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FLASH GAME APPLICATION "THE ADMIRAL"

NURUL FARAHIDA BINTI MD SEDIK

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Interactive Multimedia)

FACULTY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2006

DECLARATION

I hereby declare that this project report entitled

FLASH GAME APPLICATION "THE ADMIRAL"

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : _____ Date : 17/11/2006

(NURUL FARAHIDA BINTI MD SEDIK)

SUPERVISOR : _____ Date : 17/11/06

(EN. IBRAHIM BIN AHMAD)

DEDICATION

To my beloved parents and family;
to my father for his loving attention;
to my mother, for her love, support, trust in my chosen path of life;
to my dear sisters and brothers, for supporting me;
and all friends, for being here with me.

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To Almighty- Allah SWT, I am grateful for the blessing during this project development through out this semester. Special thanks to my beloved parents that understanding and always give me their morale support.

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ABSTRACT

"The Admiral" is a computer game whereby the player will act as the admiral who is assigns to save the princess which has been kidnapped by the pirate. The goal of this game is to save the princess. On the other hand, the player has to destroy all the pirate ships. For each level, there are more than one pirate ships. The player does have to destroy all of them before they can continue to the next level. However, before they can continue to the next level after destroying all the pirate ships, the player has to destroy the pirate captain. If the player can destroy the pirate captain, they will be given a hint to find the princess. The player will control their ship using keyboard. If the pirate ships collide with the player's ship, the player will lose one of their lives. Player has to click 'Ctrl' button on the keyboard to fire the pirate ship. Each part in this project has been done by follow the Multimedia Development Methodology (MDM). There are six phases in this methodology. After choosing the methodology, the analysis phase has been done. In design phase, the storyboard has been created. The storyboard will help the developer to develop games according to plan.

ABSTRAK

"The Admiral" merupakan sebuah permainan komputer di mana pemain akan memegang watak sebagai seorang laksamana yg telah ditugaskan untuk menyelamatkan tuan puteri yang telah diculik oleh lanun. Matlamat permainan ini adalah untuk menyelamatkan tuan puteri. Dalam masa yang sama, pemain perlu memusnahkan semua lanun. Bagi setiap peringkat, terdapat lebih dari sebuah kapal lanun dan pemain perlu memusnahkan kesemuanya sebelum layak ke peringkat seterusnya. Walaubagaimanapun, setelah menusnahkan semua kapal lanun, pemain perlu memusnahkan ketua lanun. Sekiranya pemain dapat memusnahkan ketua lanun, pemain akan memperoleh tips untuk menyelamatkan tuan puteri. Pemain akan mengawal kapal menggunakan papan kekunci. Sekiranya, kapal pemain bertembung dengan kapal lanun, pemainakan kehilangan satu nyawa. Pemain perlu menekan kekunci '*Ctrl*' pada papan kekunci untuk menembak kapal lanun. Setiap bahagian di dalam projek ini telah disiapkan dengan merujuk kepada *Multimedia Development Methodology* (MDM). Terdapat enam fasa di dalam metodologi ini. Setelah memilih metodologi, fasa analysis dijalankan. Di dalam fasa rekabentuk, sebuah papan cerita telah dihasilkan. Papan cerita ini akan membantu pembangun permainan untuk membangunkan permainan seperti yang dirancang.

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INTRODUCTION

1.1 Project Background

In common usage, a "computer game" or a "PC game" refers to a game that is played on a personal computer. A computer game is a computer-controlled game. The term "computer game" also includes games which display only text and which can therefore theoretically be played on a teletypewriter or which use other methods, such as sound or vibration, as their primary feedback device, but there are very few new games in these categories (Livingstone, d'Haenens & Hasebrink, 2001).

There always must also have some sort of input device, usually in the form of button or joystick combinations, a keyboard and mouse or trackball combination. Also, more esoteric devices have been used for input. Usually there are rules and goals, but in more open-ended games the player may be free to do whatever they like within the confines of the virtual universe. Games bring people together, regardless of gender, generation and race.

The computer game that will be developed is about the admiral who was given a very important task from the king. A long time ago, a princess of a very wealthy island has been kidnapped by a pirate who is hunger of money. The game started when the admiral was given a mission to save the princess from the kidnapper.

The player will act as the admiral who is assign to save the princess which has been kidnapped by the pirate. The goal of this game is to save the princess. On the other hand, the player has to destroy all the pirate ships. The player has to destroy the pirate ship by fire the pirate ship. For each level, there are more than one pirate ships. The player does have to destroy all of them before they can continue to the next level. However, before they can continue to the next level after destroying all the pirate ships, the player has to destroy the captain of the pirates.

The player will control their ship using keyboard arrow. It can move straight or diagonally. However, the pirate ships will move randomly. If the pirate ships collide with the player's ship, the player will lose one of their lives. Player has to click on 'Ctrl' button to fire the pirate ship. If the players completed destroying all the pirate ships and the pirate captain, they will go to the next level.

1.2 Problem Statement

An early example is *Missile Command* which has been developed by Atari in 1980, where a number of cities are attacked by missiles that the player's then have to destroy it using rockets from three missile batteries. The player is not represented on screen as an entity or actor, but only sees the results of his/her actions.

The early computer games such as *Spacewar* which has been developed by Russel in 1962, *Mystery Science Theater 2600* which has been developed by Hozer in 1999 and *Missile Command* has a very simple and plain interface. The interface for *Spacewar* contains only two colors which is black and white; black for the background and white for the spaceship. The interface for these computer games is not interesting and cannot capture the player's attention to play the games. The players will feel bored with the plain interfaces.

All of these computer games have the same mission which is destroy enemies. They will destroy the enemies by shooting at them or by using cannons or

bombs. However, their design is too simple. The screen shots of these games are shown below.

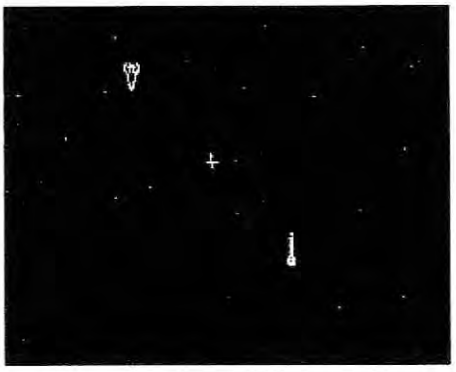

Figure 1: Spacewar Interface

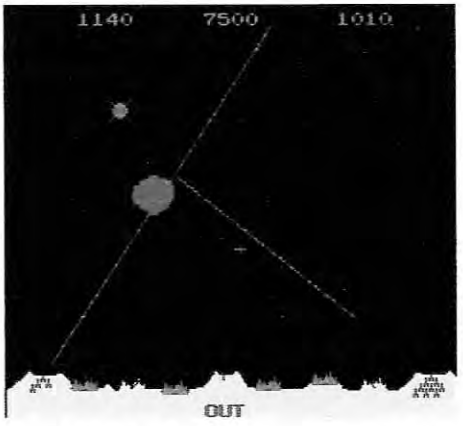

Figure 2: Missile Command Interface

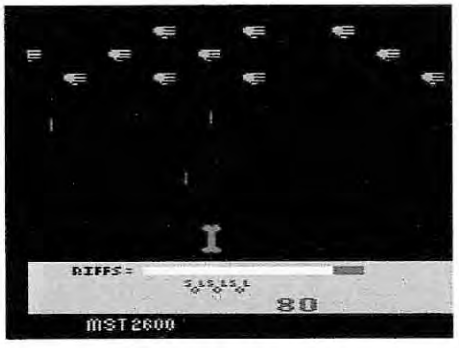

Figure 3: Mystery Science Theater 2600

1.3 Objective

The objectives of this project are as follows:-

i. To develop an interactive game for children.
   - The Admiral has combined all multimedia elements such as sound, animation, text and graphic in order to make it look interesting.

ii. To upgrade the previous game such as *Spacewar*, *Missile Command* and *Mystery Science Theater 2600*.
   - The Admiral will have an interesting interface.
   - The Admiral will use different color for each object to attract the players' attention.

iii. To stimulate the brain.
   - The player needs to think of way to stay out from the enemy in order to stay alive until the end of the game.

1.4 Scopes

The target user for 'The Admiral' is children age between six to nine years old. This game has five levels. Each time the level increase, the level of difficulties for this game is also increased. I choose to use English as the language because English is important for us for our better future since English is an international language.

The goal of this game is to save the princess that has been kidnapped by the pirates. However, the player has to destroy all pirate ships on each level before they can save the princess. The player has to destroy the pirate ship by fire the pirate ship. For each level, there are more than one pirate ships. The player does have to destroy all of them before they can continue to the next level. On the other hand, before they

can continue to the next level after destroying all the pirate ships, the player has to destroy the pirate captain.

The player will control their ship using keyboard arrow. It can move straight or diagonally. However, the pirate ships will move randomly. If the pirate ships collide with the player's ship, the player will lose one of their lives. Player has to click on 'Ctrl' key to fire the pirate ship. If the players completed destroying all the pirate ships and the pirate captain, they will go to the next level.

1.5 Project Significance

It is noticeable that 'The Admiral' offers another fascinating and attracting gameplay for computer gamers.

These days, there is not much of this type of games. 'The Admiral' offers another interesting game to play. Although this is not an educational game, it still could stimulate brains with the playing style.

Children have been known as people who love to learn a new thing. So, parents having difficult time in controlling their children. If the games could successfully attract the children's attention, parents will not have to worry about their children. It is to make sure the children will stick in front their computer playing 'The Admiral'.

1.6 Expected Output

'The Admiral' is a computer game which contain five levels. The players have to destroy all the pirate ships to qualify for the next level. Players have to destroy the pirate ship by fire the pirate ship.

'The Admiral' will be developed along with interesting and attractive design to attract users especially children. The game will consist of multimedia elements such as sound, animation, text and graphic in order to make it look interesting. The content will also be simple and do not have any complicated features as purpose of the game is to enjoy playing computer game.

1.7 Conclusion

The main purpose of developing this game is to be different with the existing game. Moreover, the game can help children in stimulating their brains with trick during the gameplay. The game is a single mode game and there are about five levels of the game. 'The Admiral' will be developed using Macromedia Flash 8 as the main platform of the game and other software to support the development of the game such as Adobe Photoshop 7.0 and Sound forge 6.0.

The next activities will be on the literature review where it requires a lot of research on fact and finding. Project methodology and project requirement also will be discussed on the next chapter.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

A literature review is a summary of previous research on a topic. Literature review is a process of searching, collecting, analyzing and drawing conclusion from all debates and issues raised in relevant body of literature. Literature reviews can be either a part of a large report of a research project, or it can be a bibliographic essay that is published separately in a scholarly journal. Literature review also makes use of other people work. This literature review can be done using books, journal, technical reports, proceeding conferences, anonymous reference, publication of international bodies or agencies and by using web pages or e-book.

In this chapter, the fact and finding also based on the project that will be develop. This includes the related or passed research, references, case study and other finding that relate to the project. It can include the case study, reading or experiments.

Project methodology is a way to use all available approaches, technique and tools used to achieve predetermined objectives. The project methodology must able to demonstrate an awareness of methodological tools available and understanding of which suitable for the project. It can be approached using qualitative method, quantitative method or combined method.

This chapter also describe about project requirements. The project requirement consists of the software, hardware and other tools which is required for the project development.

2.2 Fact and Finding

This section of this chapter will discuss about the fact and finding that are related with this project.

2.2.1 Definition

In the German language, a game is an activity which executed only for pleasure and without conscious purpose. In this definition, every activity that brings pleasure is a game. This definition people use today comes from the works of Johan Huizinga (Homo Ludens, 1938) and Friedrich George Junger (Die Spiele, 1959). But there are more ways to define games. Manfred Eigen's and Ruthild Winkler's definition for game goes beyond the definition used by Huizinga. They see a game as a natural phenomenon: half necessity and half coincidence. Their definition of games comes closer to Adornos' definition, who set himself apart from Huizinga by identifying games as an art form.

According to Encyclopedia Britannica Eleventh Edition, a game is an activity involving one or more player. This can be defined either a goal that the players try to reach, or some set of rules that determines what the players can or cannot do. Games are played primarily for entertainment or enjoyment, but may also serve an exercise or in an educational, simulation or psychological role.

The term game is defined using a series of dichotomies: (1) Creative expression is *art* if made for its own beauty, and *entertainment* is made for money. (2) A piece of entertainment is a *plaything* if it is interactive. Movies and books are

cited as examples of non-interactive entertainment. (3) If no goals are associated with the plaything, it is a *toy*. (Crawford notes that by his definition, (a) A toy can become a game element, if the player makes up rules, and (b) *The Sims* and *SimCity* are toys, not games). If it has goals, a plaything is a challenge. (4) If a challenge has no "active agent against whom you compete", it is a *puzzle*; if there is one, it is *conflict*. (5) Finally, if the player can only outperform the opponent, but not attack them to interfere with their performance, the conflict is a *competition*. However, if attacks are allowed, then the conflict qualifies as a game (Crawford, 1982).

2.2.2 History

According to Kate Jones (2000), games have been around humanity for as long as there have been humans. Games were paradigms before the word became fashionable, representing their cultures' most deeply embedded views and beliefs about the way the world works. Peoples' value systems came to color the games' objectives and rules of play. The ancestors were extremely imaginative. They tended to imbue everything around them with mystical symbolism. Their minds were much more practiced than ours in seeing analogy, metaphor, and hidden meanings.

According to Johannes Fromme (2001), interactive computer games belong to the new multimedia culture that is based on the digital computer technology. These games become increasingly popular in the past 20 to 25 years, especially among young people. In the beginning, they were mainly played by youth and young adults who were enthusiastic about computer. During the early nineties, however, computer games became a matter-of-course in the everyday life of young people, including children. The computer game industry obviously has been quite successful in attracting these young customers. From a technical perspective one could point out that starting and playing electronic games has become easier in past two decades. Users do not need specific computer knowledge to use a Game Boy or a television-linked console – it is just plug and play. In addition, the Introduction of Microsoft Windows has made personal computers (PCs) – to some degree – more user friendly to operate.

The video game history started in a strange and complicated way and it is important to avoid confusions with what happened in the 1950s and 1960s. The real video game history started with Ralph Baer as early as 1951. One very important thing to remember is how the video game has been defined in the 1960s before modern technologies allowed video games to be played on computers. A video game is defined as an apparatus that displays games using raster video equipment such as television set and monitor. In the 1950s and 1960s, computers were not only exceedingly expensive, but used a technology that could not allow integrating them into a video game system. Only mainframes could allow playing a few games. These games qualified as computer games, not video games (Anderson, 1996).

2.2.3 Computer Gaming Culture

What made and makes computer games fascinating for them? How do they use and value different games? To what extent are the changing media environments of children connected to more general social developments? Question like these are characteristic for scientific approaches which are interested in the social and cultural relevance of media uses. They go beyond media-centered approaches and try to understand how computer games are integrated into the lives of the children and young people (Livingstone, d'Haenens & Hasebrink, 2001).

This cultural and social significance of electronic games, also is pedagogically relevant, because any educational or teaching effort which aims at mediating so-called "media competency," computer literacy, or information computer technology (ICT) skills is preceded by informal and non-formal learning processes of children within their "computer gaming culture." About 20 years ago Patricia M. Greenfield discussed possible effects of new media (Greenfield, 1984). She was skeptical about common fears that new media were bad educators, because they "taught" children and young people things like violent behavior. As far as I see Greenfield was one of the first scientists who drew attention to the possible positive effects of watching television or playing video games or computer games. She addressed new media as cultural artifacts which demand complex cognitive skills

from the people who use them, and these skills and the related knowledge that come from using them are not obtained in instructional contexts like schools, but are acquired informally (Greenfield, 1984).

2.2.4 The Use of Color in Games

Color is extremely important to game graphics design. According to Ari Feldman (2005), when used correctly, color can produce a variety of powerful physical and emotional effects in games.

i. **Attract the user's attention**
   Color can make game objects "pop" or stand out to the user.

ii. **Alter the user's mood and feelings**
   Color can alter and affects the user's mood and emotions. It also can be used to convey cultural or gender-specific messages.

iii. **Alter the user's perception of space**
   Color can add depth and dimension to objects and scenes. Essentially, color can make things seem more "real" to the user and can project 3D properties onto 2D images by manipulating the user's perception.

iv. **Create aesthetic appeal**
   Color can make objects and scenes seem more enticing, which can stimulate the user's interest and enhance their enjoyment.

v. **Show and accentuate similarities and differences**
   Color can highlight the similarities and differences between game objects.

According to Ari Feldman (2005), color is more than just something we see and experience. It has its own language and can be used to apply specific meanings, mood and symbolism to the images that are created for the games. Table 2.1 shown about the popular meanings for some of more common colors, while table 2.2