educational game, several questions need to be answered in this study. The questions are listed in Table 1.1 below.

Table 1.1: Research Question

Question	Method	Focus
What are the features needed in an educational game?	Literature review Interview Brainstorming Observation	Identify the requirement for an educational game.
How to develop an educational game?	Methodology	Developing an educational game.
How to test the educational game?	Test method	Test the functionality of an educational game.
How to validate the educational game?	Test method	Test the usefulness of an educational game.

Question one is about the features that needed in the educational game. To know what are the features needed in the game we must find the requirement. The requirement can be find by several methods. On this study methods that been used is literature review, interview, brainstorming and observation. Focus of these methods is to identify the requirements of educational game.

Meanwhile second question is about how to develop an educational game. To answer this question researcher used a methodology to support the development process of the educational game. Focus of the methodology is on developing an educational game. This methodology will help setting the path to develop an educational game.

Third question needed to be answer is how to test the educational game. The educational game can be test by using several testing methods. The main focus and purpose of the testing is to know the functionality of the educational game.

After testing the functionality, the next question needs to be answer is how to validate the educational game. Educational game can be validating through testing method. This method is focus on test the usefulness of the game.

1.4 Research Objectives

The main objective of this study is to develop an educational game for Malaysian History subject. To achieve this main objective, the study defined four specific objectives:

1.4.1 To identify the requirement for an educational game.

1.4.2 To develop the educational game prototype based on the requirement identified.

1.4.3 To test the functionality of the educational game prototype.

1.4.4 To validate the proposed educational game prototype.

A first objective is to identify the requirement for an educational game. This is the most important steps in developing any educational game. Requirement need to identify first before any developing steps can involves. In this study requirement can be identified by using several methods. Researcher found that by requirement can be identify by literature review, interview, brainstorming and observation. Literature review is done by searching past research. While interview involved the some effort from researcher to ask the right person involved in the educational area. Observation is also done by researcher in the area to identify the requirement and brainstorming is done in a group of expert educational people.

A second objective is to develop the educational game according to the requirement that obtain from the first objective. To develop this educational game researcher find the suitable methodology in developing multimedia products. There are several methodologies that are available in the field. To find the most suitable methodology researcher had to determine the time and the needed in the developing process.

To test the functionality of the game is the third objectives need to achieve. Testing is done to determine the prototype that has been developed. Testing is done through

several methods. Researcher chose black box testing as a testing method. This black box testing is good to test the functionality of the game.

A last objective is to validate the proposed educational game. To validate the prototype researcher use the usefulness test method. This method is used to determine the usefulness and the acceptance of the user towards the prototype. On this study researcher use the PUEU test develop by Davis (1989).

1.5 Scope

The research is focuses on the Japanese invasion on Malaya. The topic is learned by students in Form Three. The purpose of this topic is to know the chronological of how Japanese invasion on Malaya. The topic is divided into two parts. The first part is on the way of Japanese rules Malaya and the second part is on the impacts of the Japanese invasion to the politics, economy and social of Malaya's.

The genre of the game was decided to be the First Person Perspective (FPS). FPS is a 3D game that has a view from the eye of the user. For this game, it is involve firearms. The antagonist is the Malaya army and the protagonist is the Japanese invader. The environment is based on the first day of the invasion which happened in Kota Bahru, Kelantan.

The Malaya army needs to shoot the Japanese army to progress in the game. Before the Malaya army shoot, some question will pop up and the players have to answer the questions. The game continues regardless of whether the answer is right or wrong. The score will be display at the end of the game. The total of the questions is

ten. The question is about the Japanese invasion and the impacts of the invasion. The question is derived from the books that are validated by the history teacher and under the scope of Malaysia Education Ministry. The question can be referred in Appendix 1.

The development of the prototype was based on the (Multimedia Design and Planning Pyramid) MUDPY model by Sharda. This model is suitable to be used in the multimedia development for prototype and also in game. The authoring tools used in the development were Game Maker 8. Meanwhile, to support the resources, software like Adobe Photoshop and Sony Sound Forge were integrated together in the development.

The functionality of the game was test after the prototype is completed. To test the functionality, black box testing has been used. In this testing, the function of the input on every task is tested. The result of the testing is included in the report. After the result, decision table testing will be derived. Decision tables, like flowcharts, if-then-else and switch-case statements, associate conditions with actions to perform, but in many cases do so in a more elegant way (Decision table, 2010).

1.6 Significance of the Project

This study created an educational game prototype based on Malaysian History Subject. The prototype was used to test the functionality of the educational game. The study provided some potential requirement to develop future educational game in order to make the learning process more efficient.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This section review some theories, concepts and findings from previous studies that are available in the literature regarding the subject. The latest technologies for an educational game also reviewed in this section.

2.2 Game

There are many definitions about game. Games are based on the concept of fun (Prensky, 2001). Hulzinga (1955) states a game is a free activity, outside ordinary life, with no profit. It has rules and a defined way of progressing. It may possess social groupings that cloak themselves in secrecy to stress their difference from the common world. Caillois (1961) also stresses the free or voluntary nature of games that a game has rules, and that games are unproductive. He also defines games as having a make-believe element. While Kramer (2000) said that game is any activity

which is executed only for pleasure and without conscious purpose. While Prensky (2001) said there are three major terms in game definition.

i. structure

ii. play

iii. goal

Avedon and Sutton-Smith (1981) define a game as an exercise of voluntary control systems with an opposition between forces, confined by procedures and rules that produce a disequilibria outcome. Juul (2005) also provides a shortened definition of games: "A game is a rule-based system with variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome, and the consequences of the activity are negotiable". From the research, a game can be defined as a voluntary rule-based activity that motivates the player to achieve a goal state or quantifiable outcome via conflict with others or self.

Video games started too emerged in the late 50s when Thomas T. Goldsmith Junior and Estle Ray Mann file for patent on first electronic video game, the Cathode-Ray Tube Amusement Device (Polson, 2002). Since then many game had develop either as amusement or as an education tools. While serious game can be found in the early 70s when Abt (1970) say that reduced to its formal essence, a game is an activity among two or more independent decision-makers seeking to achieve their objectives in some limiting context. A more conventional definition would say that a game is a context with rules among adversaries trying to win objectives.

2.3 Educational Game

Game have several type and genre, although this two term always being use, there is a different between this two term as describe by Grace (2005) when discussing game story, we distinguish game type as a description of game play, and game genre as a description of the narrative content of the game. While Wolf (2000) say that the game's objective is a motivational force for the player, and this, combined with the various forms of interactivity present in the game, are useful places to start in building a set of video game genres. As for history subject it's clear the choice of the genre is educational game.

An educational game, one designed for learning, is a subset of both play and fun. It is a melding of educational content, learning principles, and computer games (Prensky, 2001). An educational game is combining the element of joy and learns in a playable situation. Another term to be used with educational game is serious game. Serious game also can be defined as a mental contest, played with computer in accordance with specific rules that use entertainment to further government or corporate training, education, health, public policy and strategic communication objectives (Zyda, 2005). There are called serious games, not because other games aren't, but because game is used in a pedagogical way for political, social, marketing, economical, environmental or humanitarian purposes (Arvers, 2009). In addition Zyda (2005) also said that serious game has more than just a story, art, and software, however they involved pedagogy: activities that educate or instruct, thereby imparting knowledge or skill.

Educational games also follow the rules of traditional games but with some alterations. Educational games work best when competition is minimized and emphasis is placed on the value of the experience (Hark, 1997; Nemerow 1996). Control over the game flow may be stronger in educational games (Mungai, Jones, & Wong, 2002), and competency is stressed via feedback mechanisms. However, Prensky (2001) mention those educational games should feel like a traditional computer game, from beginning to end. Educational games create a continuous cycle of cognitive disequilibrium and resolution (Van Eck, 2006). The extent to which educational games cause cognitive disequilibrium without overwhelming the individual determines the quality of the engagement in the game (Van Eck, 2006).

2.4 Games and Learning

Games can be excellent tools for student to learn and support the learning. This can help teachers to educate complex topic into self paced learn centered. Cruickshank and Telfer (1980) point out that game provide a responsive environment where learners immediately know how they are doing. Sugar and Takacs (1999) report that games create an interactive learning experience by transforming inactive learning material into learning episodes, where the learners are active players and participants.

Computer and games can let student experience ways of learning that stress immersion in a practice, supported by structures that lead to expertise, professional-like skills, and innovative thinking (Shaffer & Gee, 2006). While Prensky (2006) agreed that digital games appear to be excellent tool for facilitating and supporting meaningful learning of pupils, merging out-of-school and in-school learning.

Another researcher says that the stronger any game is on more of the features on the list, the better its score for learning (Gee, 2005).

Sandford & Williamson (2005) had come with a list of what games and learning should engage in school. This can be viewed in the Table 2.1.

Table 2.1: Game in School

• Games to be used in school should provide progressively complex challenges which are clear and finite and can be repeated; players should be able to adapt the level of difficulty (from novice to expert) if necessary.
• Players need to be absorbed in meaningful activities whose aims and goals they clearly understand and the accomplishment of which stretches their current competence.
• Using a game in the classroom should not necessarily need players to be 'trained' beforehand; players should be allowed to practice playing, often by failing and revising and re-trying tactics, but may need support from staff or peers.
• Tasks should be related closely to real-world practices and concrete experiences or be consistent with the fantasy, and not staged as practice for some later test or exam, or, worse still, as reward for completing a 'learning activity'.
• The game demands that players interact with the rule system, by taking responsibility for actions in alternative contexts, and by seeing their impact on the outcomes of the game as a whole.
• Players should be able to infer from the feedback supplied how their actions have caused particular effects, and whether these effects are the ones that were desired; scoring systems provide immediate and constant 'assessment' of progress and accomplishment, although cannot as yet provide any improvement or further progress.
• Games to be used in classrooms should promote dialogue and the exchange of knowledge and opinions; they don't need to be multiplayer titles, but should have some cultural relevance to the participating players.
• Playing a game should be supported by the availability of additional resources such as walkthrough guides and hints and tips on the internet in order to promote wider understanding and knowledge about it.
• It should not be assumed that all players in a classroom have the same expertise; some may be recruited to 'tutor' others how to play, including pointing them towards relevant resources or sources of information.

2.5 Learning outcome

Although there are an opinion that say game lead kids into violent, but the effectiveness of educational game can't be denied (John & McFarlane, 2004). Many researchers have come out with the results that show the positive side of the gaming in education. Like Egenfeldt-Nielsen (2007) says that what games provide are superficial information is not enough to satisfy young people's educational needs, but enough for them to get a grasp on it and that in more overtly educational settings the role of teachers, peers and other supporting materials will be necessary to build on these superficial understandings. Van Eck (2006) also said that games are effective not because of what they are, but because of what they embody and what learners are doing as they play a game. In addition Egenfeldnt-Nielsen (2007) come with summerize tables that stated the effecitiveness of game in education. Shown here in Table 2.2 is a portion of recent work by the researcher.

Table 2.2: An Overview of the Studies into the Effectiveness of Educational Use of Computer Games

Author(s)	Year	Number	Genre	Subject	Results
Noble et al.	(2000)	101	Action	Drug education	Students taught by the computer games, found the experience motivating and wanted to play the computer game again.
Turnin et al.	(2000)	2000.	-	Eating habits	Computer games can teach students about eating habits and lead to significant change in everyday habits
Feng & Caleo	(2000)	47.	-	Spelling and math	Children that played computer games learned better than peers not using computer games, mostly in spelling

Author(s)	Year	Number	Genre	Subject	Results
Becker	(2001)	-	Action	Program.	The study testifies to the increased motivation in connection with computer games.
Lieberman	(2001)		Action	Asthma, diabetes,	A review of a number of research projects that support that you can learn from computer games.
Rosas et al.	(2003)	1274	Action	Reading and math	Computer games increase motivation, and there is a transfer of competence in technology from using the computer game.
McFarlane et al.	(2002)	-	-	All subjects	The study finds that teachers in general are skeptical towards the learning of content with computer games. However the learning of general skills was appreciated.
Gander .	(2002)	29	Strategy	Program.	The study finds that computer games are effective for especially teaching specific knowledge
Squire et al.	(2004)	96	Simulation	Physics	Students using the simulation game performed better compared to the control group.
Egenfeldt-Nielsen	(2005)	72	Strategy	History	Students initially learn the same in history when using video games but have better retention
Buch& Egenfeldt-Nielsen	(2006)	72	RPG	Social studies	60% students on self assessment found they learned more with Global Conflicts: Palestine than a traditional course. Almost 40% that it was around the same.

From all the literature, it can be conclude that game and learning always make the learning more interactive and the result of the learning is always positive. With the help of the technology, there is always a new element to manipulate in order to make the learning fun. Game can be helpful in several occasions including the history subject that always consider as bored subject.

CHAPTER 3

METHODOLOGY

This chapter reviewed the methodology used in order to achieve the objectives stated. It covered the explanation about the theory, tools and other resources used in the development process of the prototype.

3.1 Introduction

The Methodology used in the prototype development was Multimedia Design and Planning Pyramid (MUDPY) model. This model was created by Dr Nalin Sharda (2004). MUDPY is a model that supports systematic planning, design, and production of multimedia projects. This model is chosen because it can deliver a clear framework for the multimedia development team to communicate and develop a right multimedia prototype. Multimedia provides a wide range of symbols from the domains of text, audio, still and moving images for creating meaning (Encyclopedia Jrank, 2010). All the symbols and element were blended together to provide user with a meaningful page or system. This will make multimedia development more complex compared to other development.

MUDPY provides a better understanding by dividing the pyramid into five levels. To start planning a multimedia prototype researcher started from top to down. Meanwhile for the implementation, the researcher starts from bottom to top of the pyramid. A full understanding on every level will make the development easier and can create meaningful multimedia prototype. MUDPY was chosen because it is very suitable with the development of the multimedia prototype. It provides a manageable and systematic planning, also designing process for this study. This model also helps in collecting the requirement and sources needed in the development of the prototype. With this prototype, it sets a route to follow and reduces mistakes.

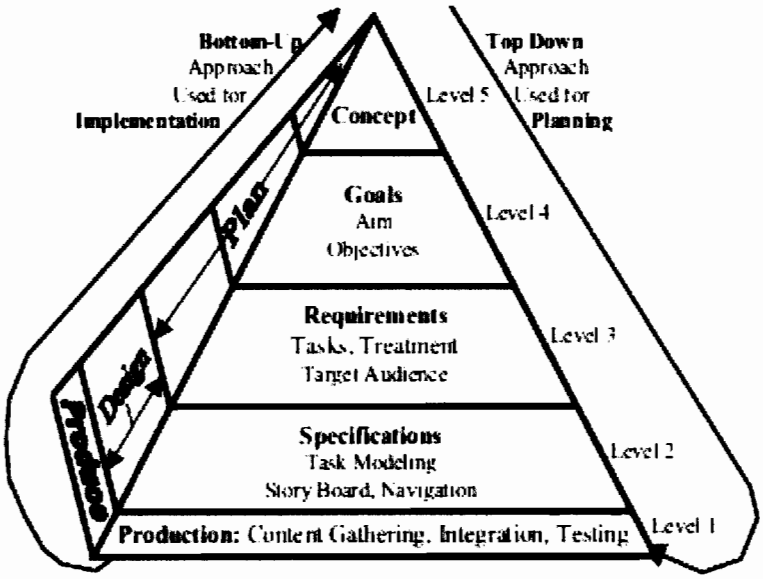

Figure 3.1 : MUDPY Model (Sharda, 2004)

3.2 Phase

3.2.1 Concept

On concept level, the statements gave an overview of the whole project in about two or three sentences. All decisions at the lower levels of the project must relate to the concept statement. The lower levels must do their best to fulfill the intent of the concept statement, and refer to the same, to resolve any implementation conflicts (Encyclopedia Jrank, 2010). In this concept level the statement stated the interest of the prototype. After the statement is identified the next level was based on that statement so that every aspect of the development is parallel with the interest.

The concept of this game is about the retention of British Army towards Japanese invasion in Malaya in the World War II. This game is an educational game. A direct question is asked along the game. Players have to answer the questions in order to get the game complete. This game adapted the First Person Perspective (FPS) genre. The score was displayed at the end of the game. The main target of this prototype is the form three student of Malaysia Secondary School.

3.2.2 Goals

Goals are generically for an achievement or accomplishment for which certain efforts are put. Objectives are specific targets within the general goal. Objectives are time-related to achieve a certain task (Diffen, 2010). Goals are specified as the aim and objectives. Aim should be a short statement that embodies the intention and the purpose of the project. Objectives should be presented as a list of outcomes, or deliverables that need to be attained (Encyclopedia Jrank, 2010).

Aim and goal of this game prototype is to make the history learning as fun as possible. Meanwhile the objectives of the game are listed as to:

- State the reasons for Japan's expanding power.
- Describe the arrival of the Japanese to Malaya.
- List the success factors of Japan dominate Malaya.

3.2.3 Requirements

A requirement is a statement that identifies a capability or function that is needed by a system in order to satisfy its customer's needs (Sage & Rouse, 2009). In this MUDPY model, Sharda (2004) describing the requirement into Task, Treatment and Target Audience.

Task is about the functional of the system, what system can do and capable of. This task must in line with the objectives that were stated before. On the other hand, treatment is about the usage of the multimedia element in the system, the system must provide a well balanced element between text, image, sound, animation and video. Meanwhile target audience is about the end user that going to use the system. The entire component must accomplish the user requirement.

In this research, the requirement is collected from the end user. The data was collected through an informal interview and observation. Informal interview was done in three selected schools around Perlis. The schools are SMK Dato' Ali Ahmad, SMK Putra and SMK Kuala Perlis. In every school, a total of three students and three teachers were interviewed. Random students were picked up through the classroom.

Meanwhile teachers that have five years and above of teaching experience was selected. The interview was based on general question guide interview. This interview was done with a guide question but the answer is open to the interviewee. The details of the interview questions as in Appendix 2.

Meanwhile the observation was done in three selected school in Perlis. The schools are SMK Dato' Ali Ahmad, SMK Putra and SMK Kuala Perlis. The type of observation that has been conducted was direct observation. In this observation, the researcher sat at the back of the class during the teaching and learning session. If needed, the researcher recorded the session and examines the recorded video at other time. There was a problem in this kind of observation; the respondent's disturbed by the researcher presence. Due to this, the observer unable to examine the natural setting of the class.

Another technique to obtain the requirement was brainstorming. Brainstorming is a process for developing creative solutions to problems (Clark, 1998). In this project, electronic brainstorming was used. E-brainstorming can use email, instant messenger and social network site as a tool. Data was collected from the history teacher across the nation. The questions were based on the history subject and Japanese Invasion on Malaya. This email had a time frame; it had to be answered in three days time. Data then derived from the reply email. The questions were open question, while the replied answers are open to the teachers. The question of e-brainstorming can be found in Appendix 3.

3.2.4 Specification

In the specification level Sharda (2004) located task modeling, story board and navigation. *S*pecifications often become the main form of documentation articulating the contractual obligations for all the players in a project. (Encyclopedia Jrank, 2010). Specification includes the prototype platform, hardware and software. In this level, researcher found the best platform to be used in this game, so that it will give the best performance.

Before story board, the character must be designed. For this prototype, characters were consisted of the army of Malay and army of Japanese. The costume was based on the year of 1940s. Another detail added to the character includes the rifle of the British army and Japanese army. This character was drawn into four view rotation model.

After the creation of the character, next step was the storyboard design. This storyboard was designed by using the template by Kennerly (2004). This story board included the shot of the scene and also the design environment. It also have image, description/interaction and time. The template and example can be found in Apendix 5.

A storyboard visually tells the story of an animation panel by panel, kind of like a comic book (ACCAD, 2002). A storyboard is prepared to create a good story line in the game. This story line also includes the history. To create a good storyboard researcher drew with a pencil first, and then this story board transferred to the computer through a scanner

Meanwhile navigation is the way of the pages is linked and interacts together. In this study the navigation was developed based on the user needs. The navigation is going to be as easy as it gets to comply with the level of the user from beginner to experts. When users first entered the game, a splash screen appeared and the title of the game is displayed. After that, main menu displayed. There are several menus which include new game, high scores, instruction, and exit. After the user selected the menu, game will interacted to the selected menu. The diagram of the navigation can be viewed in Appendix 6.

3.2.5 Production

In the production, the MUDPY pyramid contains several tasks. The tasks are content gathering, integration and testing. Production began with the content gathering.

The content gathering task started with the collecting of the specific information which includes features, technique, syllabus, topic, question, answer and raw data. These collections also included photo, audio, and video. The entire element then carefully examined to avoid any copyrights problems. The first place to start this task was the school library. Resources like paper and magazines also help in the gathering. Web is another resource for content gathering. URL links to the content were recorded in order to make sure it is legal and copyrighted. All the content was backup for safety reason.

The entire element was integrated together in the authoring software. In this study Game Maker version 8 was used as authoring tools. Game Maker allows users to

easily develop computer games without the requirement of prior computer programming experience, while allowing advanced users to create complex applications with its built-in scripting language (Wikipedia, 2010).

A coding also applied in the Game Maker. All the work was documented to make sure the prototype can be delivered in time. Adobe Photoshop was also used in editing and creating the image of the game prototype. Meanwhile, Sony Sound Forge was used in sound editing besides the open sources Audacity. For the video editing, Adobe Premiere Pro was used. Adobe Flash was used for animation.

After finish with the integration, the prototype was tested. Testing method that was used in this study was a block box testing. Using black box testing techniques, testers examine the high-level design and the customer requirements specification to plan the test cases to ensure the code does what it is intended to do (Williams, 2004). While Pressman (2010) say black box testing also called behavioral testing, focused on the functional requirement of the software. This black box testing enables researcher to test the input and the outcome of the input whether comply to the user needs or not. Black box testing was applied in the final stage of the protype and will find the errors in the function, interface, data, behavior and functional categories. This testing also stress only on the functionality part.

In this black box testing researcher appointed five person as an independent tester. They were selected from the school around Perlis. They were two students and three teachers. First, they were given a specific tester id. Then they were given a set of input that they have to perfom. After that they were given the expected outcome from

the input. If the actual outcome is parellel to the expected outcome, then the test is a success, but if the output fail then the tester has to examine the failure. The example of black box testing can be find in Appendix 7.

Perceived Usefulness and Ease of Use is been develop by Davis (1989), This test was used to measure the component of perceived usefulness and perceived ease of use of user acceptence. The questionnaire consists twelve question with one to seven scaling. The questionnaire is divided into two parts, first part is about perceived usefulness and second part is about perceived ease of use. To analyze the result from the PUEU test, researcher used Microsoft Excel 2007 software with descriptive analysis method.

CHAPTER 4

PROTOTYPE DEVELOPMENT AND FINDINGS

This chapter will discuss on the development process. The development phases was based on the MUDPY Model. This MUDPY Model has a three phases, phase one is about planning, meanwhile phase two is about design and the last part is about production. In every phase there are stages. Stages include concept, goal, requirement, specification and production. This chapter also discuss on the finding of the prototype.

4.1 Introduction

Development was an important part. This part determined wheter we can answer the problem statement that has been stated in the ealier stages. In this MUDPY Model there were several stages that we followed to develop the prototype. This research looked deeper into every stages. Every stages had a techniques and outcome as shown in Figure 4.1.

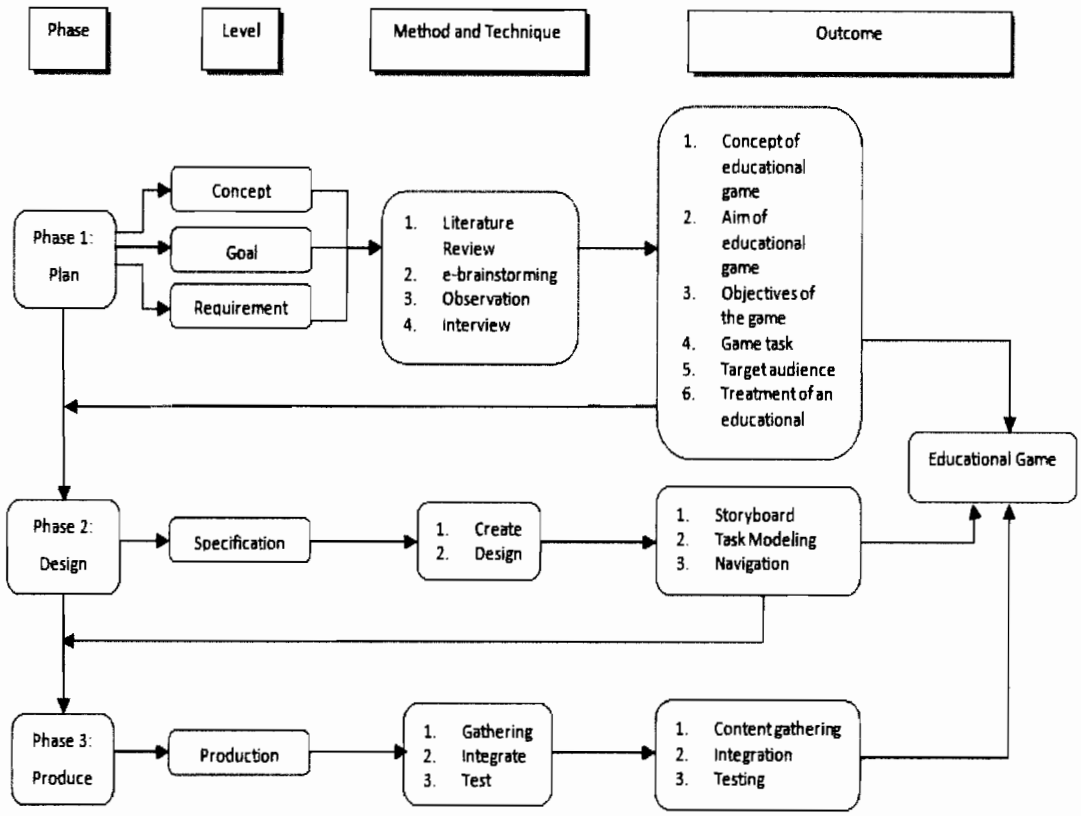

Figure 4.1 : The Outcomes Diagram for Educational Game Prototype

This diagram show us the outcome of every phase and level involved in the developing process. It has three main phase, phase one is about planing. Level involved in planning is concept, goal and requirement. From this level it has a method and technique. On phase one, method and technique involved are literature review, e-brainstorming, observation and interview. Result derived from phase one is shown in the outcome section as concept, aim, objectives, game task, target audience and treatment.

While phase two is about designing the prototype. In this phase it has only specification level. Method and technique involved in the specification level is create and design. The outcome of the design phase is storyboard, task modeling and navigation.

Meanwhile the last phase is a produce phase, in this phase it has a production level. To achieve this phase the technique and method suggested are gathering, intergrate and test. The outcome of the produce phase are content gathering, intergration and testing. The outcome of every phase is combine and produce an educational game prototype.

4.2 Phase 1: Plan

In this stage, concept, goal and requirement were gathered through several methods. There were literature reviews as in chapter two, e-brainstorming, observations and interviews. E-brainstorming is a set of questions related to the educational game that been circulated through email. Several history teacher was selected from all over the country. While observation was done in several school. Researcher sat at the back of the class to experience the history learning process that was happening in the school. After the class, researcher took several minutes to interview the teacher and the selected students. From the methods that have been used in planning phase, several outcomes were expected such as concept, objectives, aim, task, target audience and game treatment. From all the process, the findings can be concluded as below.

4.2.1 e-Brainstorming

From the e-brainstorming, researcher found that teacher had a problem with the students attention in the class. They found that students were not interested in history because they had to memorize the facts. Lack of teaching aids also contribute to the lack of students attention in the class. Teachers were lack good teaching aids to help them in the teaching and learning process. Teachers were willing to use teaching aids. They also stated that multimedia teaching aids would be better compared to the other teaching aids because multimedia can trigger students sense.

4.2.2 Interview

Based on the interview conducted in several school, the conclusion were made based on three parts as stated below.

Teachers

Teachers had a very big experience in history and teaching, but lack of students initiative to make early preparations was a major drawbacks to the teachers. Teachers want to give all the best to their students but the students were not ready to take action and this can make the knowledge to freeze. Teachers also want students to make their own learning aids like mind maps, but students did not take serious action to the task. From the interview, the teacher were willing to use a new teaching aid like educational game in class to help paced the knowledge transfer between students and teachers.

Students

From the interview, researcher found that the most attractive part of learning in school is the way of delivery in class. Students are ready to learn in a relax and condusive environment. They do not prefer teacher who always gave them pressure to study and create uneasy feeling in the classroom. Students also like to learn something that have impact on their lives. They want to learn history because they want to know about the events that happened in the past and related to them. From the interview, researcher also found that students spent an average 1.5 hours a day to play video game. Sports type of game is their first choice game they are played. Second most played game typed is a 3D FPS game.

Teaching Methods

Teaching methods that been used by teachers nowdays are considered by students to be out of dated. This is deu on the huge age range between teachers and students. Students seem to be more complex and technology based persons. Meanwhile average teachers age are around 35 years old. This means that the teacher are not very competent in terms of making use of new technology compared to their students. Students ready to learn in high paced but teachers are still in their slow lane. Students also like the teaching aids to be used by teachers to enhance the understanding of the lesson. With combination of the aids and teaching methods, the classroom can be a very condusive place to learn. Based on the interview, teacher want the teaching matrerial to be more actractive and can comply to the multiple intelligence that students have.

As a result, several items have been identified and documented for Malaysia History Educational Game.

4.3 Phase 2: Design

In this phase, according to Sharda (2004) there are specification levels. This level started with the creating and designing process. In this level researcher designs the character, storyboard, task modelling and navigations.

Specification is includes the prototype platform, hardware and software. The chosen platform in this prototype development was a windows based. Hardware that was suitable to run the prototype application is any computers that run Intel Pentium 4 processor. The memory should be 1MB and above and with free space of 500 kb on hard disk. The computer also should be equipped with the multimedia devices such as cd-rom and speaker. The other devices include monitor, keyboard and mouse.

4.3.1 Character Design

Character design was done through the sckething process. After that, the sketching was transfered into the computer through a scanner. Manipulation of the character was done through a graphic manipulation software. In this case, the researcher used Adobe Photoshop. Character was selected carefully to give an impact to the students when playing this game. The antagonist character was pictured as Japanese army, to give a true feeling about the invasion that happened in the past. The protogonist character was pictured as Malay army that were defending the Malaya in that particular time. This character was designed in four view. That is front, left, right, and back as shown in Figure 4.1 and 4.2.

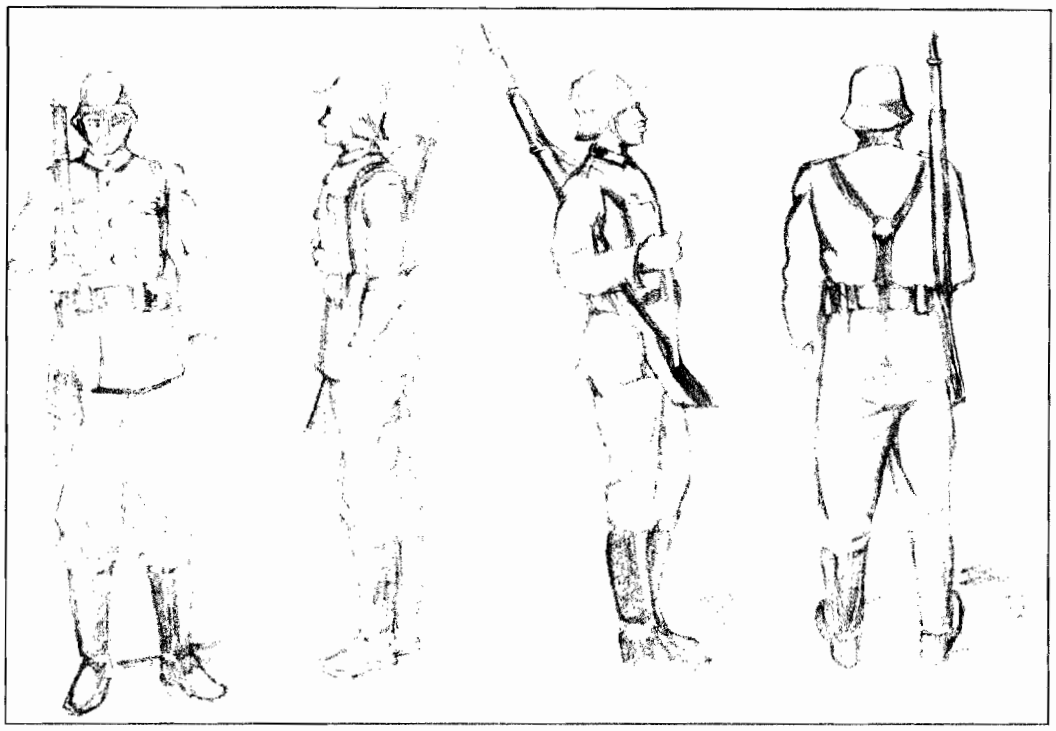

Figure 4.1 : Antagonist Character

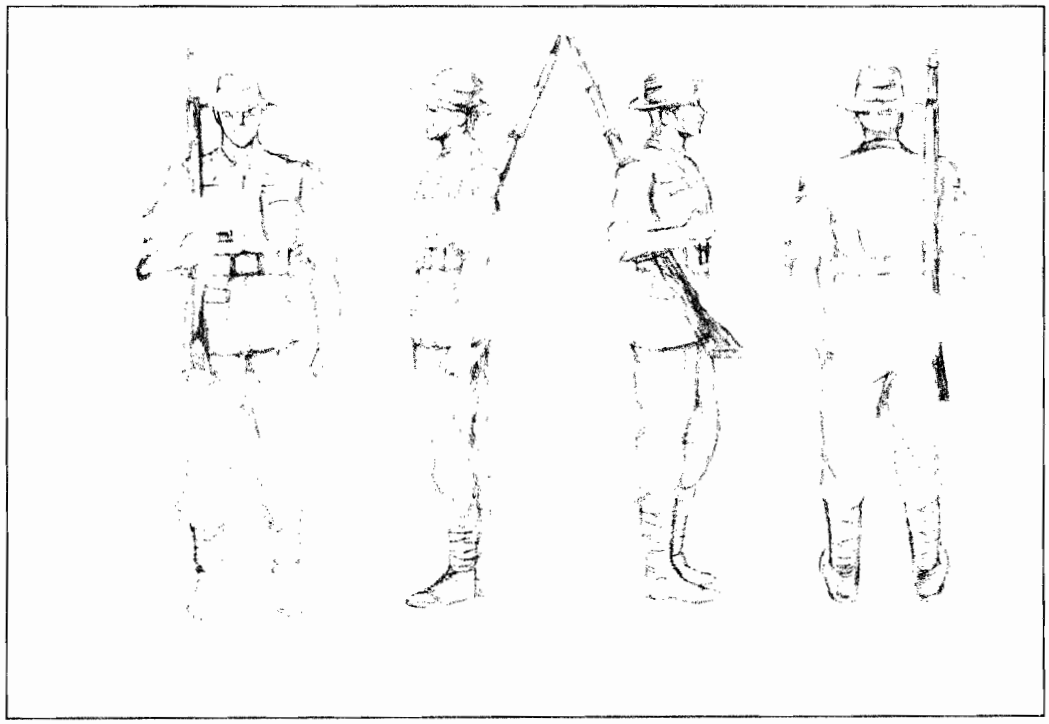

Figure 4.2 : Protogonist Character

4.3.2 Storyboard

After the character design, story board was created. This story board consisted the story line inside the game. The storyboard is a vital document in the game making process. The storyboard will determine the flow and elements of the prototype. This storyboard becomes a guide for the researcher. Figure 4.3 shows the welcome screen of the educational game. The interface was design with an instruction and as simple as it can to make sure students understand and can play the game well.

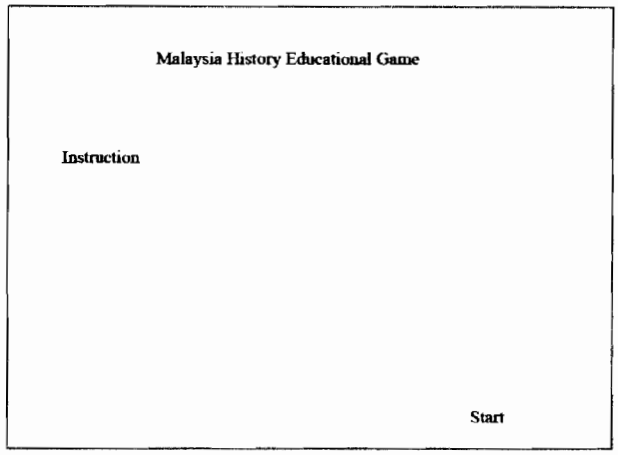

Figure 4.3: Welcome Screen

Meanwhile Figure 4.4 shows the time when player engage with the enemy. To enable the player to shot the enemy, the player must answer the question as show in Figure 4.5. Player needs to choose one correct answer. If the answer is right then the player will get a bonus mark. If not, the player has one more chance. If the answer is right on the second time a normal score is given but if the answer is wrong the score and health is deducted. Player had to engage ten enemies with ten questions to end the game.

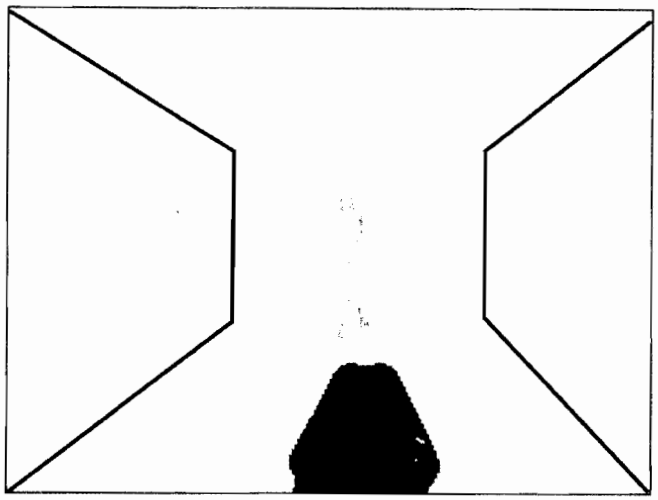

Figure 4.4: Player engage with enemy

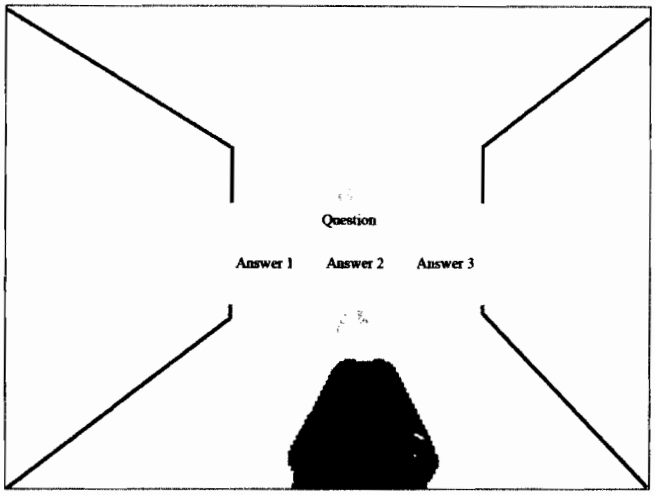

Figure 4.5: Pop up question

Score will be shown at the last stage after all the enemies were defeated. If the player get caught with the enemy, health of the player will be deducted until the health is zero. Then the game is over and the score is shown as Figure 4.6.

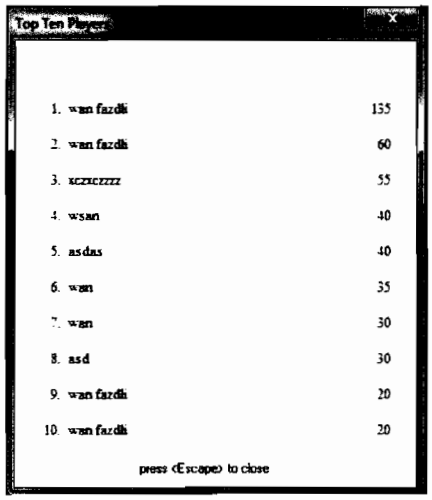

Figure 4.6: High Score

4.3.3 Task modelling

Task Modeling techniques provide the means to specify goal-oriented tasks (Paterno, 2002). Task Modeling gives a window to the required interface, this task model had an influence on the composition and the game navigation. This task model can be referring to Figure 4.7.

This task modeling shows the flow of the task on the game. Player has to complete the entire task in order to get to the next task. In this game prototype, the task is to answer the multiple choice questions. Players will get two chances to answer the questions. After answering the question, players can continue the game.

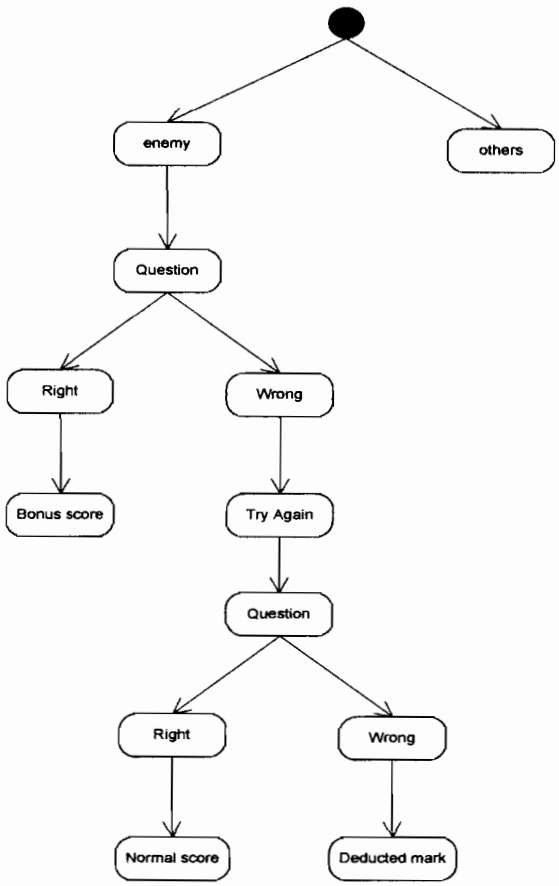

Figure 4.7: Task Modeling

4.3.4 Game Navigation

Navigation is how the pages and interactive in the game is linked together. There are several ways of navigation like linear, circular, network and tree structure. For this game prototype, linear navigation was used where there were no any other level. But player can end the game anytime by hitting the 'esc' key. No high score will be shown. To understand more on this game navigation there is an overview of the navigation shown in Figure 4.8.

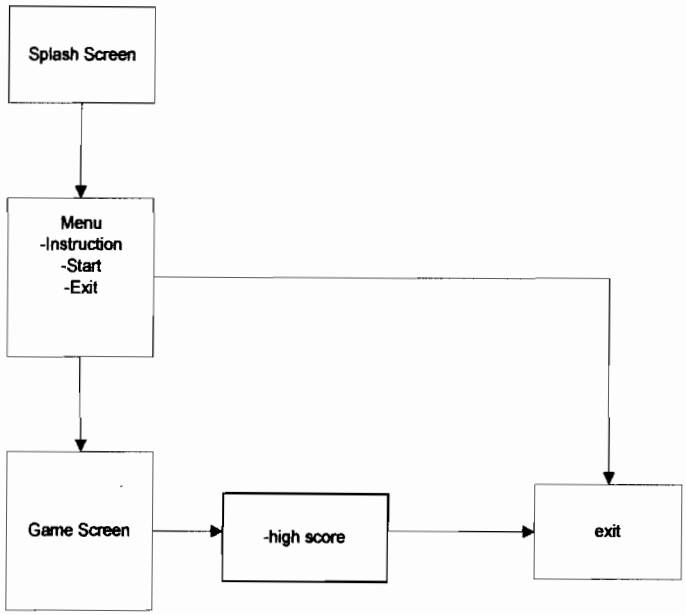

Figure 4.8 : Game Prototype Navigation

4.4 Phase 3: Produce

On this stage all of the components is intergrated together to produce a game according to the objectives. Components like graphic, audio, animation, video and text are selected to ensure the production will run smoothly.

4.4.1 Content Gathering

The content of the game is gathered through various ways. Most of the content are gathered through the Internet. Then all the content is intergrated together through a Game Maker 8.0 software. Before all the content is inserted into the game maker software, some of them have to be edited, so researcher used Adobe Photoshop to edit several pictures.

After all the content were ready and can be used, the researcher intergrated all of the items into the sprites and make it as object in the Game Maker 8.0 software. All the

content were blended well to perform an useable prototype to make sure the audience get the objective and perform the task.

4.4.2 Intergration

Sprites is the main part of the Game Maker 8.0, where all the animations and the characters are placed. Sprites is created like an animation to make sure all the movement of the character is accordingly. Table 4.2 list all the sprites used in the game prototype.

Table 4.2 : Game Prototype Sprites

No	Name	Type
1.	spr_barrel_exp	sprite
2.	spr_door_hor	sprite
3.	spr_monster	sprite
4.	spr_monster_dead	sprite
5.	spr_plant1	sprite
6.	spr_plant2	sprite
7.	spr_player	sprite
8.	spr_wall1_hor	sprite
9.	spr_wall1_vert	sprite
10.	spr_wall2_hor	sprite
11.	spr_wall2_vert	sprite
12.	spr_wall3_hor	sprite
13.	spr_wall3_vert	sprite
14.	spr_wall4_hor	sprite
15.	spr_wall4_vert	sprite
16.	spr_wall5_hor	sprite
17.	spr_wall5_vert	sprite
18.	spr_wall6_hor	sprite
19.	spr_wall6_vert	sprite
20.	sprite_shotgun	sprite
21.	tex_barrel	sprite
22.	tex_barrel_exp	sprite
23.	tex_monster	sprite
24.	tex_monster_dead1	sprite
25.	tex_monster_dead	sprite
26.	tex_plant1	sprite
27.	tex_plant2	sprite

After that this sprites was transformed into the object which the researcher can manipulate the ways and condition. Some coding is needed to make sure the object is reacted to the command given by player. Table 4.3 list all the object used in the game prototype.

Table 4.3 : Game Prototype object

No	Name	Type
1.	obj_barrel	object
2.	obj_barrel_exp	object
3.	obj_door	object
4.	obj_door_sliding	object
5.	obj_endGame	object
6.	obj_gun	object
7.	obj_instruction	object
8.	obj_monster10	object
9.	obj_monster11	object
10.	obj_monster1	object
11.	obj_monster1_dead	object
12.	obj_monster2	object
13.	obj_monster3	object
14.	obj_monster4	object
15.	obj_monster5	object
16.	obj_monster6	object
17.	obj_monster7	object
18.	obj_monster8	object
19.	obj_monster9	object
20.	obj_monster_basic	object
21.	obj_plant1	object
22.	obj_plant2	object
23.	obj_plant_basic	object
24.	obj_player	object
25.	obj_wall1_hor	object
26.	obj_wall1_vert	object
27.	obj_wall2_hor	object
28.	obj_wall2_vert	object
29.	obj_wall3_hor	object
30.	obj_wall3_vert	object
31.	obj_wall4_hor	object
32.	obj_wall4_vert	object
33.	obj_wall5_hor	object
34.	obj_wall5_vert	object
35.	obj_wall6_hor	object
36.	obj_wall6_vert	object
37.	obj_wall_basic	object

Besides the sprites and objects, there were also background and wall to make the game border. This background and wall is the environment choosen by the developers to make sure the condition of the game was related to the story line. In this game researcher choose to use the jungle wall and background as the game was based on the war in the jungle.

A good game also must have a good sound, sound is added and intergrated together into the Game Maker software. This sound is edited in the Audacity Software and also Sony Sound Forge. List of the sound, script and background can be viewed in Table 4.4

In the Game Maker software there is also a room. Room is the place where all the resources is intergrated togheter. Before the room can be used , first we must drew a border through a wall and a background. The room is viewed from the top to make sure the developer knows where is the placed to put the player, object, obstruction and the enemies. Figure 4.9 is the example of the room in Game Maker.

Table 4.4 : Game Prototype Scripts, Sounds and Backgrounds.

No	Name	Type
1.	script0	script
2.	script1	script
3.	snd_explosion	sound
4.	snd_ow	sound
5.	snd_shot	sound
6.	texture_ceiling	background
7.	texture_door	background
8.	texture_floor	background
9.	texture_wall1	background
10.	texture_wall2	background
11.	texture_wall3	background
12.	texture_wall4	background
13.	texture_wall5	background
14.	texture_wall6	background

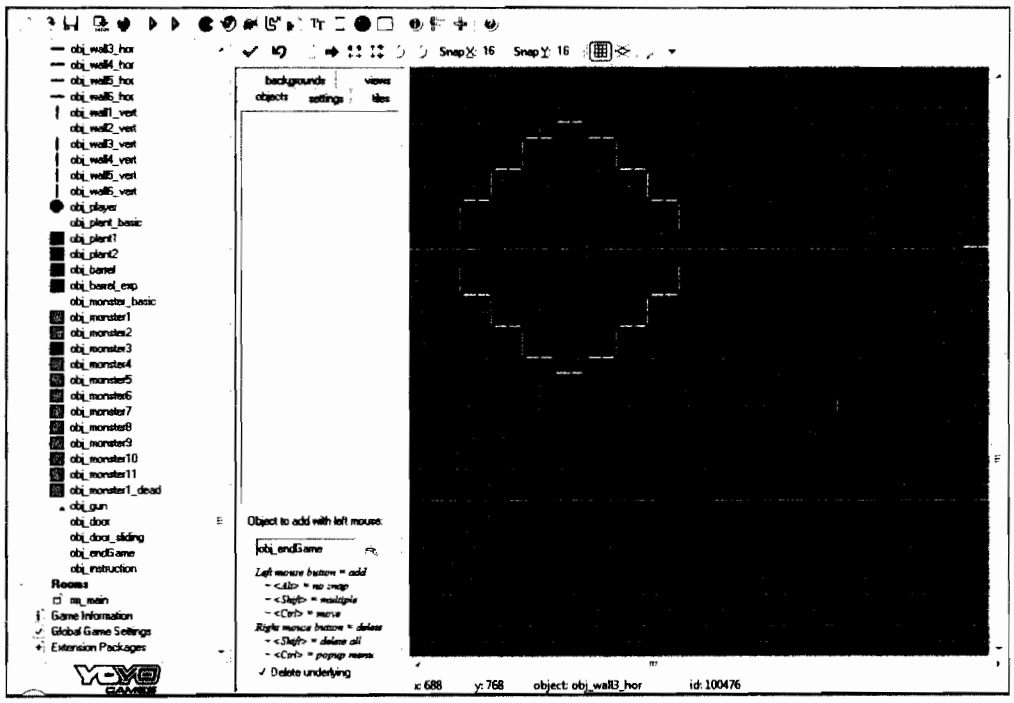

Figure 4.9: Room in Game Maker.

After all the process of content gathering and intergration, researcher had come out with the game prototype. The prototype is tested onto the user for the PUEU test. The screen shot of the game interface can be viewed in Figure 4.10.

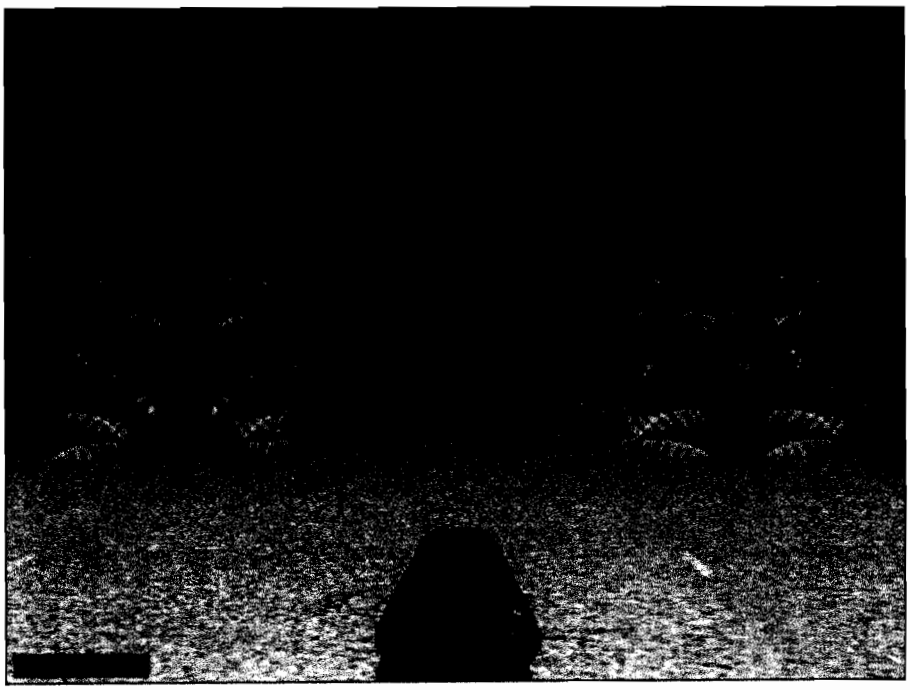

Figure 4.10: Screen Shot of the Game Prototype.

4.4.3 Testing

Test has been done to make sure the developed prototype comply to the user need and can perform the task accordingly. For this prototype, black box testing has been used for the functional system testing. Meanwhile for the usefulness of the system the Perceived Usefulness and Ease of Use (PUEU) test has been implemented.

Black box testing has been used during the development for each phases. This test rapidly conducted to make sure the prototype is in the right path. After every test researcher make an adjustment to meet the requirement of the prototype. The information for black box testing can be referred in Apendix 7.

PUEU test took place when the prototype has been developed. Sample from twenty student were selected from both genders and they were asked to answer the questionnaire after playing the game prototype. The question for the questionnaire as in the Appendix 8. Result of the test will determine whether the prototype that had been developed fulfil the requirement. PUEU consist of twelve question with seven scale from unlikely to likely. Users were asked to answer the question after playing the game.

To analyze the PUEU test, researcher choosed to use the descriptive analysis by using Microsoft Excel software. With this descriptive analysis researcher can look into the mean, median, mode and standard error.

From the analysis result, researcher devides the questions into two part. First is about the perceived of usefulness. The questions that contributed to the perceived

usefulness are from question one to six. Table 4.5 shows us the the mean, median, mode, and standard error derived from the questionnaire.

Table 4.5: Descriptive Analysis of Perceived Usefulness

	Question 1	*Question 2*	*Question 3*	*Question 4*	*Question 5*	*Question 6*
Mean	6.25	5.9	5.31	5.75	5.8	6.31
Standard Error	0.25	0.26	0.41	0.28	0.32	0.26
Median	7	6	6	6	6.5	7
Mode	7	7	6	7	7	7

Second part of PUEU is on the ease of use. Questions involved in this part are from question seven to twelve. Table 4.6 shows us the the mean, median, mode, and standard error related to the test.

Table 4.6: Descriptive Analysis of Ease of Use

	Question 7	*Question 8*	*Question 9*	*Question 10*	*Question 11*	*Question 12*
Mean	5.15	4.57	5.85	5.63	5.2	5.89
Standard Error	0.43	0.53	0.34	0.32	0.40	0.43
Median	5	6	6	6	6	7
Mode	7	7	7	7	6	7

Meanwhile Figure 4.11 show us the overall mean from question one to twelve. Mean is the most comman figure used in the analysis. Mean is the average of the selected item. From the questionnaire researcher can conclude that the average result from the questionnaire is around 4.5 to 6.3.

The highest result was in the question six which involved the agreeness about the system is useful in their job. While the lowest mean was on the question number

seven with the question about learning to operate the system. This is because user is not very familiar with the game environment and new to the system.

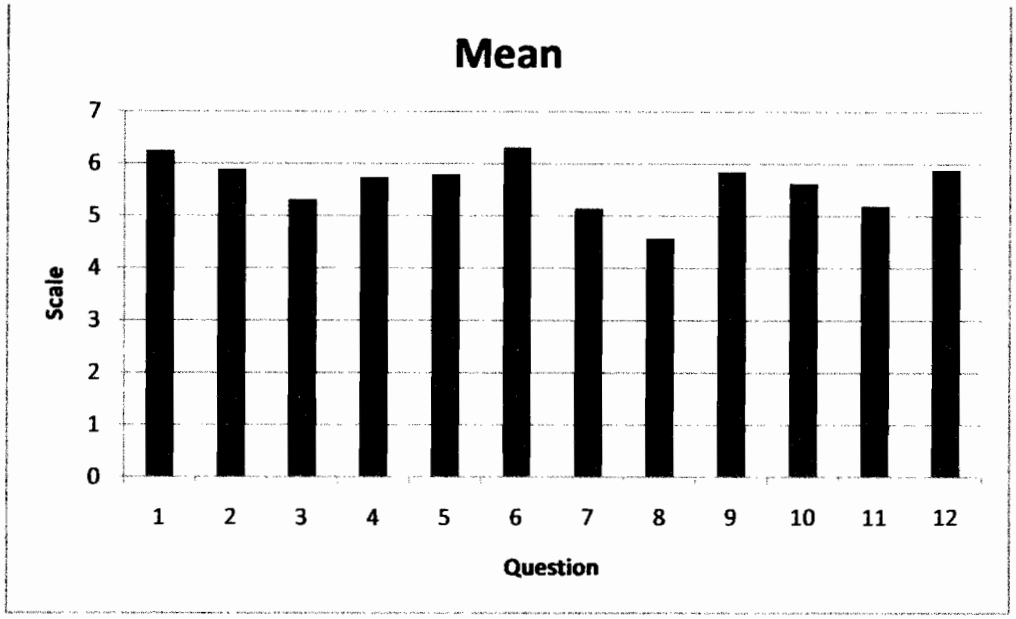

Figure 4.11: Mean of PUEU test

Median is the score that is found in the middle of the set values. If the set value is even then the number will be interpolate. Figure 4.12 show us the median from the PUEU test that been done in the research. The median of every question is around five to seven. The lowest median is on question seven where the question is about the operating of the system. The highest median is on question one, six and twelve.

Question one and six is about the usefulness of the system in the history subject revision. While question twelve is about the ease of use in the game system. From this median researcher can conclude that this game system will help paced the history revision and the system was easy to use in the process.

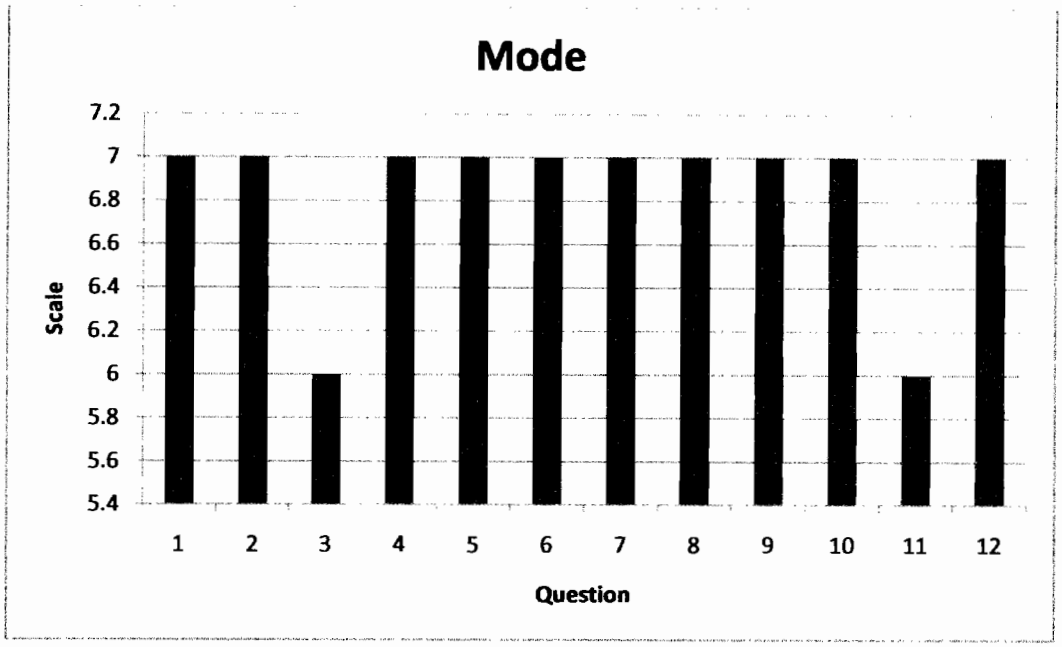

Figure 4.13 : Mode of the PUEU test

Standard error is the range between the highest set of value and the lowest set of value. This standard error also has a devision that derived from the mean and the set of score value. The lowest standard error value is the better result. Figure 4.14 show us the standard error in the PUEU test that been conducted by researcher.

From the figure it can be said that the highest standard error is on question eight that have 0.53 calculation. Meanwhile the lowest standard error is on question one with 0.25 calculation. Question eight is about the user find the system easy to do what they want to do. The reason behind this event maybe because the prototype system is not really work well and the user do not read the instruction ealier in the game.

Meanwhile question one is about the user ability to accomplish their task more quickly with this system. This make researcher believes that the game system is helping the student to revise the subject more quickly.

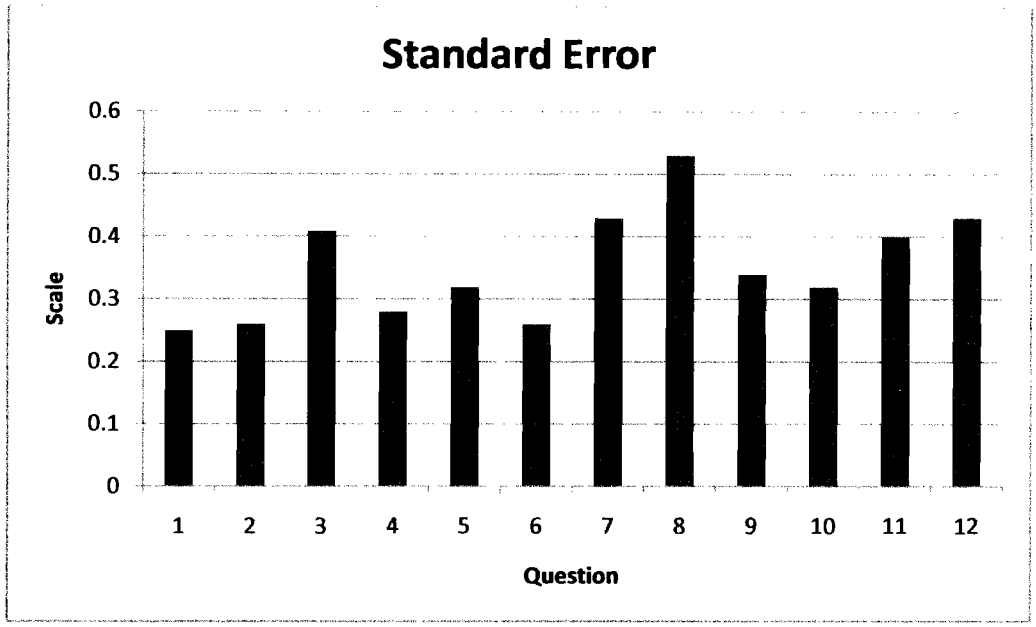

Figure 4.14: The Standard Error on PUEU Test

The PUEU test also has a list questions that have to be filled by the user. The question is about the most negative and positive aspect of the game. From the feedback of the user researcher found the the most negative aspect is the violent and use of gun in the game is not really appreciate by the user.

While the most positive aspect is about the effectiveness of the game system to help the user in history subject revision. Users says that they can revise the subject more quickly and more fun compare to the old system. With this feedback, the researcher is confident that this research can make a contribution in the revision of history subject.

CHAPTER 5

CONCLUSION

5.1 Introduction

This chapter will discuss the final findings and conclude the findings based on the research that been done by the researcher. Then the result will determined whether the objectives of the study is achieve or not.

5.2 Conslusion

This prototype is developed to achieve four main objectives. The first objective is to identify the requirement for an educational game. This objectives can be answered by several methods and techniques that have been done by researcher. The method are literature review, e-brainstorming, observation and interview. All this method can be found in chapter one and chapter two. The conclusion diagram as in Figure

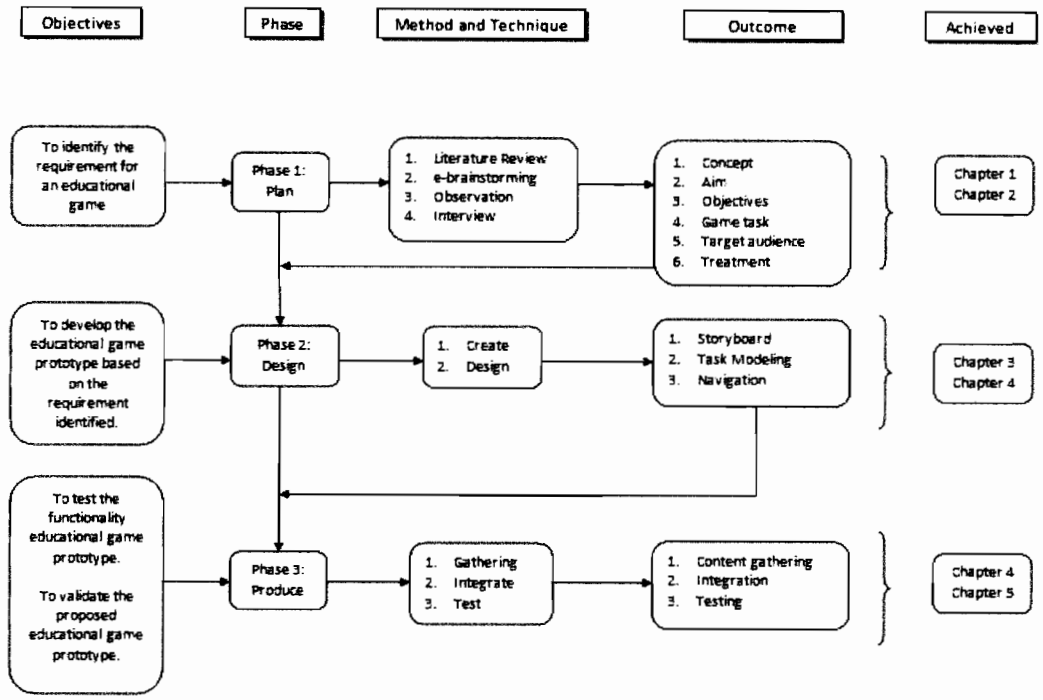

Figure 4.15: Conclusion

Meanwhile to achieve the second objective researcher has to answer the question of how to develop the educational game. In order to answer that, researcher used amethod that had been introduced by Sharda (2004). This methodology is called MUDPY model. This model consists of phases with several levels. All the method can be found in chapter three and chapter four. This two chapters also answered the second objective of the study.

The third objective of the study is to test the functionality of an educational game prototype. This objective is answered by the researcher in the fourth chapter. In this chapter researcher used the black box testing method to answer the objectives question. Black box testing was used to test the functionality of the educational game. The testing shows us that the educational game prototype is ready to be used.

For the last objectives of the study researcher try to answer on how to validate the educational game prototype. From this objectives question researcher test the prototype by using PUEU test. This test will determine the perceived usefulness and ease of use. After the test, findings shows that this educational game fullfills the user requirement and easy to be used by the user. This answer can be found in chapter four.

5.3 Contribution of the study

This study also give impact to several party who involved in the developing an educational game. From this study researcher found that it gave impact mostly to the the developer and the ministry of education. It is expected that this study will achieve its objective that is to develop an educational game prototype. Hopefully the prototype can promote the use of ICT in learning and to make learning more fun. Besides that students' interest in history will increased with the new study environment. Students can also feel the excitement and pleasure playing the game. After all, the nation building can be a great value to the Malaysia through an understanding of our own history. The nation target to create a k-worker can be paced with the help of a valuable education.

5.3.1 To System Developer

This study will be a guidelines for other developers to make a research and to develop an educational game in future. The requirement can also be a refering model to the developers. They also know the specific area of the user interest in the game prototype development.

ii. More complex of game design and game character to give advantures and challenge to the users.

iii. Collaboration from various field of education to make educational game more interesting.

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Appendix 1: Question

1. Kejayaan Jepun menakluki negara kita dalam masa yang singkat telah memeranjatkan banyak pihak termasuk Amerika Syarikat. Apakah kunci kejayaan tentera Jepun menakluki Tanah Melayu dalam masa yang singkat?
   A Strategi peperangan
   B Sistem pemerintahan
   C Peranan kerajaan Jepun
   D Kelengkapan tentera Jepun

2. Serangan Jepun ke atas Singapura telah ditentang hebat oleh Rejimen Askar Melayu.
   Siapakah pemimpin pasukan ini?
   A Leftenan Adnan
   B Dato' Onn Jaafar
   C Ibrahim Haji Yaacob
   D Leftenan Yeop Mahidin

3. Kejatuhan Tanah Melayu ke tangan tentera Jepun memberikan kesan penting kepada penduduk Tanah Melayu. Apakah iktibar terpenting peristiwa ini?
   A Perlu mempunyai bilangan tentera yang ramai dan bersemangat
   B Tidak berharap kepada kuasa asing untuk mempertahankan tanah air
   C Kukuhkan pertahanan negara pada setiap masa dan sentiasa bersedia
   D Mempunyai kelengkapan perang yang cukup untuk menghadapi musuh

4. Mengapa Jepun mula memperkenalkan dasar yang lebih bermanfaat kepada penduduk Tanah Melayu apabila mendapati bahawa mereka akan kalah?
   A Ingin berbuat baik kepada penduduk tempatan
   B Ingin membalas jasa orang Melayu yang menyokongnya
   C Supaya penduduk tempatan mampu berkerajaan sendiri
   D Supaya tidak menyokong British apabila British kembali

5. Kenapa tentera British tidak bersungguh-sungguh serta tidak bersedia menghadapi serangan Jepun ke atas Tanah Melayu?
   A Tentera British tidak terlatih
   B Bilangan tentera British yang kurang
   C Lebih menumpukan peperangan di Eropah
   D Tumpuan pertahanan British di Singapura

6. Jepun telah mengeluarkan kad catuan bagi setiap keluarga yang bertujuan merekodkan tarikh, jenis dan kuantiti barang keperluan yang diperoleh. Langkah ini adalah sebahagian daripada bentuk ekonomi
   A Kawalan
   B Terancang
   C Kapitalisme
   D Pasaran bebas

7. Jeneral Seishiro Itagaki telah menyerah diri kepada Tentera Bersekutu di Singapura pada 15 Ogos 1945
   Apakah kesan terpenting peristiwa di atas kepada Tanah Melayu?
   A Semangat kebangsaan menyemarak
   B Parti politik yang radikal ditubuhkan
   C Penduduk Tanah Melayu bersatu padu
   D Penduduk Tanah Melayu menghargai Jepun

8. Jepun telah melaksanakan dasar penjepunan semasa menjajah Tanah Melayu.
   Apakah tujuan utama dasar ini?
   A Meningkatkan taraf hidup penduduk
   B Mewujudkan perpaduan di kalangan masyarakat
   C Menjamin sokongan penduduk Tanah Melayu
   D Mewujudkan kesetiaan kepada Maharaja Jepun

9. Pasukan polis rahsia yang bertindak ganas dan kejam terhadap mereka yang disyaki membenci Jepun
   Maklumat di atas berkaitan dengan
   A Kaisha
   B Kunrenjo
   C Kimigayo
   D Kampetai

10. Jepun telah menyerahkan Negeri-negeri Melayu Utara kepada Siam pada tahun 1943.

    Kenapa Jepun mengambil tindakan ini?

    A Membalas jasa kerajaan Siam
    B Untuk mendapat sokongan raja Siam
    C Mematuhi salah satu syarat Perjanjian Burney
    D Siam membekalkan beras kepada tentera Jepun

Appendix 2: Interview Question

Teacher

1. Name and position.
2. Years of experience in teaching.
3. What subjects are you involved?
4. Years of experience in subject.
5. What is the student problem in history learning?
6. Does student get clear description about historical events?
7. Does student have problem in memorize historic date?
8. Do you need any teaching aids?
9. What kind of teaching aids would you like?
10. Are you agreed with educational game? If agreed please give suggestion.
11. What features needed in the game?
12. How the system can fits the history learning?
13. Would you use educational game in the class?
14. What the others features would you like in the game

Student

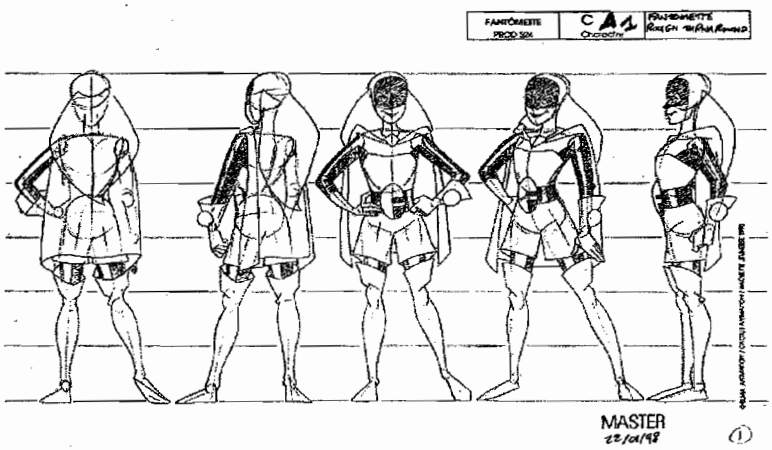
1. Name and age?
2. The most preferred subject in school?
3. What make learning fun?
4. Do you like the ways of learning in school?
5. Do you play video games?
6. What kind of game do you play?
7. How many hours a day you play games?
8. Do you feel that history subject is interesting?
9. What make history fun to learn?
10. Do you want to play game for learning history?
11. What features would you like in the history games?
12. What additional features would you like in the game?

Appendix 3: e-brainstorming question

Teachers

1. Name and position.
2. Years of experience in teaching.
3. Years of experience in subject.
4. What is the student problem in history learning?
5. What kind of teaching aids would you like?
6. Are you agreed with educational game? If agreed please give suggestion.
7. What features needed in the game?
8. What the others features would you like in the game

Appendix 4: Character design



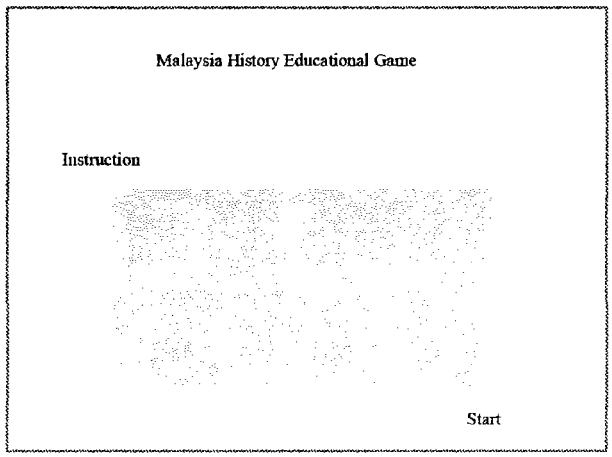
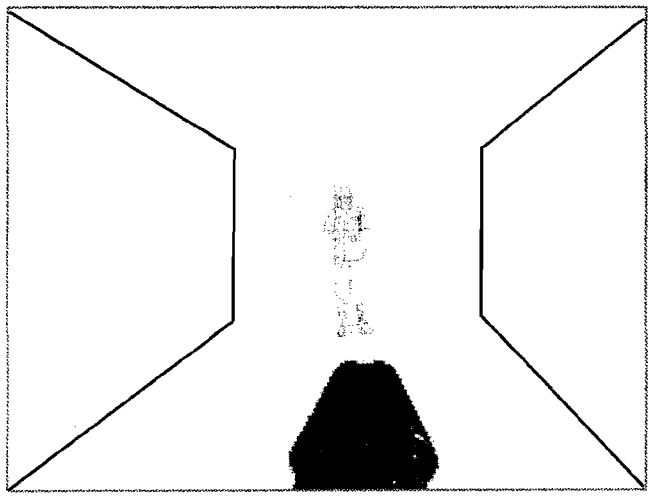
Japanese Army

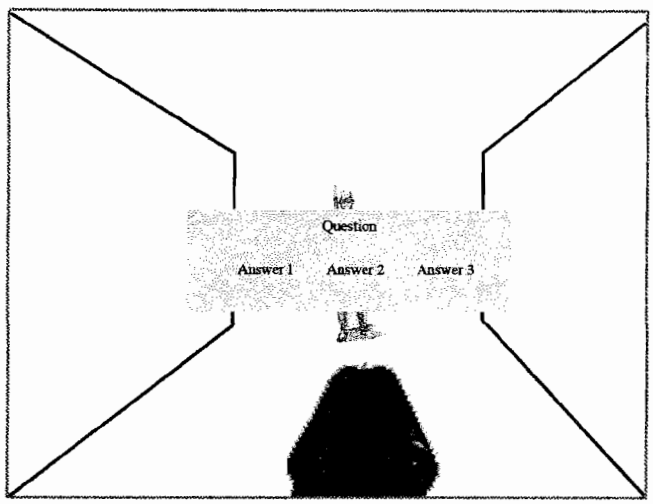
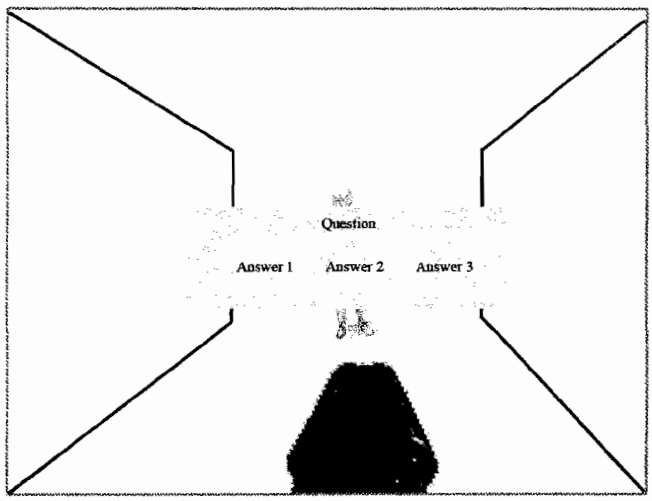
British Army

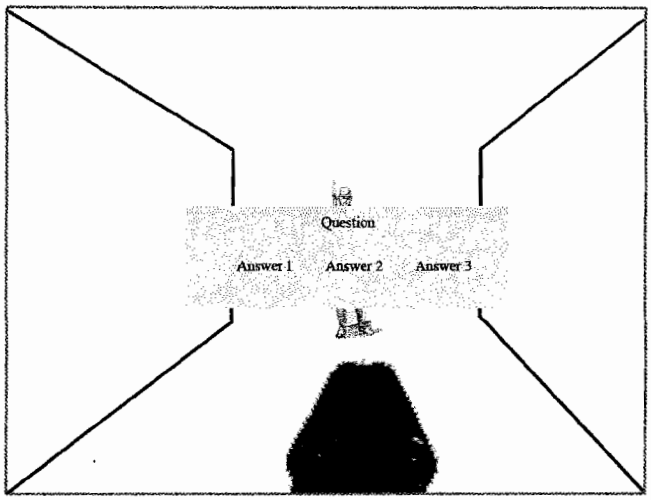
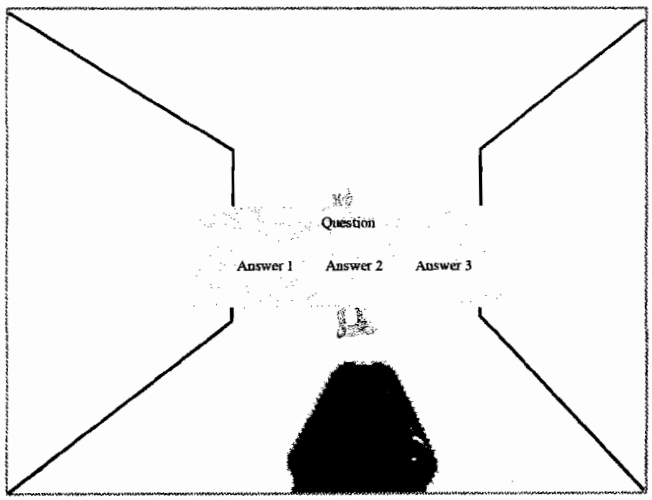
Weapon of British Army in 1940s

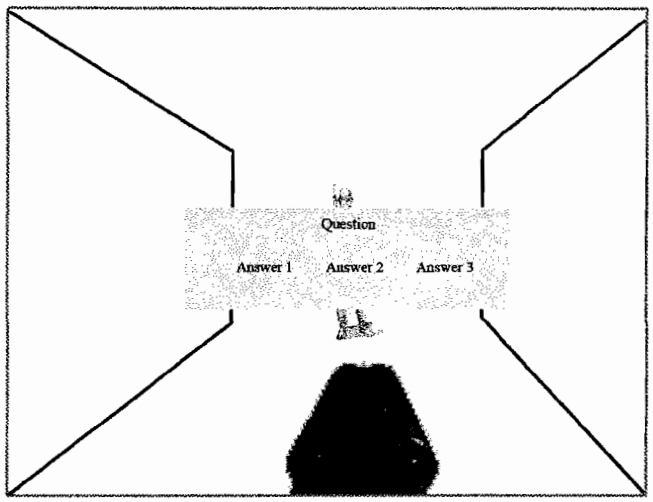
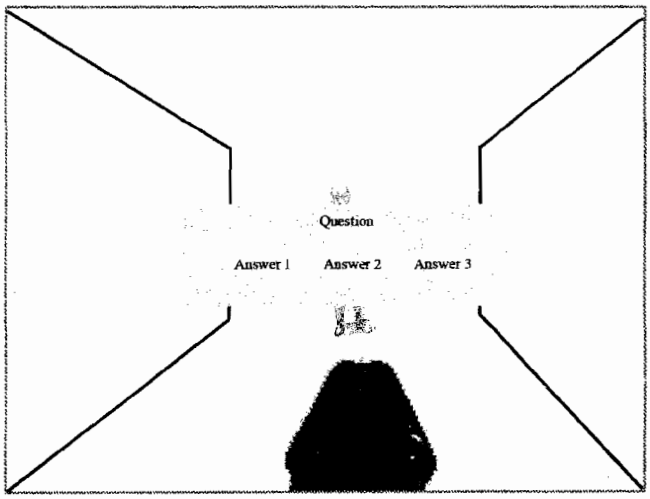
Appendix 5: Storyboard example

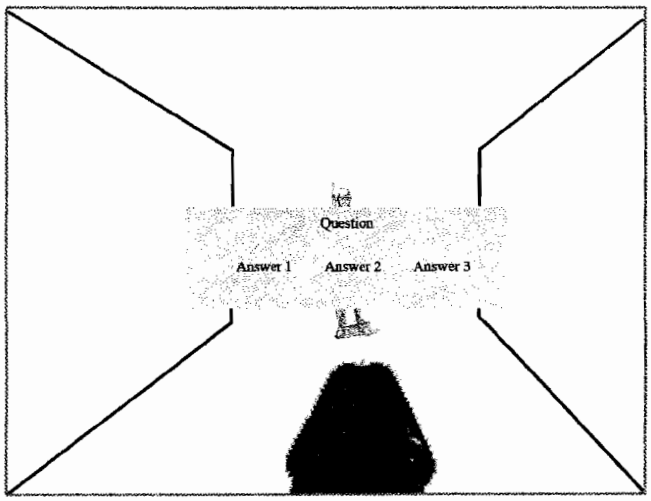
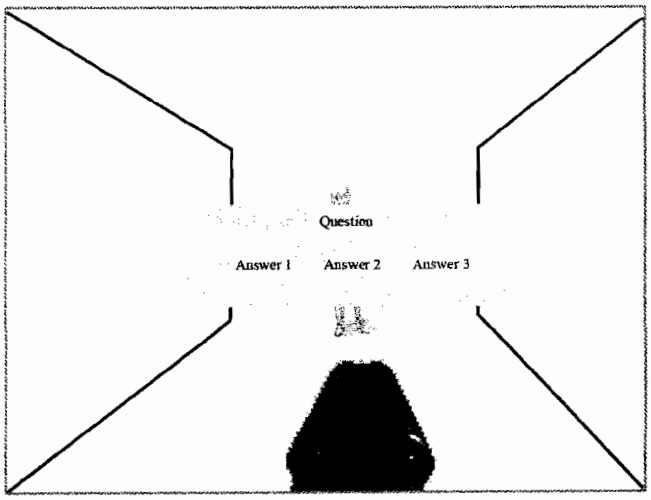
Game	Sequence	Scene	Page /
	Board ID	Artist	Date

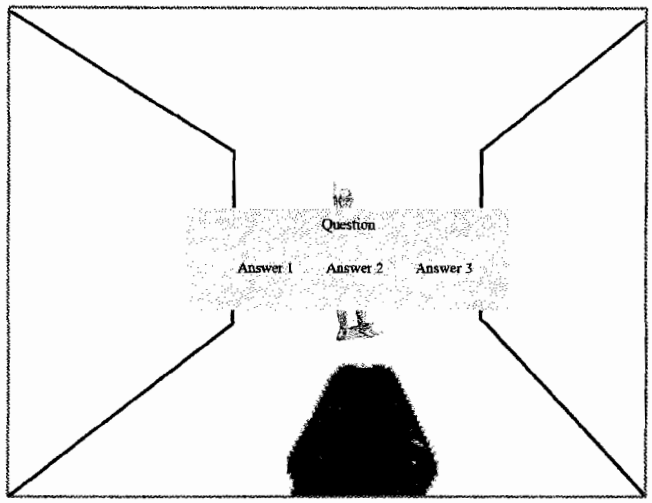
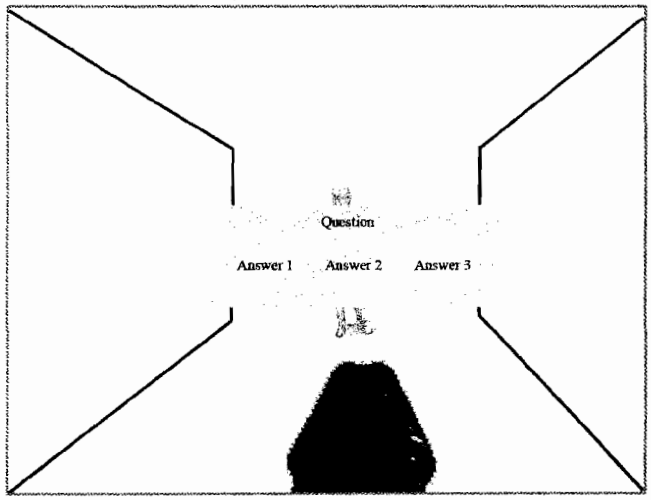
Shot	Image	Description / Interaction	Time
LS		Main menu of the game sreem Option to start the game Instruction on how to play game.	
LS		Show the entire body and very short distance above and below Enemy is approaching fast.	

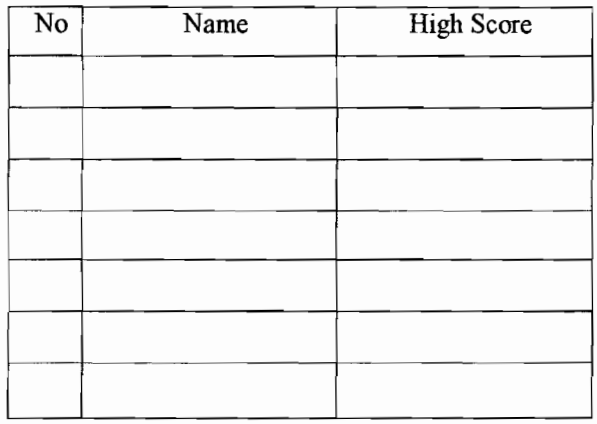
Shot	Image	Description / Interaction	Time
LS		Show the entire body and very short distance above and below Pop up question 1	
LS		Show the entire body and very short distance above and below Pop up question 2	

Shot	Image	Description Interaction	Time
LS		Show the entire body and very short distance above and below Pop up question 3	
LS		Show the entire body and very short distance above and below Pop up question 4	

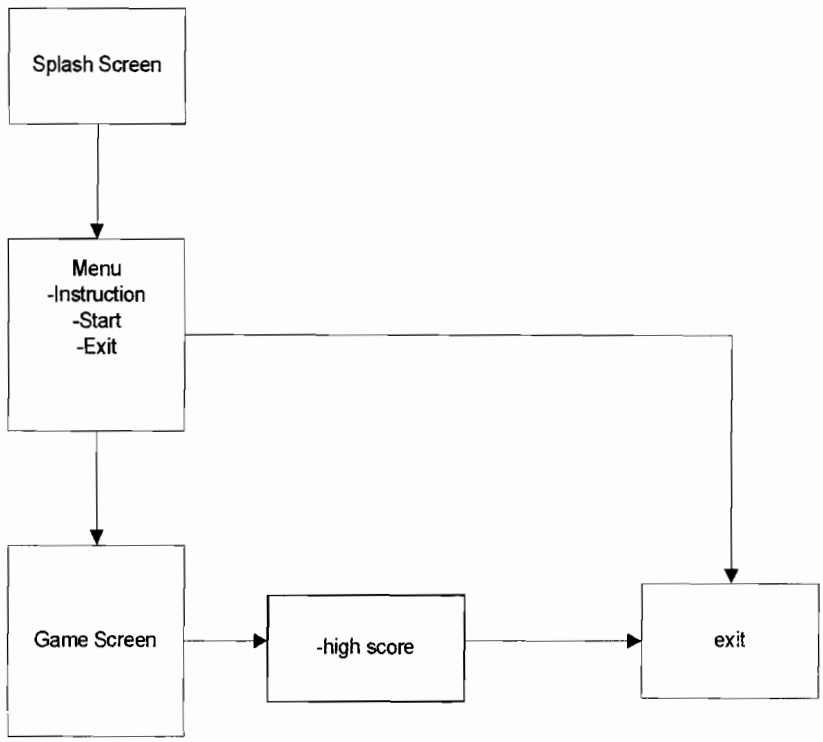
Shot	Image	Description - Interaction	Time
LS		Show the entire body and very short distance above and below Pop up question 5	
LS		Show the entire body and very short distance above and below Pop up question 6	

Shot	Image	Description / Interaction	Time
LS		Show the entire body and very short distance above and below Pop up question 7	
LS		Show the entire body and very short distance above and below Pop up question 8	

Shot	Image	Description · Interaction	Time
LS		Show the entire body and very short distance above and below Pop up question 9	
LS		Show the entire body and very short distance above and below Pop up question 10	

Shot	Image	Description / Interaction	Time
LS		Show the high score	

Appendix 6: Game Navigation



Appendix 7: Black Box testing template

Test ID	Description	Expected Result	Actual Result
1	Game is loaded and the game is on. Player in the start position. Health = 100 Score = 0	Player is located at the start point	
2	Player engage with enemy. Player shot the enemy. Health = 100 Score = 0	Question will pop up	
3	Pre condition : Test 2 is done Player choose a correct answer. Health = 100 Score = 20	Enemy will die	
4	Pre condition : Test 2 is done Player choose wrong answer Health = 100 Score = 0	Try again to answer the question	
5	Pre condition : Test 4 is done Player choose right answer Health = 100 Score = 10	Enemy will die	
6	Pre condition : Test 4 is done Player choose wrong answer Health = 95 Score = -5	Enemy will die	
7	Player kill all the enemy	Game is over High score is shown	
8	Player engage with door Player shoot door	Door will open	
9	Player engage with barrel Player shoot barrel	Barrel will explode	

Apendix 8 : PUEU Questionnaire

Perceived Usefulness and Ease of Use

Based on: Davis, F. D. (1989) *Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology.* **MIS Quarterly**, 13:3, 319-340.

Please rate the usefulness and ease of use of the system.

- Try to respond to all the items.
- For items that are not applicable, use: **NA**

System: Malaysia History Educational Games

PERCEIVED USEFULNESS		**1**	**2**	**3**	**4**	**5**	**6**	**7**		**NA**
1. Using the system in my job would enable me to accomplish tasks more quickly	unlikely	○	○	○	○	○	○	○	likely	○
2. Using the system would improve my job performance	unlikely	○	○	○	○	○	○	○	likely	○
3. Using the system in my job would increase my productity	unlikely	○	○	○	○	○	○	○	likely	○
4. Using the system would enhance my effectiveness on the job	unlikely	○	○	○	○	○	○	○	likely	○
5. Using the system would make it easier to do my job	unlikely	○	○	○	○	○	○	○	likely	○
6. I would find the system useful in my job	unlikely	○	○	○	○	○	○	○	likely	○

PERCEIVED EASE OF USE		1	2	3	4	5	6	7		NA
7. Learning to operate the system would be easy for me	unlikely	○	○	○	○	○	○	○	likely	○
8. I would find it easy to get the system to do what I want it to do	unlikely	○	○	○	○	○	○	○	likely	○
9. My interaction with the system would be clear and understandable	unlikely	○	○	○	○	○	○	○	likely	○
10. I would find the system to be flexible to interact with	unlikely	○	○	○	○	○	○	○	likely	○
11. It would be easy for me to become skillful at using the system	unlikely	○	○	○	○	○	○	○	likely	○
12. I would find the system easy to use	unlikely	○	○	○	○	○	○	○	likely	○
		1	2	3	4	5	6	7		NA

List the most **negative** aspect(s):

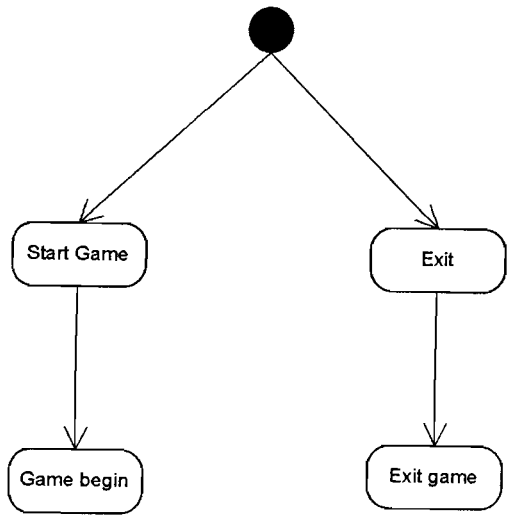
1. _____
2. _____
3. _____

List the most **positive** aspect(s):

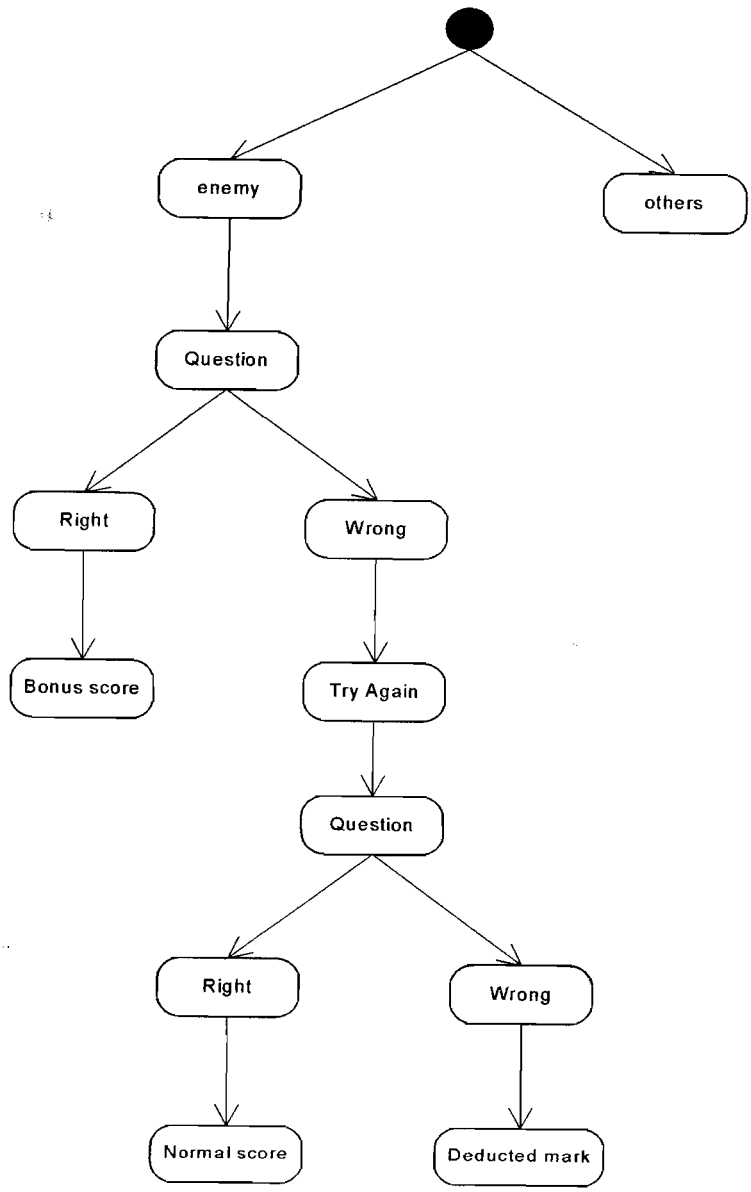
1. _____
2. _____
3. _____

Apendix 9 : Task Modeling

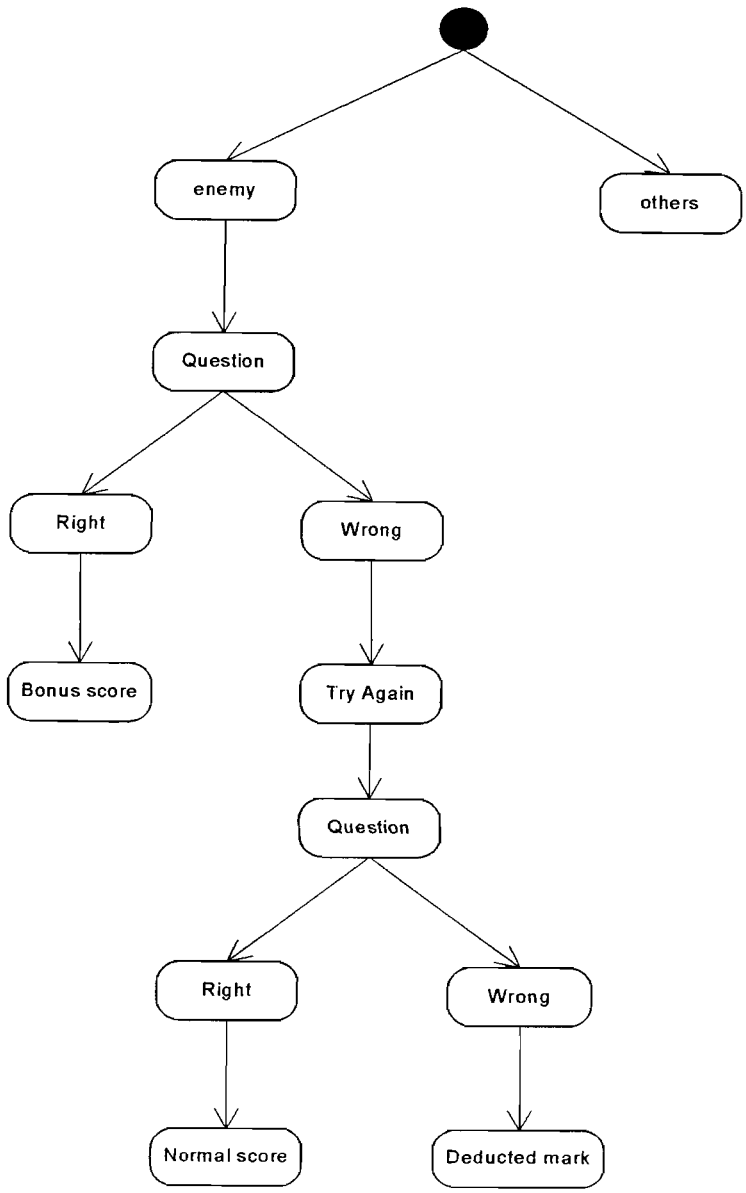
Start



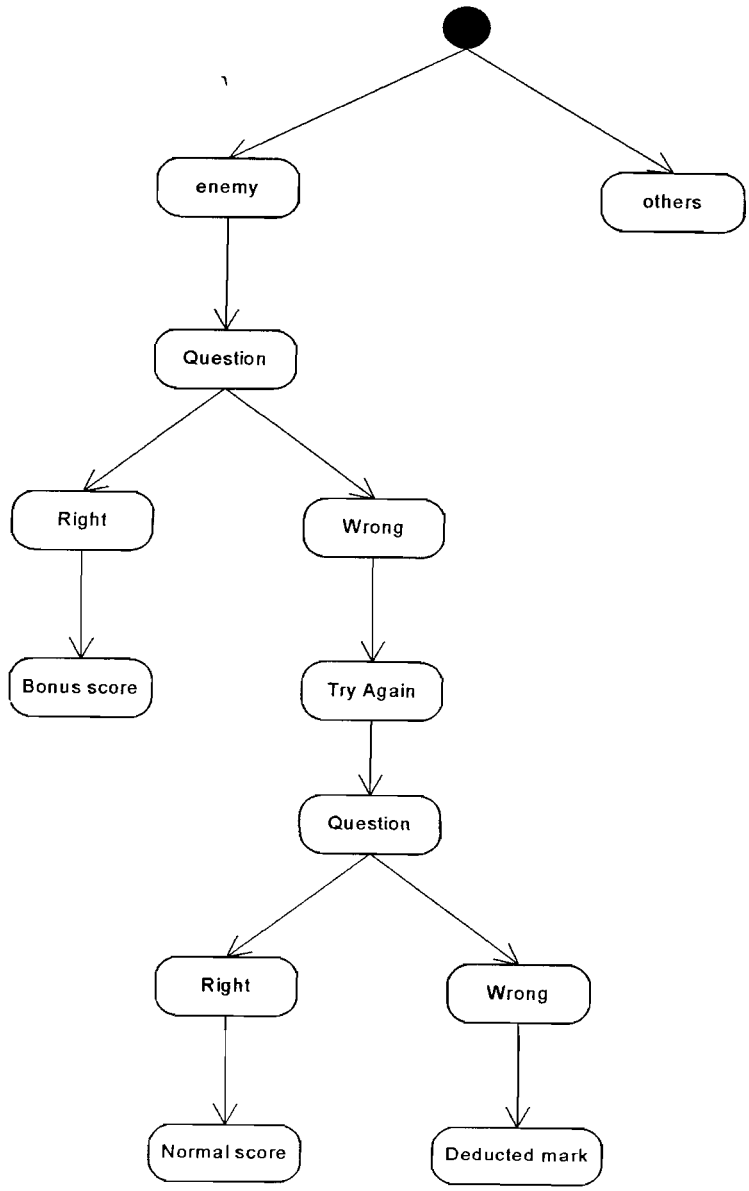
Question 1


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

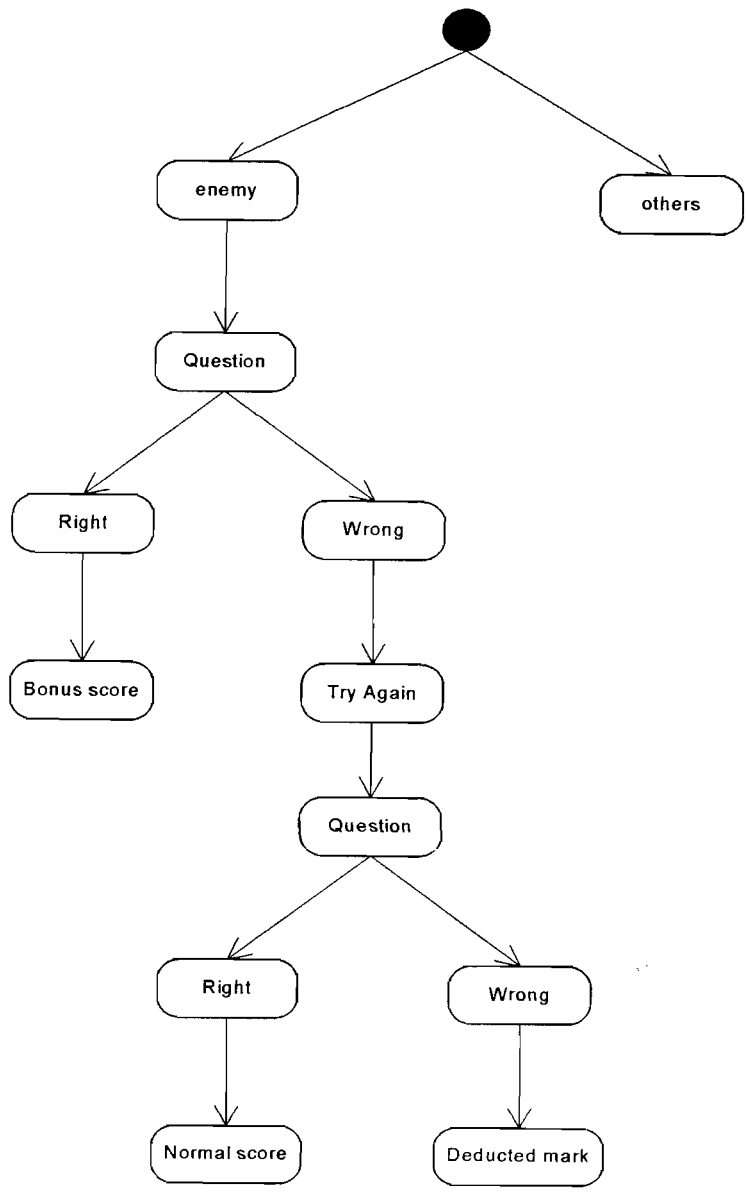
Question 2


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

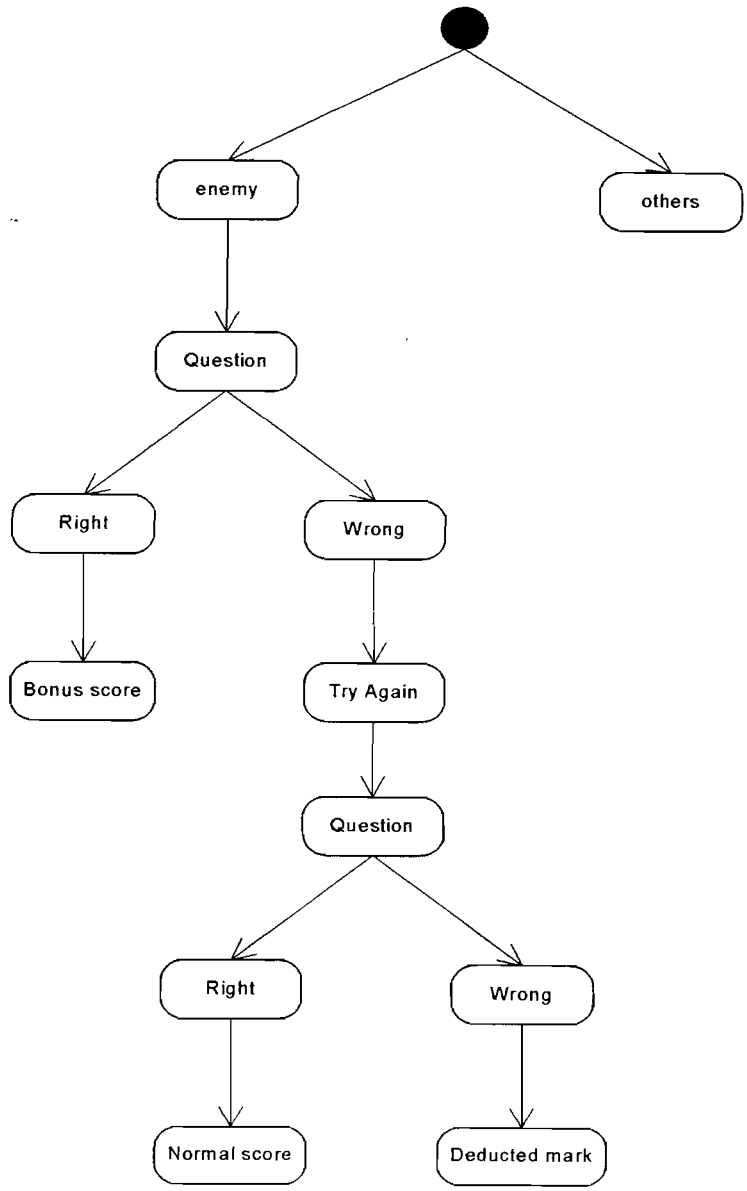
Question 3


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

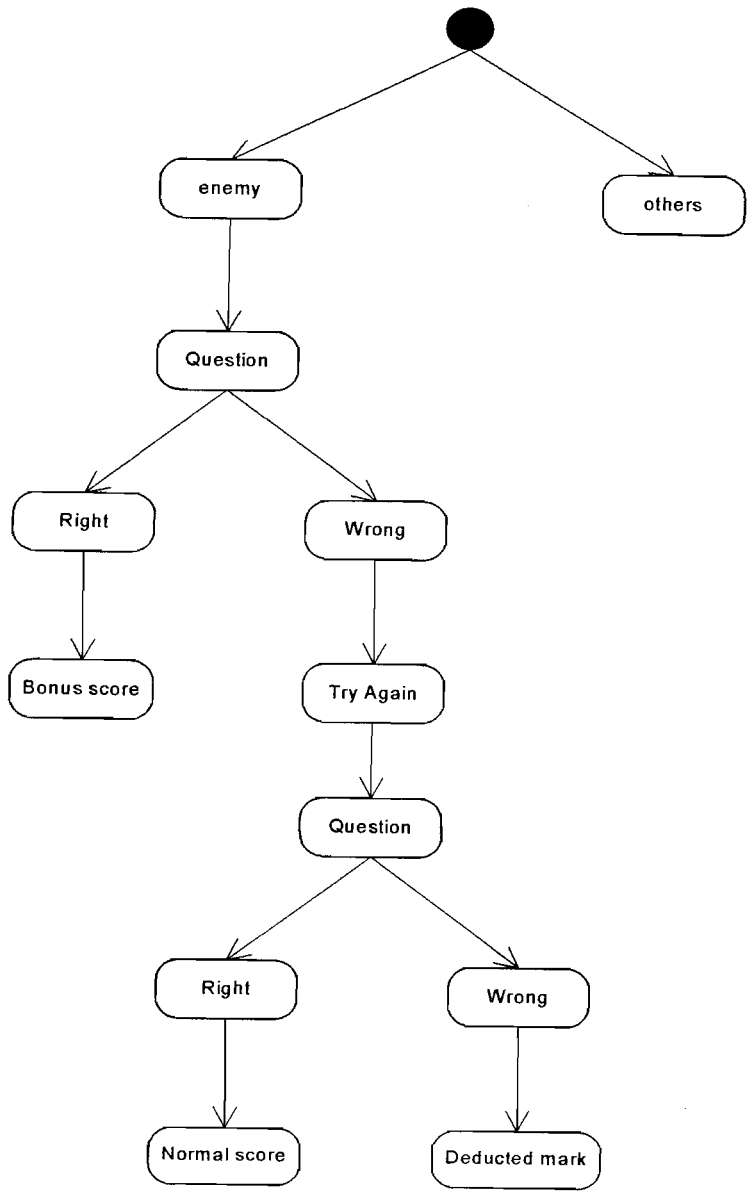
Question 4


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

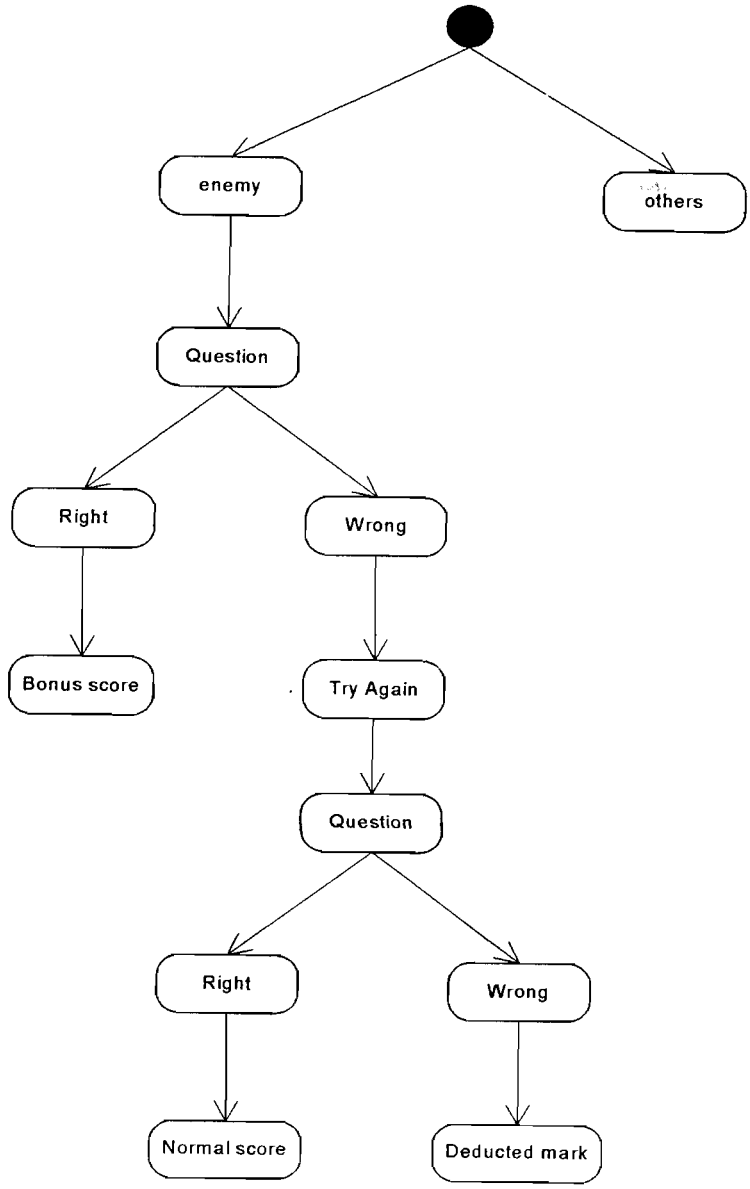
Question 5


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

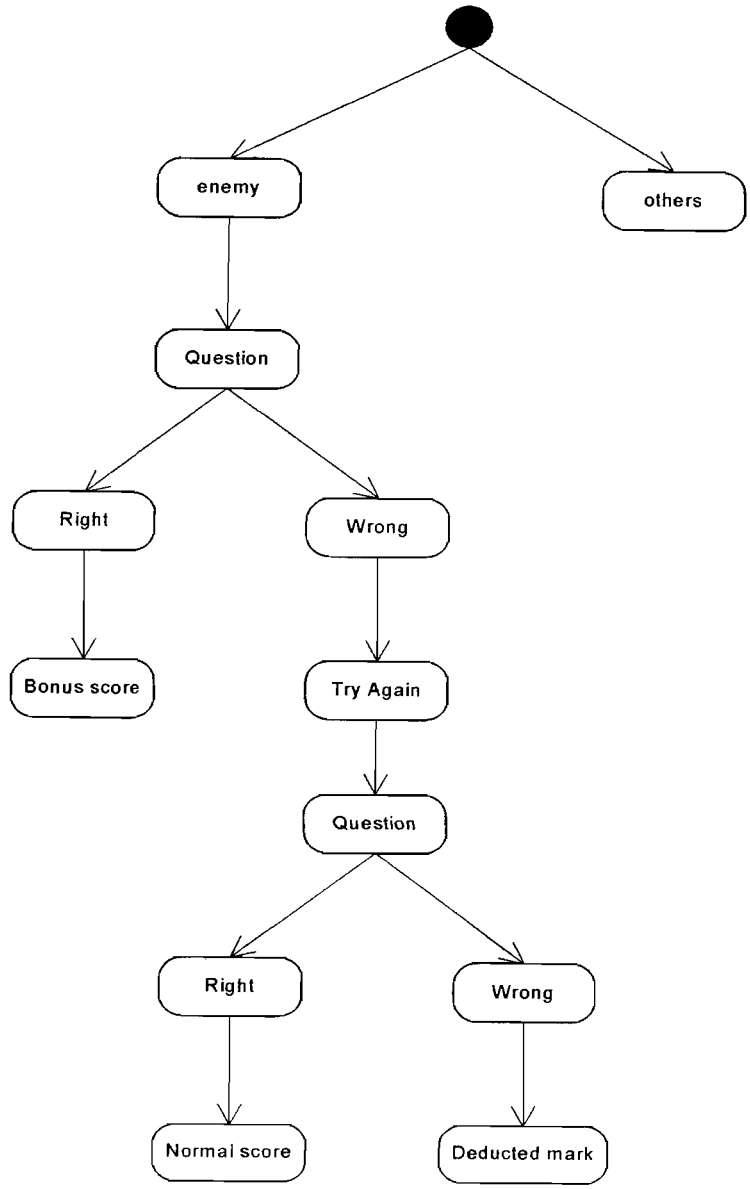
Question 6


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

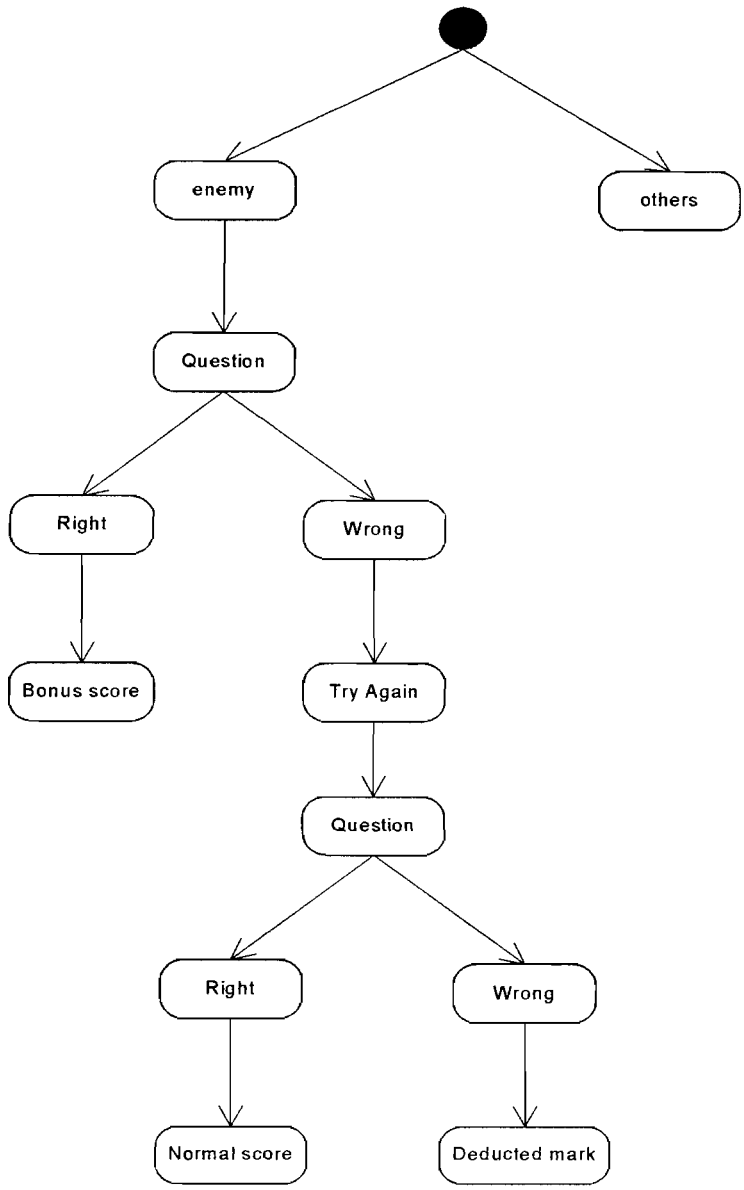
Question 7


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

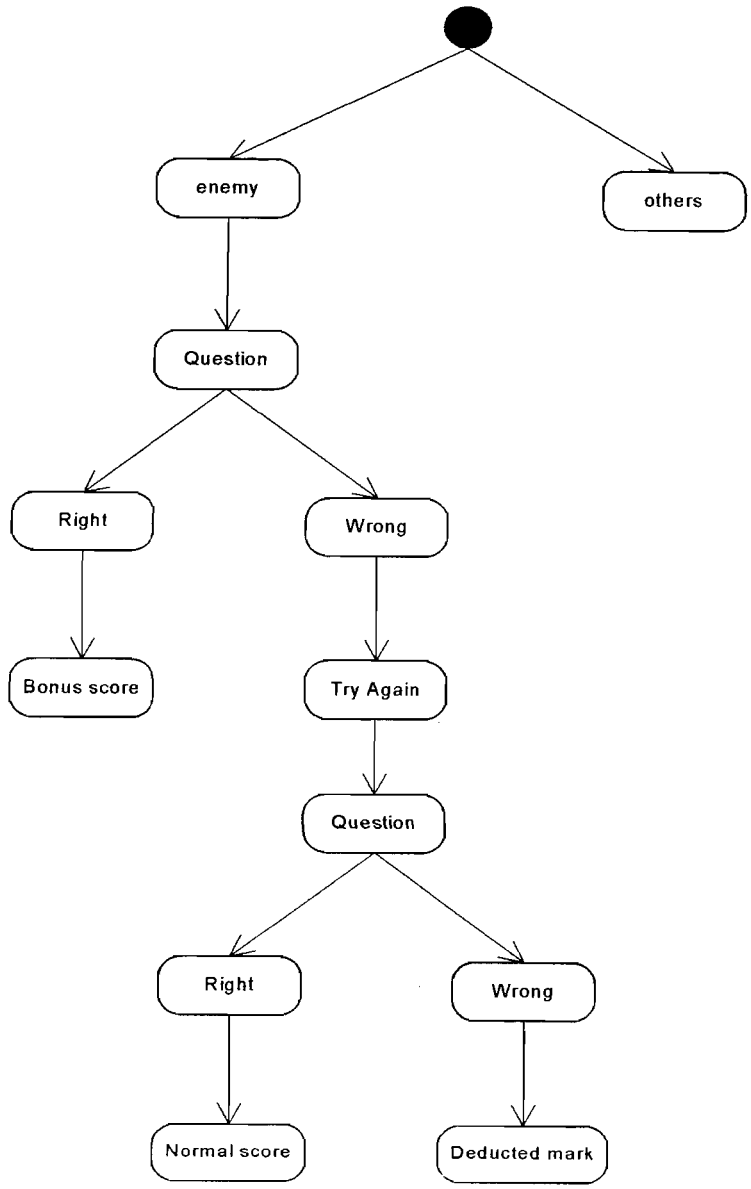
Question 9


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

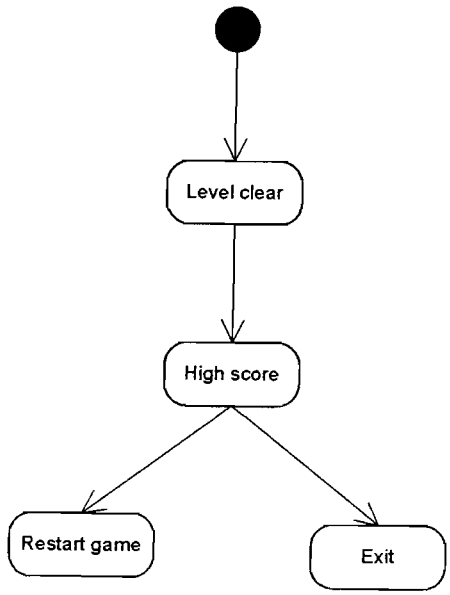
Question 8


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

Question 10


enemy
others
Question
Right
Wrong
Bonus score
Try Again
Question
Right
Wrong
Normal score
Deducted mark

Level clear



Apendix 10 : Game object Information

Information about object: obj_wall_basic

Sprite: <no sprite>
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: <no parent>
Mask: <same as sprite>

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 d3d_draw_wall(x1,y1,z1,x2,y2,z2,tex,1,1);
}
```

Information about object: obj_wall1_hor

Sprite: spr_wall1_hor
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
 y1 = y;
 y2 = y;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall1);
}
```

Information about object: obj_wall1_vert

Sprite: spr_wall1_vert
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x;
 x2 = x;
 y1 = y-16;
 y2 = y+16;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall1);
}
```

Information about object: obj_wall2_hor

Sprite: spr_wall2_hor
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
 y1 = y;
 y2 = y;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall2);
}
```

Information about object: obj_wall2_vert

Sprite: spr_wall2_vert
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x;
 x2 = x;
 y1 = y-16;
 y2 = y+16;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall2);
}
```

Information about object: obj_player

Sprite: spr_player
Solid: false
Visible: true
Depth: 100
Persistent: false
Parent: <no parent>
Mask: <same as sprite>

Create Event:
execute code:

```
{
 global.camx = x;
 global.camy = y;
 global.camsin = sin(direction*pi/180);
 global.camcos = cos(direction*pi/180);
}
```

execute code:

```
{
 friction = 0.2;

 // initialize 3D
 d3d_start();
 d3d_set_hidden(true);
 d3d_set_lighting(false);
 d3d_set_culling(false);
 d3d_set_fog(true,c_black,10,300);
 // interpolate textures
 texture_set_interpolation(true);
}
```

set the health to 100
stop sound snd_ow

Step Event:
execute code:

```
 if instance_number(obj_monster2)=0
if instance_number(obj_monster3)=0
if instance_number(obj_monster4)=0
if instance_number(obj_monster5)=0
if instance_number(obj_monster6)=0
if instance_number(obj_monster7)=0
if instance_number(obj_monster8)=0
if instance_number(obj_monster9)=0
if instance_number(obj_monster10)=0
if instance_number(obj_monster11)=0
{
show_message("Tahniah anda telah menamatkan permainan ini")
highscore_show(score)
game_restart()
}
```

End Step Event:
execute code:

```
{
```

```
 global.camx = x;
 global.camy = y;
 global.camsin = sin(direction*pi/180);
 global.camcos = cos(direction*pi/180);
}
```

Collision Event with object obj_wall_basic:
execute code:

```
{
 x = xprevious;
 y = yprevious;
 if (abs(hspeed) >= abs(vspeed) && not place_meeting(x+hspeed,y,obj_wall_basic))
   { x += hspeed; exit;}
 if (abs(vspeed) >= abs(hspeed) && not place_meeting(x,y+vspeed,obj_wall_basic))
   { y += vspeed; exit;}
 speed = 0;
}
```

Keyboard Event for <Left> Key:
execute code:

```
{
 direction += 3;
}
```

Keyboard Event for <Up> Key:
execute code:

```
{
 var maxspeed;
 if keyboard_check(vk_shift) maxspeed = 3 else maxspeed = 1.5;
 if (speed < maxspeed ) speed = min(maxspeed ,speed+0.4);
}
```

Keyboard Event for <Right> Key:
execute code:

```
{
 direction -= 3;
}
```

Keyboard Event for <Down> Key:
execute code:

```
{
 var maxspeed;
 if keyboard_check(vk_shift) maxspeed = 3 else maxspeed = 1.5;
 if (speed > -maxspeed) speed = max(-maxspeed,speed-0.4);
}
```

Keyboard Event for X-key Key:
execute code:

```
{
 var xn,yn;
 xn = x + sin(direction*pi/180);
 yn = y + cos(direction*pi/180);
 if not place_meeting(xn,yn,obj_wall_basic)
   { x = xn; y = yn; }
```

```
}
```

Keyboard Event for Z-key Key:
execute code:

```
{
 var xn,yn;
 xn = x - sin(direction*pi/180);
 yn = y - cos(direction*pi/180);
 if not place_meeting(xn,yn,obj_wall_basic)
   { x = xn; y = yn; }
}
```

Other Event: No More Health:
display message: YOU ARE DEAD!!!!
show the highscore table
  background: <undefined>
  show the border
  new color: 255, other color: 0
  Font: "Times New Roman",10,0,0,0,0,0
restart the game

Draw Event:
execute code:

```
{
 // set the projection
 d3d_set_projection(x,y,10, x+cos(direction*pi/180),y-sin(direction*pi/180),10, 0,0,1);
 // set color and transparency
 draw_set_alpha(1);
 draw_set_color(c_white);
 // draw floor and ceiling
 d3d_draw_floor(0,0,0,room_width,room_height,0,
          background_get_texture(texture_floor),32,32);
 d3d_draw_floor(0,0,32,room_width,room_height,32,
          background_get_texture(texture_ceiling),24,24);
}
```

Information about object: obj_wall3_hor

Sprite: spr_wall3_hor
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
 y1 = y;
 y2 = y;
 z1 = 32;
 z2 = 0;
```

```
 tex = background_get_texture(texture_wall3);
}
```

Information about object: obj_wall4_hor

Sprite: spr_wall4_hor
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
 y1 = y;
 y2 = y;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall4);
}
```

Information about object: obj_wall5_hor

Sprite: spr_wall5_hor
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
 y1 = y;
 y2 = y;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall5);
}
```

Information about object: obj_wall6_hor

Sprite: spr_wall6_hor
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic

Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
 y1 = y;
 y2 = y;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall6);
}
```

Information about object: obj_wall3_vert

Sprite: spr_wall3_vert
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x;
 x2 = x;
 y1 = y-16;
 y2 = y+16;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall3);
}
```

Information about object: obj_wall4_vert

Sprite: spr_wall4_vert
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x;
 x2 = x;
 y1 = y-16;
 y2 = y+16;
 z1 = 32;
 z2 = 0;
```

```
 tex = background_get_texture(texture_wall4);
}
```

Information about object: obj_wall5_vert

Sprite: spr_wall5_vert
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x;
 x2 = x;
 y1 = y-16;
 y2 = y+16;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall5);
}
```

Information about object: obj_wall6_vert

Sprite: spr_wall6_vert
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x;
 x2 = x;
 y1 = y-16;
 y2 = y+16;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_wall6);
}
```

Information about object: obj_barrel

Sprite: spr_barrel
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_wall_basic

Mask: <same as sprite>

Create Event:
set variable image_speed to 0.1

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_barrel_exp);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_barrel,image_index);
 d3d_draw_wall(x-6*global.camsin,y-6*global.camcos,12,
          x+6*global.camsin,y+6*global.camcos,0,tex,1,1);
}
```

Information about object: obj_barrel_exp

Sprite: spr_barrel_exp
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.2
set Alarm 0 to 5

Alarm Event for alarm 0:
play sound snd_explosion; looping: false

Other Event: Animation End:
destroy the instance

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_barrel_exp,image_index);
 draw_set_alpha(1-0.1*image_index);
 d3d_draw_wall(x-12*global.camsin,y-12*global.camcos,24,
          x+12*global.camsin,y+12*global.camcos,0,tex,1,1);
 draw_set_alpha(1);
}
```

Information about object: obj_plant1

Sprite: spr_plant1
Solid: false
Visible: true
Depth: -20
Persistent: false
Parent: obj_plant_basic
Mask: <same as sprite>

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_plant1,0);
 d3d_draw_wall(x-7*global.camsin,y-7*global.camcos,24,
          x+7*global.camsin,y+7*global.camcos,0,tex,1,1);
}
```

Information about object: obj_plant2

Sprite: spr_plant2
Solid: false
Visible: true
Depth: -20
Persistent: false
Parent: obj_plant_basic
Mask: <same as sprite>

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_plant2,0);
 d3d_draw_wall(x-7*global.camsin,y-7*global.camcos,20,
          x+7*global.camsin,y+7*global.camcos,0,tex,1,1);
}
```

Information about object: obj_gun

Sprite: sprite_shotgun
Solid: false
Visible: true
Depth: -100
Persistent: false
Parent: <no parent>
Mask: <same as sprite>

Create Event:
execute code:

```
{
```

```
 image_speed = 0;
 image_index = 0;
 can_shoot = true;
}
```

Keyboard Event for <Space> Key:
execute code:

```
{
 // check whether you can shoot
 if (not can_shoot) exit;
 can_shoot = false;
 // show the animation and play the sound
 image_speed = 0.4;
 image_index = 0;
 sound_play(snd_shot);
 // determine what you hit
 var xx, yy, ii;
 xx = global.camx;
 yy = global.camy;
 repeat (50)
 {
  xx += 4*global.camcos;
  yy -= 4*global.camsin;
  ii = instance_position(xx,yy,obj_wall_basic);
  if (ii == noone)
  {
   ii = instance_position(xx,yy,obj_monster_basic);
   if (ii == noone) continue;
   with (ii) instance_destroy();
   break;
  }
  if object_is_ancestor(ii.object_index,obj_plant_basic) continue;
  if (ii.object_index == obj_barrel) || (ii.object_index == obj_door)
    with (ii) instance_destroy();
  break;
 }
}
```

Other Event: Animation End:
execute code:

```
{
 image_speed = 0;
 image_index = 0;
 can_shoot = true;
}
```

Draw Event:
execute code:

```
{
 d3d_set_projection_ortho(0,0,640,480,0);
 d3d_set_hidden(false);
 draw_sprite_ext(sprite_shotgun,-1,0,480-256,2,2,0,c_white,1);
 draw_set_alpha(0.4);
 draw_healthbar(5,460,100,475,health,c_black,c_red,c_lime,0,true,true);
 draw_set_alpha(1);
 d3d_set_hidden(true);
}
```

Information about object: obj_monster1

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
  speed = 0; health -= 2;
  if not sound_isplaying(snd_ow) sound_play(snd_ow);
  exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster1_dead

Sprite: spr_monster_dead
Solid: false
Visible: true
Depth: -10
Persistent: false

Parent: <no parent>
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set Alarm 0 to 5

Alarm Event for alarm 0:
play sound snd_explosion; looping: false

Other Event: Animation End:
set the sprite to tex_monster_dead with subimage 7 and speed 0

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster_dead,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,-13,tex,1,1);
}
```

Information about object: obj_monster_basic

Sprite: <no sprite>
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: <no parent>
Mask: <same as sprite>

Collision Event with object obj_wall_basic:
execute code:

```
{
 x = xprevious;
 y = yprevious;
 if (abs(hspeed) >= abs(vspeed) && not place_meeting(x+hspeed,y,obj_wall_basic))
   { x += hspeed; exit;}
 if not place_meeting(x,y+vspeed,obj_wall_basic)
   { y += vspeed; exit;}
 if not place_meeting(x+hspeed,y,obj_wall_basic)
   { x += hspeed; exit;}
}
```

Information about object: obj_plant_basic

Sprite: <no sprite>
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic

Mask: <same as sprite>

Information about object: obj_door

Sprite: spr_door_hor
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
 y1 = y;
 y2 = y;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_door);
}
```

Destroy Event:
create instance of object obj_door_sliding at relative position (0,0)

Information about object: obj_door_sliding

Sprite: spr_door_hor
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: obj_wall_basic
Mask: <same as sprite>

Create Event:
start moving in directions 000100000 with speed set to 1
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
 y1 = y;
 y2 = y;
 z1 = 32;
 z2 = 0;
 tex = background_get_texture(texture_door);
}
```

set Alarm 0 to 64

Alarm Event for alarm 0:
start moving in directions 000010000 with speed set to 0

Step Event:
execute code:

```
{
 x1 = x-16;
 x2 = x+16;
}
```

Information about object: obj_monster2

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```
execute code:

```
{
 option = show_message_ext('Apakah faktor kejayaan Jepun menakluk  Malaya? # A.Strategi peperangan # B.Sistem Pemerintahan # C. Peranan kerajaan Jepun', 'A','B','C')

if (option = 1)
 {
  show_message('Cuba lagi');
  option = show_message_ext('Apakah faktor kejayaan Jepun menakluk  Malaya? # A.Strategi peperangan # B.Sistem Pemerintahan # C. Peranan kerajaan Jepun', 'A','B','C',)
  if (option = 1)
  {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
  }
  if (option = 2)
   {
    show_message ('Betul');
    score += 10;
    exit;
   }
   if (option =3)
   {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
   }
}
if (option = 2)
```

```
 {
   show_message('Tahniah Bonus score!');
   score += 20;
   exit;
}
if (option = 3)
 {
   show_message('cuba lagi');
   option = show_message_ext('Apakah faktor kejayaan Jepun menakluk  Malaya? # A.Strategi
peperangan # B.Sistem Pemerintahan # C. Peranan kerajaan Jepun', 'A','B','C',)
   if (option = 1)
   {
     show_message('Tidak tepat!');
     health -=5;
     score -=5;
     exit;
   }
   if (option = 2)
   {
     show_message ('Betul');
     score += 10;
     exit;
   }
   if (option =3)
    {
     show_message('Tidak tepat!');
     health -=5;
     score -=5;
     exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
show lives with caption lives:
show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
  speed = 0; health -= 2;
  if not sound_isplaying(snd_ow) sound_play(snd_ow);
  exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
```

```
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
        x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_instruction

Sprite: <no sprite>
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: <no parent>
Mask: <same as sprite>

Create Event:
execute script script0 with arguments (0,0,0,0,0)

Information about object: obj_monster3

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```
execute code:

```
{
 option = show_message_ext('Slogan Asia untuk Asia telah digunakan untuk membantu Jepun meluaskan kuasa. Bagaimana slogan ini membantu? # A.Membantu menguasai China # B.Menonjol diri sebagai pembela Asia # C. Membantu usaha perlaksanaan ekonomi kawalan', 'A','B','C',)

if (option = 1)
 {
  show_message('Cuba lagi');
  option = show_message_ext('Slogan Asia untuk Asia telah digunakan untuk membantu Jepun meluaskan kuasa. Bagaimana slogan ini membantu? # A.Membantu menguasai China # B.Menonjol diri sebagai pembela Asia # C. Membantu usaha perlaksanaan ekonomi kawalan', 'A','B','C',)
  if (option = 1)
  {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
```

```
      exit;
    }
    if (option = 3)
    {
      show_message ('Betul');
      score += 10;
      exit;
    }
     if (option =2)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
if (option = 3)
 {
   show_message('Tahniah Bonus score!');
   score += 20;
   exit;
}
if (option = 2)
 {
   show_message('cuba lagi');
   option = show_message_ext('Slogan Asia untuk Asia telah digunakan untuk membantu Jepun meluaskan kuasa. Bagaimana slogan ini membantu? # A.Membantu menguasai China # B.Menonjol diri sebagai pembela Asia # C. Membantu usaha perlaksanaan ekonomi kawalan', 'A','B','C',)
   if (option = 1)
   {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
   }
   if (option = 3)
   {
      show_message ('Betul');
      score += 10;
      exit;
   }
    if (option =2)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
```

```
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
  speed = 0; health -= 2;
  if not sound_isplaying(snd_ow) sound_play(snd_ow);
  exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster4

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```
execute code:

```
{
 option = show_message_ext('Jepun mengalahkan British di Tanah Melayu disebabkan faktor ? # A.Pakatan dengan Thailand # B.Bantuan Jerman # C. Pakatan Axis', 'A','B','C')

if (option = 2)
 {
   show_message('Cuba lagi');
   option = show_message_ext('Jepun mengalahkan British di Tanah Melayu disebabkan faktor ? # A.Pakatan dengan Thailand # B.Bantuan Jerman # C. Pakatan Axis', 'A','B','C')
   if (option = 2)
   {
     show_message('Tidak tepat!');
```

```
      health -=5;
      score -=5;
      exit;
    }
    if (option = 1)
    {
      show_message ('Betul');
      score += 10;
      exit;
    }
     if (option =3)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
if (option = 1)
 {
   show_message('Tahniah Bonus score!');
   score += 20;
   exit;
}
if (option = 3)
 {
   show_message('cuba lagi');
   option = show_message_ext('Jepun mengalahkan British di Tanah Melayu disebabkan faktor ? #
A.Pakatan dengan Thailand # B.Bantuan Jerman # C. Pakatan Axis', 'A','B','C')
    if (option = 2)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
    if (option = 1)
    {
      show_message ('Betul');
      score += 10;
      exit;
    }
     if (option =3)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
  speed = 0; health -= 2;
  if not sound_isplaying(snd_ow) sound_play(snd_ow);
  exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster5

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```

execute code:

```
{
 option = show_message_ext('Serangan tentera Jepun bermula dari utara ke selatan, tempat pendaratan tentera Jepun yang awal ialah ? # A.Perlis # B.Kota Bahru # C. Jitra', 'A','B','C')

if (option = 1)
 {
   show_message('Cuba lagi');
   option = show_message_ext('Serangan tentera Jepun bermula dari utara ke selatan, tempat pendaratan tentera Jepun yang awal ialah ? # A.Perlis # B.Kota Bahru # C. Jitra', 'A','B','C')
   if (option = 1)
   {
```

```
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
    if (option = 2)
    {
      show_message ('Betul');
      score += 10;
      exit;
    }
    if (option =3)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
if (option = 2)
 {
   show_message('Tahniah Bonus score!');
   score += 20;
   exit;
}
if (option = 3)
 {
   show_message('cuba lagi');
   option = show_message_ext('Serangan tentera Jepun bermula dari utara ke selatan, tempat
pendaratan tentera Jepun yang awal ialah ? # A.Perlis # B.Kota Bahru # C. Jitra', 'A','B','C')
   if (option = 1)
   {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
   }
   if (option = 2)
   {
      show_message ('Betul');
      score += 10;
      exit;
   }
    if (option =3)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
   speed = 0; health -= 2;
   if not sound_isplaying(snd_ow) sound_play(snd_ow);
   exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster6

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```

execute code:

```
{
 option = show_message_ext('Semasa berundur dari Tanah Melayu tentera Britush telah memusnahkan jambatan, jalan kereta api, jalan raya dan ladang. Apakah tujuan British? # A. Melumpuhkan ekonomi # B.Mewujudkan pemberontakan # C. Menghapuskan sistem perhubungan', 'A','B','C')

if (option = 2)
 {
   show_message('Cuba lagi');
   option = show_message_ext('Semasa berundur dari Tanah Melayu tentera Britush telah
```

```
memusnahkan jambatan, jalan kereta api, jalan raya dan ladang. Apakah tujuan British? # A. Melumpuhkan ekonomi # B.Mewujudkan pemberontakan # C. Menghapuskan sistem perhubungan', 'A','B','C')
   if (option = 2)
   {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
   }
   if (option = 1)
    {
      show_message ('Betul');
      score += 10;
      exit;
    }
     if (option =3)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
if (option = 1)
 {
   show_message('Tahniah Bonus score!');
   score += 20;
   exit;
}
if (option = 3)
 {
   show_message('cuba lagi');
   option = show_message_ext('Semasa berundur dari Tanah Melayu tentera British telah memusnahkan jambatan, jalan kereta api, jalan raya dan ladang. Apakah tujuan British? # A. Melumpuhkan ekonomi # B.Mewujudkan pemberontakan # C. Menghapuskan sistem perhubungan', 'A','B','C')
   if (option = 2)
   {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
   }
   if (option = 1)
   {
      show_message ('Betul');
      score += 10;
      exit;
   }
    if (option =3)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
  speed = 0; health -= 2;
  if not sound_isplaying(snd_ow) sound_play(snd_ow);
  exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster7

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```
execute code:

```
{
 option = show_message_ext('Mengapakah Miri menjadi tumpuan tentera Jepun?,#A. Pusat pentadbitran British #B.Tumpuan pertahanan British #C.Pusat perlombongan minyak', 'A','B','C')
```

```
if (option = 1)
 {
   show_message('Cuba lagi');
   option = show_message_ext('Mengapakah Miri menjadi tumpuan tentera Jepun?,#A. Pusat pentadbitran British #B.Tumpuan pertahanan British #C.Pusat perlombongan minyak', 'A','B','C')
   if (option = 1)
   {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
   }
   if (option = 3)
    {
      show_message ('Betul');
      score += 10;
      exit;
    }
    if (option =2)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
if (option = 3)
 {
   show_message('Tahniah Bonus score!');
   score += 20;
   exit;
}
if (option = 2)
 {
   show_message('cuba lagi');
   option = show_message_ext('Mengapakah Miri menjadi tumpuan tentera Jepun?,#A. Pusat pentadbitran British #B.Tumpuan pertahanan British #C.Pusat perlombongan minyak', 'A','B','C',)
   if (option = 1)
   {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
   }
   if (option = 3)
   {
      show_message ('Betul');
      score += 10;
      exit;
   }
    if (option =2)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
   speed = 0; health -= 2;
   if not sound_isplaying(snd_ow) sound_play(snd_ow);
   exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster8

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```

execute code:

```
{
 option = show_message_ext('Tentera Jepun telah ditentang hebat oleh Rejimen Askar Melayu.
```

```
Siapakah pemimpin pasukan itu? # A.Dato Onn Jaafar # B.Ibrahim Yaakob # C. Leftenan Adnan',
'A','B','C')

if (option = 1)
 {
   show_message('Cuba lagi');
   option = show_message_ext('Tentera Jepun telah ditentang hebat oleh Rejimen Askar Melayu.
Siapakah pemimpin pasukan itu? # A.Dato Onn Jaafar # B.Ibrahim Yaakob # C. Leftenan Adnan',
'A','B','C')
   if (option = 1)
   {
     show_message('Tidak tepat!');
     health -=5;
     score -=5;
     exit;
   }
   if (option = 3)
    {
     show_message ('Betul');
     score += 10;
     exit;
    }
    if (option =2)
    {
     show_message('Tidak tepat!');
     health -=5;
     score -=5;
     exit;
    }
}
if (option = 3)
 {
   show_message('Tahniah Bonus score!');
   score += 20;
   exit;
}
if (option = 2)
 {
   show_message('cuba lagi');
   option = show_message_ext('Tentera Jepun telah ditentang hebat oleh Rejimen Askar Melayu.
Siapakah pemimpin pasukan itu? # A.Dato Onn Jaafar # B.Ibrahim Yaakob # C. Leftenan Adnan',
'A','B','C')
   if (option = 1)
   {
     show_message('Tidak tepat!');
     health -=5;
     score -=5;
     exit;
   }
   if (option = 3)
   {
     show_message ('Betul');
     score += 10;
     exit;
   }
    if (option =2)
    {
     show_message('Tidak tepat!');
     health -=5;
     score -=5;
```

```
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
  speed = 0; health -= 2;
  if not sound_isplaying(snd_ow) sound_play(snd_ow);
  exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster9

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```

execute code:

```
{
 option = show_message_ext('Mengapakah tentera british tidak bersungguh menghadapi serangan tentera Jepun # A.Bilangan tentera British kurang # B.Tentera British tidak terlatih # C.Lebih menumpukan peperangan di Eropah ', 'A','B','C')

if (option = 2)
 {
  show_message('Cuba lagi');
  option = show_message_ext('Mengapakah tentera british tidak bersungguh menghadapi serangan tentera Jepun # A.Bilangan tentera British kurang # B.Tentera British tidak terlatih # C.Lebih menumpukan peperangan di Eropah ', 'A','B','C')
  if (option = 2)
  {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
  }
  if (option = 1)
   {
    show_message ('Betul');
    score += 10;
    exit;
   }
    if (option =3)
   {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
   }
}
if (option = 1)
 {
  show_message('Tahniah Bonus score!');
  score += 20;
  exit;
}
if (option = 3)
 {
  show_message('cuba lagi');
  option = show_message_ext('Mengapakah tentera british tidak bersungguh menghadapi serangan tentera Jepun # A.Bilangan tentera British kurang # B.Tentera British tidak terlatih # C.Lebih menumpukan peperangan di Eropah ', 'A','B','C')
  if (option = 2)
  {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
  }
  if (option = 1)
  {
    show_message ('Betul');
    score += 10;
    exit;
  }
   if (option =3)
```

```
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
   speed = 0; health -= 2;
   if not sound_isplaying(snd_ow) sound_play(snd_ow);
   exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster10

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:
execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
execute code:

{
 option = show_message_ext('Apakah kesan pendudukan Jepun ke atas Tanah Malayu? # A.Berjaya menyatukan orang Melayu # B.Semangat Nasionalisme # C. Ekonomi berkembang', 'A','B','C')

if (option = 1)
 {
  show_message('Cuba lagi');
  option = show_message_ext('Apakah kesan pendudukan Jepun ke atas Tanah Malayu? # A.Berjaya menyatukan orang Melayu # B.Semangat Nasionalisme # C. Ekonomi berkembang', 'A','B','C')
  if (option = 1)
  {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
  }
  if (option = 2)
   {
    show_message ('Betul');
    score += 10;
    exit;
   }
   if (option =3)
   {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
   }
}
if (option = 2)
 {
  show_message('Tahniah Bonus score!');
  score += 20;
  exit;
}
if (option = 3)
 {
  show_message('cuba lagi');
  option = show_message_ext('Apakah kesan pendudukan Jepun ke atas Tanah Malayu? # A.Berjaya menyatukan orang Melayu # B.Semangat Nasionalisme # C. Ekonomi berkembang', 'A','B','C')
  if (option = 1)
  {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
  }
  if (option = 2)
  {
    show_message ('Betul');
    score += 10;
    exit;
  }
```

```
    if (option =3)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
  speed = 0; health -= 2;
  if not sound_isplaying(snd_ow) sound_play(snd_ow);
  exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_monster11

Sprite: spr_monster
Solid: false
Visible: true
Depth: -10
Persistent: false
Parent: obj_monster_basic
Mask: <same as sprite>

Create Event:
set variable image_speed to 0.3
set variable image_index to floor(random(4))

Destroy Event:

execute code:

```
{
 instance_create(x,y,obj_monster1_dead);
}
```

execute code:

```
{
 option = show_message_ext('Pada 15 Ogos 1945, Jepun telah menyerah kalah. Apakah faktor utama Jepun mengambil tindakan ini? # A. Arahan Maharaja Jepun # B.Kekalahan di Itali # C.Amerika menggugurkan bom Atom', 'A','B','C')

if (option = 1)
 {
  show_message('Cuba lagi');
  option = show_message_ext('Pada 15 Ogos 1945, Jepun telah menyerah kalah. Apakah faktor utama Jepun mengambil tindakan ini? # A. Arahan Maharaja Jepun # B.Kekalahan di Itali # C.Amerika menggugurkan bom Atom', 'A','B','C')
  if (option = 1)
  {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
  }
  if (option = 3)
   {
    show_message ('Betul');
    score += 10;
    exit;
   }
    if (option =2)
   {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
   }
}
if (option = 3)
 {
  show_message('Tahniah Bonus score!');
  score += 20;
  exit;
}
if (option = 2)
 {
  show_message('cuba lagi');
  option = show_message_ext('Pada 15 Ogos 1945, Jepun telah menyerah kalah. Apakah faktor utama Jepun mengambil tindakan ini? # A. Arahan Maharaja Jepun # B.Kekalahan di Itali # C.Amerika menggugurkan bom Atom', 'A','B','C')
  if (option = 1)
  {
    show_message('Tidak tepat!');
    health -=5;
    score -=5;
    exit;
  }
  if (option = 3)
  {
```

```
      show_message ('Betul');
      score += 10;
      exit;
    }
    if (option =2)
    {
      show_message('Tidak tepat!');
      health -=5;
      score -=5;
      exit;
    }
}
}
```

set the information in the window caption:
show score with caption score:
don't show lives with caption lives:
don't show health with caption health:

Begin Step Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 200)
   { speed = 0; exit; }
 if (collision_line(x,y,global.camx,global.camy,obj_wall_basic,false,false))
   { speed = 0; exit; }
 if (point_distance(x,y,global.camx,global.camy) < 12)
 {
   speed = 0; health -= 2;
   if not sound_isplaying(snd_ow) sound_play(snd_ow);
   exit;
 }
 move_towards_point(global.camx,global.camy,1.4);
}
```

Draw Event:
execute code:

```
{
 if (point_distance(x,y,global.camx,global.camy) > 240) exit;
 var tex;
 tex = sprite_get_texture(tex_monster,image_index);
 d3d_draw_wall(x-8*global.camsin,y-8*global.camcos,19,
          x+8*global.camsin,y+8*global.camcos,3,tex,1,1);
}
```

Information about object: obj_endGame

Sprite: <no sprite>
Solid: false
Visible: true
Depth: 0
Persistent: false
Parent: <no parent>
Mask: <same as sprite>

Create Event: