

2D GAME: KILL THE PEST

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2D GAME: KILL THE PEST

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DECLARATION

I hereby declare that this project report entitled
2D GAME: KILL THE PEST

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

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DEDICATION

*To my supervisor,
for all the time you give me unlimitedly.*

*To my parents,
for all the love you give me unequivocally.*

*To my family,
for your fully encouragement.*

*To my friends,
for your help and fully support.*

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ABSTRACT

This project is tried develop a simple game to stimulate children brain to prioritize cleanliness. It can make the children feel interesting to play this game and encourage them to keep hygiene first. This game gave titled Kill the Pest and develops by Adobe Flash. The target user of this game is children aged seven to twelve years old. This game will help and practice children to prioritize cleanliness as to kill the pest that come to their canteen using soap spray. Besides those children nowadays do not even know about the pest that can cause food poisoning so that the aims of this project is to lighten up the dangerous of these pest to their healthy and how they can affect the hygiene at school canteen. The moral values can deliver to the children while they playing this simple game. This 2D game has three categories and for each category, there are three levels to be complete. In order to differentiate current game with the others, some multimedia elements like sound, text, animation and graphics need to be implemented together and this will make the game looks more interesting and enjoyable to play. This game is successfully developed and meets all the criteria.

ABSTRAK

Projek ini cuba membangunkan permainan yang mudah untuk merangsang otak kanak-kanak untuk mengutamakan kebersihan. Ia boleh membuat kanak-kanak berasa tertarik untuk bermain permainan ini dan menggalakkan mereka untuk menjaga kebersihan. Permainan ini bertajuk Kill Pest dan dibangunkan menggunakan Adobe Flash. Kumpulan sasaran permainan ini adalah kanak-kanak berumur tujuh hingga dua belas tahun. Permainan ini akan membantu kanak-kanak untuk mengutamakan kebersihan dengan membunuh binatang perosak yang datang ke kantin mereka dengan menggunakan semburan sabun. Selain itu, kebanyakan kanak-kanak pada masa kini tidak tahu dengan lebih dalam mengenai binatang perosak yang boleh menyebabkan keracunan makanan, jadi matlamat projek ini adalah untuk menerangkan betapa bahayanya binatang perosak ini terhadap kesihatan mereka dan bagaimana ia boleh menjejaskan kebersihan di kantin sekolah. Nilai-nilai moral boleh dipelajari oleh kanak-kanak semasa mereka bermain permainan mudah ini. Permainan 2D ini mempunyai tiga kategori dan untuk setiap kategori, terdapat tiga peringkat. Dalam usaha untuk membezakan permainan ini dengan permainan lain, beberapa elemen multimedia seperti bunyi, teks, animasi dan grafik perlu digabungkan bersama-sama dan ini akan membuat permainan kelihatan lebih menarik dan menyeronokkan untuk bermain. Permainan ini berjaya dibangunkan dan telah memenuhi semua kriteria.

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LIST OF ABBREVIATIONS

2D	- Two Dimensional
3D	- Three Dimensional
AS	- Action Script
RGB	- Red Green Blue
CYMK	- Cyan Yellow Magenta Key(Black)
.PNG	- Portable Network Graphic
.GIF	- Graphic Interchange Format
.JPEG	- Joint Photographic Experts Group
.PDF	- Portable Document Format
.WMF	- Windows Media Format
.SVG	- Scalable Vector Graphics
.WAV	- Windows Wave
.AIFF	- Audio Interchange File Format
.MP3	- Metroid Prime 3
GB	- Gigabyte
CPU	- Central Processing Unit
RAM	- Random Access Memory
API -	- Application Programming Interface
CD	- Compact Disc

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CHAPTER I

INTRODUCTION

1.1 Introduction

Nowadays, there are many games in the world. Although, many games for children to accelerate learning such as 2D Education Game, Math Blaster, Pest Control and a lot of games. People who like to play games are to release tension, to relax their mind from work and to have fun. While for children, games can stimulate and accelerate the growth of children.

The project will focus on hygiene at school canteen among the students in the primary school. As we know, pests are one of the effects which are influenced by the level of hygiene in our environment that can cause food poisoning. Pests can either carry disease within their body, or transmit pathogens via contact due to the unsavory locations where they live and feed. This makes their presence in any kind of food preparation environment unacceptable. Health Minister Datuk Seri Dr. S. Subramaniam (2014) said he does not compromise about hygiene, health and food safety that can affect many parties if underestimated. According to him, until last August, a total of 12,122 cases of food poisoning were reported nationwide by 43 percent or 5,265 cases of suspected caused food served in school canteens and hostel kitchen.

So, this game hope will help and practice children to prioritize cleanliness as to kill the pest that come to their canteen using soap spray. Besides those children nowadays do not even know about the pest that can cause food poisoning so that the aims of this project is to lighten up the dangerous of these pest to their healthy and how they can affect the hygiene at school canteen. The games are designed to ensure the overall development of the child's brain so that the children can perform better in general. Generally, this 2D game aims to gives awareness to the students about important of hygiene and prioritizes cleanliness at school canteen to avoid food poisoning. Additionally, this project also has 2D animation storyline that can make children understand about the pest that can spread disease to their healthy.

1.2 Problem statement

Problem that we want to highlight is pests that can be one of the effects which are influenced by the level of hygiene in our environment. The pest problems at school's canteen can disseminated various infectious food borne diseases to human. According to Datuk Seri Dr Hilmi Yahya (2013), 7229 school canteens were inspected, out of which 99 were ordered to close due to unhygienic conditions.

So, from this problem, a game will be develops to be an education method to children about hygiene and keeping environment clean. Another problem is why we use a game as an education platform? This is because children are more interested in colourful and interactive things. So this game will attract them to play it. The last problem is the lack of awareness about priority of cleanliness in our country. Malaysia is more concerned with entertainment than others. Therefore, we want to bring awareness to the students so that food poisoning can be reduced.

1.3 Objective

The main objectives of this game which are:-

- i. To study about food poisoning, the factors that contribute towards food poisoning cases.
- ii. To design and develop a 2D game as an education method to children about hygiene and keeping environment clean.
- iii. To test and evaluate the effectiveness of the game in teaching children about hygiene.

1.4 Scope

2D game is merely production objects move in a two dimensional space. These objects differ from stills, like photos or logos to more complex objects, like 3D graphics. 2D game were chooses to develops this project by using Adobe Flash. This project is the combination of linear storyline and interactive game as an education method to children about hygiene and keeping environment clean. This is because children are more interested in colourful and interactive things. In this 2D game, containing some aspects include background music, sound effects and simple instructions write in English.

It starts with simple animation story that explain about the pests and then it continue with interactive game to be play by the users. There are three pests that will be introduced to the users, flies, cockroach and rat. For each pest category, there are three levels to complete. The first level is easy level to complete; the next level will be

difficult level to complete. In this game, the user will be given time limitation to complete the game.

This 2D game is suitable for all gender and ages of audiences but more specific to seven until twelve year's old children. This is because children from this age are easily understand the message that we want to deliver and can practice it right away.

1.5 Project Significance

2D game has a lot of attraction. This game can bring awareness to the students to be more prioritized in hygiene and keeping environment clean. By using this game, students will more easily understand the important of cleanliness at school's canteen. The research significant in this project is among the students in the primary school. Hope this application can bring benefits to all the students. So, this game is develop to test and evaluate the effectiveness of the game in teaching children about hygiene.

Besides, this project also helps promotion of 2D game in media industry in Malaysia. Most of the local company prefers to produce 2D game than 3D game because cost to produce 2D game is much cheaper. Moreover, the implementation of 2D game is simpler than developing 3D game which takes time to produce.

The game that was developed must have good messages to show to the children. This project produces game about the important of cleanliness at canteen to avoid pests that can contribute to food poisoning. Children who play this game will kill the pests using soap spray that give meaning of implementing cleanliness at their school canteen. Mostly, children more interest in cartoon or something that interact with them directly than a verbal story. To make sure they play the game, the simple storyline was developed. The storyline include information about the pests and their danger. The

combination of linear 2D animation storyline with 2D game will make sure children understand the messages.

This project is good for education, edutainment, entertainment and also for commercialization. The main purpose of this project is for educational, edutainment and entertainment, therefore the story provides a moral values and good messages to user.

1.6 Expected Output

To develop a game that make user understand about the important of hygiene. The game developed with the Adobe Flash hopefully can make the user know the important to prioritizing cleanliness about pests' problems.

1.7 Conclusion

As a conclusion, this chapter consist project background, problem statement, objective, scope, project significant and expected result. While this chapter is all about the project which is 2D game based learning for children age seven to twelve. The development of this game hoped can give awareness to people about how important to prioritize cleanliness at school canteen to avoid food poisoning. The game about "Kill the pests" was developed by combination of 2D animation and 2D games using Adobe Flash. The combination of linear 2D animation storyline with 2D interactive games wills attentiveness more children to play the game.

Pest infestations are serious and dangerous to health and can affect the level of hygiene in our environment. This research carried out is to educate students that pests can lead to food poisoning and can affect to their health. So this game is hopefully will

gives awareness to the students about important of hygiene and prioritizes cleanliness at school canteen to avoid food poisoning. Moreover, chapter 2 is literature review and project methodology will be covered on the next chapter.