

2D EDUTAINMENT: JOURNEY TO THE LAND OF IMAGINATION

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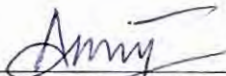
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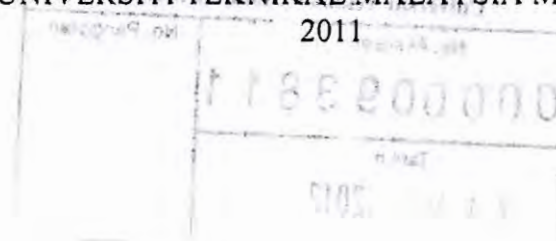
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2D EDUTAINMENT: JOURNEY TO THE LAND OF IMAGINATION

MOHD KAMARUL AMRY BIN UMAR

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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DECLARATION

I hereby declare that this project report entitled
2D EDUTAINMENT: JOURNEY TO THE LAND OF IMAGINATION

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

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DEDICATION

I dedicate special thanks to my parents who giving me support and motivation throughout my PSM. This dedication are also to my PSM supervisor, Pn Norazlin Binti Mohammed for the consultation, advices, comments and support just to make sure that I can finish this PSM successfully. I also want to thanks to my all my friends that always are by my side as I working on this project.

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Alhamdulillah, praise to Allah s.w.t, I am very pleased and grateful of being able to finish my final project. First and foremost, I would like to thank my beloved parents and my family for their support and motivation throughout my project.

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I would also like to thank to Sarni Suhaila Bt Rahim as my evaluator and all my fellow best friends and also to all my classmates whom helps me a lot to complete my PSM. Thank you very much.

ABSTRACT

2D edutainment for children to encourage them uses their active thinking from their right brain. Nowadays, mostly education centre for kids does not teach of physical learning including about their creativity and imagination. Mostly education lesson is about knowledge or in academic section such as calculating, theory and writing. Computer is already become part of teaching tools among most of education centre. Children are very interested in learning about animation and using it for any learning activity. I hope this animation can improve in the future for education about science computer. Journey to The Land of Imagination is created to help the children range between 2-6 years old to develop their creativity and imagination through 2D edutainment.

ABSTRAK

Edutainment 2D untuk kanak-kanak bagi menggalakkan mereka menggunakan pemikiran mereka aktif dari otak kanan mereka. Pada masa kini, kebanyakan pusat pendidikan untuk anak-anak tidak mengajar ilmu fizikal termasuk kira-kira kreativiti dan imaginasi mereka. Kebanyakannya pelajaran pendidikan mengenai pengetahuan atau dalam seksyen akademik seperti mengira, teori dan menulis. Komputer telah menjadi sebahagian daripada alat pembelajaran di sebahagian besar pusat pendidikan. Kanak-kanak sangat berminat untuk belajar tentang animasi dan menggunakan bagi sebagai aktiviti pembelajaran. Saya berharap animasi ini boleh bertambah baik pada masa depan untuk pendidikan mengenai komputer sains. Journey to the Land of Imagination diwujudkan bagi membantu kanak-kanak di antara 2-6 tahun untuk membangunkan kreativiti dan imaginasi mereka melalui edutainment 2D.

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LIST OF ABBREVIATIONS

2D	-	Two Dimensional
3D	-	Three Dimensional
PAL	-	Phase Alternating Line
MPEG-4	-	Moving Picture Experts Group version 4

LIST OF APPENDICES

APPENDIX A	-	GANTT CHART
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CHAPTER I

INTRODUCTION

1.1 Project Background

This project is to develop 2D edutainment for children to encourage them using their active thinking from their right brain. The children, as they grow up, children's creativity, imaginary and passion for learning gradually dissipate after they learn to think in rational way, and by adulthood have mostly disappeared.

The children from 2 – 6 years old are attracted to sound and musical. They can easily learn from exploration and the storytelling. By the exploration and storytelling, the children can think creatively and they also can enjoy themselves during the studies.

The Journey to the Land of Imagination is about siblings gone to fantasy land full with imaginations. The surrounding in the Land of Imagination makes both siblings to think creatively. There are many unique things that the sibling thinks and became reality.

Journey to the Land of Imagination is for the child with an active imagination. This 2D edutainment is helping the children to encourage them to think creatively using their right brain.

1.2 Problem statement(s)

Nowadays, mostly education centre for kids does not teach of physical learning including about their creativity and imagination. Mostly education lesson is about knowledge or in academic section such as language, science or writing. Kids' psychology development will affect their right brain and behavior development. By developing this product, the children can learn more about themselves especially their creativity and imagination.

Computer is already become part of teaching tools among most of education centre. Children are very interested in learning about computer and using it for any activity. However, the resource for e-learning is still limited for education field. Some of the guidance and parent does not realize the benefit of using edutainment to educate the children. From this, edutainment is not been fully utilize of the users.

1.3 Objective

The objectives that are hoped to achieve through this edutainment are:

- a) To develop 2D animation edutainment product

The main purposed of this project is to develop a 2D animation edutainment product about creative thinking and right brain development. Through this, the audience has been learn and entertained about the creative activities and wonderful imagination.

- b) To generate creativity and imaginatively among the kids

This edutainment product is helping in generating children creativity and imagination. It is just like a storytelling but has educational dimension which is in animation giving more impact to audience. The viewers use imagination based on the shows to create a story by own.

- c) To educate kids about imagination and creativity

By creating this project, kids can learn about the imagination and creativity. The children can find out and understand more about creativity through imagination.

1.4 Scope

This 2D edutainment is designed for children 2 – 6 years old. They usually are using their imagination and creativity to solve the problem. At this stage of human development, they usually attracted to sounds and colors. Besides that, this 2D edutainment is suitable for parent and also teacher who teaching at kindergarten.

This 2D edutainment is using exploration and storytelling to deliver the content to the audience. This concept is suitable for the children in order to develop their right brain and also their creativity. Exploration usually using narration to give the direction and the audience can interact to the character.

Storytelling method is usually used in 2D animation and this method is continuously without interaction between the narrator and the audience. By combining both methods, the children can easily learn from this 2D edutainment. The 2D is designed for TV edutainment using Malaysian standard which are MPEG-4 and PAL (level 3).

1.5 Project significance

From this product, the user will learn the lesson that is teaching about creative thinking. This product can applied at kids education centre to help the children learn about creative thinking and activates their right brain. The audience is able to interact and solve the problem that occurred in this 2D edutainment. At the same time, the children will be entertained with the animation of problem solving story.

Apart of that, this product had brought children involved into the computer technology world. This teaching method will be indirectly as an e-learning method because it using technology application for education. It has saved a lot of time and energy for teacher to educate the children about problem solving. Besides, children can learn and watch the edutainment at anytime and anywhere because this product is a standalone product.

1.6 Conclusion

This is the first part which contains briefing on the whole project to be done. It is contained introduction to develop 2D edutainment for children to encourage them using their active thinking from their right brain and overview of the project including problem statement which to change the logical education behavior to children. This project is hoped can be successfully educating children about creative imagination and able to entertain them to make them keep attract with this product. The next chapter is about literature review and project methodology. This chapter will contain reviews and researches about related issues such as 2D animation, facial expression, emotion and learning skills. The methodology to use for project development will be state in this chapter. Software and hardware requirement also included to show and explained the project requirement.

CHAPTER II

LITERATURE REVIEW & PROJECT METHODOLOGY

2.1 Introduction

This chapter deliberates on literature review and project methodology. Literature review includes the project domain, existing system and techniques. For project methodology, it states the method being use by the developer. Besides that, it contains the project requirements where the software and hardware specification is stated and follows by the project schedule and milestone. The planning stage will be elemental at this chapter. The outcome of project will fundamentally depend on this chapter.

Most individuals have a distinct preference for one of these styles of thinking. Some, however, are more whole-brained and equally adept at both modes. In general, schools tend to favor left-brain modes of thinking, while downplaying the right-brain

ones. Left-brain scholastic subjects focus on logical thinking, analysis, and accuracy. Right-brained subjects, on the other hand, focus on aesthetics, feeling, and creativity.

Curriculum—In order to be more whole-brained in their orientation, schools need to give equal weight to the arts, creativity, and the skills of imagination and synthesis.

Instruction—To foster a more whole-brained scholastic experience, teachers should use instruction techniques that connect with both sides of the brain. They can increase their classroom's right-brain learning activities by incorporating more patterning, metaphors, analogies, role playing, visuals, and movement into their reading, calculation, and analytical activities.

Assessment—For a more accurate whole-brained evaluation of student learning, educators must develop new forms of assessment that honor right-brained talents and skills.

Right Brain VS Left Brain

Left Hemisphere Style	Right Hemisphere Style
Rational <ul style="list-style-type: none"> • Responds to verbal instructions • Problem solves by logically and sequentially looking at the parts of things • Looks at differences • Is planned and structured • Prefers established, certain information • Prefers talking and writing • Prefers multiple choice tests • Controls feelings • Prefers ranked authority structures 	Intuitive <ul style="list-style-type: none"> • Responds to demonstrated instructions • Problem solves with hunches, looking for patterns and comparisons • Looks at similarities • Is fluid and spontaneous • Prefers elusive, uncertain information • Prefers drawing and manipulating objects • Prefers open ended questions • Free with feelings • Prefers collegial authority structures
Sequential <ul style="list-style-type: none"> • Is a splitter: distinction important • Is logical, sees cause and effect 	Simultaneous <ul style="list-style-type: none"> • Is a knapper: connectedness important • Is analogic, sees correspondences, resemblances
Draws on previously accumulated, organized information.	Draws on unbounded qualitative patterns that are not organized into sequences, but that cluster around images.

Figure 1.0 Right Brain VS Left Brain

2.2 Domain

2D Edutainment can be defined as an entertainment with educational purposes. The term edutainment is defined in several ways. Hutchison Encyclopedia, for example, defines edutainment as multimedia-related term, used to describe computer software that is both education and entertainment. The American Heritage Dictionary defines edutainment as "the act of learning through a medium that both educates and entertains." According to Buckingham and Scanlon, edutainment is "a hybrid genre that relies heavily on visual material on narrative or game-like formats computer games-education-implications for game developers, and on more informal, less didactic styles of address." Edutainment can be summarized as a deliverable of messages in an entertaining manner.

This project falls into edutainment domain. Edutainment is a form of educational entertainment. There are several forms of edutainment which are games, 2D animations, 3D animations, interactive CD titles, movies, and more which are designed to educate the users as well as amuse. The purpose is to create awareness or an understanding of an idea or generating knowledge. This project target user focuses on 5 and 6 years old kids. Kids learn through playing.

This edutainment is in 2D animation. 2D animation can be defined as motion pictures in a two dimensional environment. It is done by sequencing consecutive images by each image showing the next gradual progression of steps. 2D animation is the simplest animation and it is an effective way to illustrate motion picture. 2D is chosen for this edutainment because of its low bandwidth and faster real-time rendering. As the target user is focused mainly on kids, 2D animation is sufficient enough to catch kids' attention. Moreover, the educational content that is planned to deliver such as shapes and color information can be delivered effectively through 2D animation instead of 3D.

2.3 Existing System

The current existing systems for edutainment are like Pocoyo, Blue's Clues, Dora the Explorer and many more. These three edutainment will take into review for this project. Of course there many more interesting edutainment at market but these three are carefully chosen for its own reason.

For Blue's Clues, it is the most alike to this ongoing project. The episode watched was shapes and colors. For the similarity of educational content that is delivering, the way of the present will be educate and understand. Dora the Explorer is chosen to be in this phase because it is the fully 2D animation edutainment. The way it is animated and the way the educational content is deliver will be identify and comprehend. The currently most award winning edutainment is Pocoyo. Hence, it is chosen for ideating the way the information in conveys to the audience. The approach will be recognize and be aware of.

Thus, the approach of the edutainment will be ideate and understand. The result will be contributing to the project development. The best approach and combination of the approach will be use to make the project effectively develop.

a) **Mickey Mouse Club House (3D Edutainment)**



Figure 2.1 Mickey Mouse Club House

The Mickey Mouse Club House created by Walt Disney and produced by Walt Disney Production. Mostly the characters of this show are in animal form like Donald Duck, Mickey Mouse, Pluto (Dog) and others. Every episode of the show has different activity or story on delivering the information. Usually, Mickey and friends have facing some problems of the activity like go for vacation, having a birthday party and going to picnic. Generally these activities will be the activities that viewers do in real life for example going to school, playing football or go to playground. This approach can let the audience feel and catch up of the delivered information, which is connected with the real situation.

b) **Dora the Explorer**



Figure 2.2 Dora Explorer

Dora the Explorer is an animated television series, which is classified as 2D animation. Dora the Explorer show is preschool show with main character named Dora, 7 years old. This show about Dora with adventures takes place in an imaginative, tropical world filled with jungles, beaches and rainforests. Dora explores her world just as preschoolers always do. In the show, the audience have been ask to join Dora and her best friend Boots for an exciting adventure. Every step of the journey consists of a problem or puzzles that Dora and the viewers must solve in order to move to the next challenge. Dora is bilingual and the knowledge of English and Spanish been used to communicate with other friends, overcome the obstacles and reaching the goals. Dora teaches Spanish word or phrases to the audience and then asks viewers to use the word to solve a problem and forge ahead.

For the Dora's Halloween episode, there have a little monster that lost his way to go home. He has to go back before twelve and asking Dora helping her to find correct way to go back to his house. They have referred the given map to guiding them to send the little monster back to the home. A simple explaining were given about the map and been repeated couple of times to make audience remember it. Along the way back, the time of clock were thought of telling the audience about the current time.

c) **Pocoyo and Friend (3D Edutainment)**



Figure 2.3 Pocoyo

Pocoyo is a pre-school animated cartoon of edutainment, which is view in 3D animation. This type of show is using learning through laugh approach to educate children. Each show take around 7 minutes long to avoid the viewers getting bored.

Pocoyo who is full of curiosity and who loves to play games is the main character of the show. Featuring a cast of colorful, loveable characters, Pocoyo captures the imagination and stimulates children to watch, listen and interact towards the shows.

Besides that, learning through laughter is the way to promote creativity, self-awareness and self-confidence among the children. In the "The Big Sneeze" episode, the story is about the Elly is having a cold and her sneezes are knocking Pocoyo's tower of backs down. From this, they were doing many ways to stop Elly from sneezing. During this episode, the characters have shown some facial expression such as angry because Elly cause the brick collapse. However, the facial expression shows in simple description where involved movement of eyes and mouth only. The main purpose of this learning approach is to create an enjoyable learning environment to the audience. This can attract the audience to keep watching and focus to the animation.

2.3.1 Comparison of Existing systems

Mickey Mouse Club House	Dora the Explorer	Pocoyo and Friend
3D edutainment	2D edutainment	3D edutainment
Using the toddlers to solve the problems	Using the backpack to solve the problems	Using the narration approach to solve the problems
No narrator used	No narrator used	Has narrator used
There are no audience voice in the making choices	There are no audience voice in the making choices	Using audience voice in the making choices

Table 2.1 Comparison in Current System

2.4 Project Methodology

After the invention of the printing press, it is the advent of multimedia that has changed the way we learn and comprehend. Integration of multiple media such as visual imagery, text, audio, video, graphics and animation together multiply the impact of the message.

Multimedia differs fundamentally from the conventional media like slides and films. While, conventional media are linear (one event follows another in a sequence), multimedia is non-linear - it has the capacity for branching in different directions and establishing linkages between different sections or components of the program. The non-linear attribute provides the end-user the luxury of viewing the multimedia presentation at their convenience and pace.

The ADDIE model is basically a generic, systematic, step-by-step framework used by instructional designers, developers and trainers to ensure course development and learning does not occur in a haphazard, unstructured way. It is designed to ensure: (1) learners will achieve the goals of the course, (2) allows for the evaluation of learner's needs, (3) the design and development of training materials, and (4) evaluation of effectiveness of the training program using processes with specific, measurable outcome.

Multimedia Production Process

Project methodology is the core part of developing this product. The smoothness of this development is depending to the chosen methodology. The Multimedia Production Process is the most suitable methodology to develop animation product.

Pre-Production	Production	Post-Production
- Storyboarding	- Placing the character cells over the background layout	- Sound added to the films
- Drawing Picture by Picture	- Background frame will not be remove until next scene	- Re-check the animation for any false made
- Paste on transparency sheet called "cell"	- Record by following the page arrangement	- The film send to any publishing company
- Arrangement of the sheet layers	- Record the drawings by using camera	
- Arrangement of the sheet layers		

Figure 2.4 Multimedia production process

a) Pre-Production

i) Concept Definition

Researches about development the 2D animation have been held in this stage. This project is about 2D animation for edutainment which is educated about creative imagination. Creative imagination is the process of actively creating an image in your mind of something you want to accomplish and holding that picture over a period of time. In this, developing timeline, defining the person responsible for each activity, stating the start or end time of each activity and defining the needed activities. Analysis about the target user, the learning method, type of facial expression and the duration needed to develop the product.

ii) Design

This stage is more in designing the layout and storyline. The content of the product is being divided into several categories based on project requirement.

iii) Production Plan

At this stage, storyboarding of the content has been made in linear storyboard. The storyboard contains sketches of pictures and words, which are, will be the storyline of the animation. The scriptwriting also needed for narration of animated videos.

iv) Documentation

These tasks are documented at the end of this stage. Project documentation is containing proposal for the project and Gantt chart of this project. Every activities or task must be state in clearly.

v) Build Prototype

The layout or interface of this animation has been build to illustrate the content and flow of project. The characteristic and appearance of the character is being decided.

b) Production**i) Content creation**

The character, the scene, sound, animation and linking function have been done. All of animation task is done by applying Macromedia flash professional and Adobe Photoshop, Adobe Illustrator and flash, makes the designing task. The sound editing task is being done by Sound forge software.

ii) Content Processing

In this stage, the layout, background or scene, key frame and character is being developed. All of these is have be done by developer including animating, painting designing and others.

iii) Software Creation

This project is creating an edutainment CD of 2D animation for facial expression. This software has to run by flash player and in Windows platform.

iv) Integration of content and software

The narration or voiceover is recorded and the animation of character is created. The artwork also been produced and all of these is integrated to produce an edutainment program.

v) Build Alpha Version

Some of test is been carry out such as a strict QA procedures are followed to make it closer to final version

vi) Alpha Testing

The first testing is involving clients or users in giving comment on the product, process it and then giving feedback. The project been considered as a working model which is known as alpha testing.

vii) Build Beta Testing

Once all comment is received, the Beta version for testing is being built. The product is presented of first version with all required features including additional features.

c) Post-Production**i) Beta Testing**

At this stage, a group of beta testers releases the product for user test. Any bugs that are found by testers and some minor features testers will be reported.

ii) Released Product

The product is burned to CD-ROM as an edutainment CD for sale. The CD have been presented and delivered to users.

iii) Documentation

Documented all task of development as reference.

2.4.1 Instructional Design

The ADDIE model of instructional design is being use in this project. The

ADDIE model is a systematic instructional design model consisting of five phases: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation

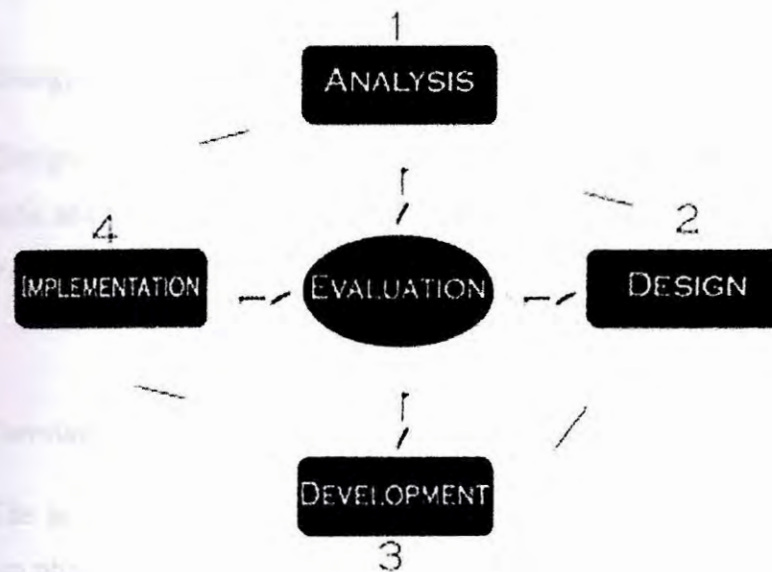


Figure 2.5: The ADDIE Model of Instructional Design/Development

The five phases of ADDIE are as follows:

i) Analysis

During analysis, the designer identifies the learning problem, the goals and objectives, the audience's needs, existing knowledge, and any other relevant characteristics. Analysis also considers the learning environment, any constraints, the delivery options, and the timeline for the project.

ii) Design

Design is a systematic process of specifying learning objectives. Detailed storyboards and prototypes are often made, and the look and feel, graphic design, user-interface and content are determined here.

iii) Development

The actual creation (production) of the content and learning materials based on the Design phase.

iv) Implementation

During implementation, the plan is put into action and a procedure for training the learner and teacher is developed. Materials are delivered or distributed to the student group. After delivery, the effectiveness of the training materials is evaluated.

v) **Evaluation**

This phase consists of formative and summative evaluation. Formative evaluation is present in each stage of the ADDIE process. Summative evaluation consists of tests designed for criterion-related referenced items and providing opportunities for feedback from the users. Revisions are made as necessary.

2.5 **Project Requirement**

The requirement to develop the project is divided into 2 parts which is software and hardware section. Software section is about the programs or application that used to develop the product. Hardware section is including Personal Computer, Scanner, and speaker which more to devices that used to apply or build the product.

2.5.1 **Software Requirement**

Software requirement is listed to make sure the needed requirement is been identified before the development process carry out. 2D animation project software requirement is more to multimedia software elements.

i) Adobe Flash

It is a multimedia platform used to add animation, video, and interactivity to Web pages. It also is an industry standard program for creating interactive features for websites. It can create interactive websites, rich media advertisements, instructional media, engaging presentations, games, and more. Adobe flash is the application that allows us to create and edit artwork and animation and add sound and interactivity. The projects that are created using this software stored in the .fla and .swf file format.

ii) Adobe Photoshop

It is a graphics, photo editing and manipulation software. This also includes image compression software. Photoshop is an advanced application enabling users to create, modify and restore images and has an advanced selection of color sources. It is used for design the cover DVD and bunting.

iii) Adobe Audition

It is a software application to edit, record, and mix audio. This particular software also can be used to add special effects to the audio and compress audio in multiple choices of audio formats. This software is used while develop 2D animates with sound track.

iv) Sound Forge

Sound Forge is chosen because it is very simple of using it to embed sound to the 2D cartoon animation film, where we can edit it and also compose our own music by mixing the existing sounds. The reason of using this application software is it has built-in support for video and can save to WAV file format where can import to flash.

v) **Adobe Premiere Pro**

This software is used for converting .swf format to .wmv format as final production.

vi) **Microsoft Project**

This software is used to record and keep track all project schedules. Gantt chart will be developed using this software.

2.5.2 Hardware Requirement

Table 2.2 Hardware Requirement

Type	Description
Laptop	Aspire 4350
Processor	AMD Turion(tm) X2 Dual-Core Mobile RM-70 2.00GHz
RAM	2.00 GB (1.75 GB usable)
Graphic	nVidia GeForce 9100M G
Hardisk	160 GB WDC WD1600BEVT-22ZCT0 ATA Device
Mouse	Gigabyte USB Optical Wheel Mouse and Gateway mouse pad
Sound	Realtek HD Audio Manager
DVD/CD	HL-DT-ST DVD-RAM GSA-T50N ATA Device

2.6 Conclusion

As for this chapter, we will know about the literature review and also the methodology. It is contained introduction to literature review about the edutainment and overview of the project including comparison with other edutainment animation such as Dora the Explorer, Mickey Mouse Club House and Pocoyo and Friends. As for the methodology I use the multimedia production development and also ADDIE model for my instructional design. This project is hoped can be successfully educating children about creative imagination and able to entertain them to make them keep attract with this product. The next chapter is about analysis. This chapter will contain reviews and researches about current scenario analysis and also the requirement analysis. The current scenario analysis contains the generic flow of existing scenario representation. As for requirement analysis will contain about the analysis of the system to be develop.

CHAPTER III

ANALYSIS

3.1 Introduction

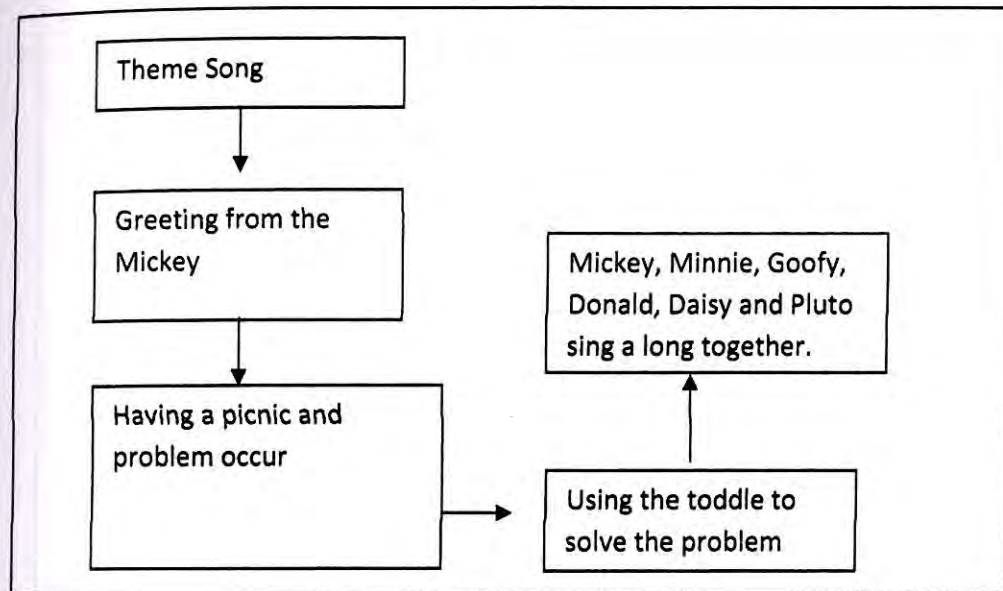
This chapter will deliberate more about the current scenario analysis and requirement analysis. Current scenario analysis explains more on how the current system developed by using the appropriate diagram to visualize the system. By doing so, the best method will be found to implement the project. Then, the requirement analysis includes the main functional requirements which are project specification, storyline and character design. Besides, the information collection also is analyzed by doing questionnaires and interviews. In order to make the project successful, list of hardware, software, and network requirement also be acknowledged.

3.2 Current Scenario Analysis

The brain is divided into two hemispheres that each control specific functions. When you're doing mathematical and analytical thinking, for example, you're utilizing the left side of your brain. When you're creatively thinking or daydreaming, the right side of your brain takes over. Both sides of the brain are connected to each other, so they switch off taking control when necessary. For example, when you're driving, the right side of the brain is at work. When you're balancing your check book, the left side of your brain is in control

The right side of the brain tends to use more creative, fantasy and philosophical thinking, where as the left side of the brain focuses more on facts, numbers and analytical thinking. When you daydream, you're using the right side of your brain. When you're thinking of an original design or drawing, that's also the right side of your brain at work. People who are dominated by the right side of their brain tend to be more creative than people who mostly use the left side of their brain.

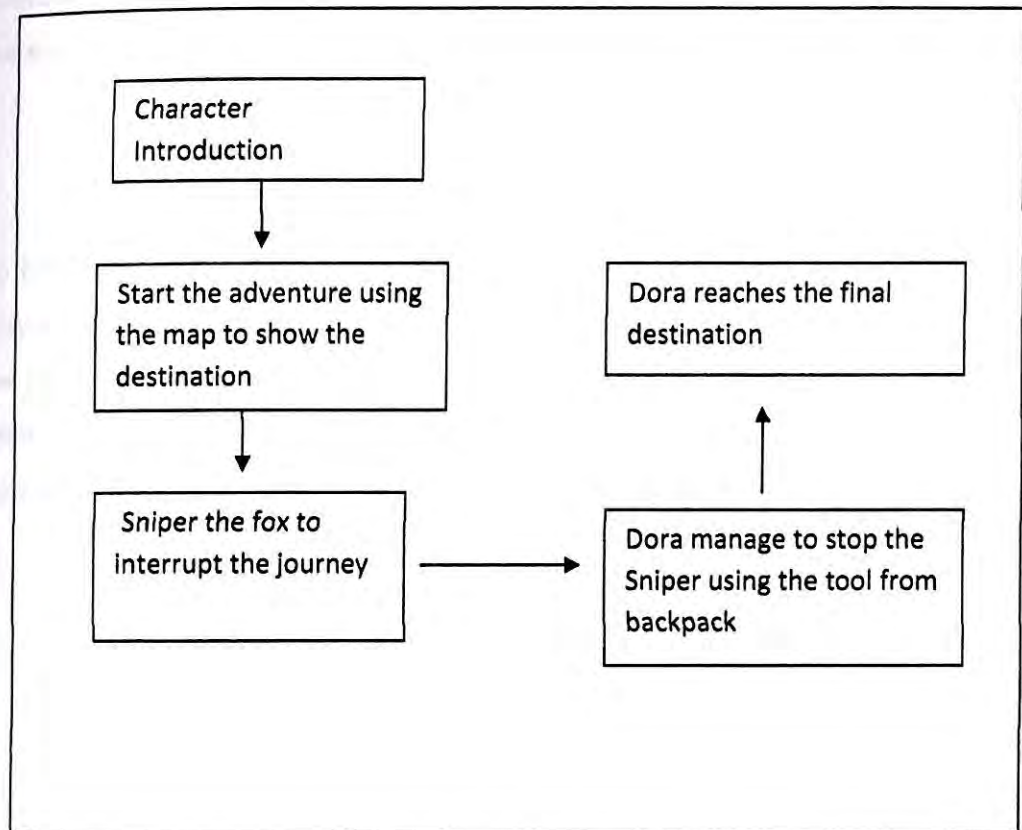
i) **Mickey Mouse Club House**



3.1 Mickey Mouse Club House Storyline

The Mickey Mouse Club House created by Walt Disney and produced by Walt Disney Production. Mostly the characters of this show are in animal form like Donald Duck, Mickey Mouse, Pluto (Dog) and others. Every episode of the show has different activity or story on delivering the information. Usually, Mickey and friends have to face some problems of the activity like going for vacation, having a birthday party and going to picnic. Generally, these activities will be the activities that viewers do in real life, for example going to school, playing football or going to the playground. This approach can let the audience feel and catch up on the delivered information, which is connected with the real situation.

ii) Dora the Explore



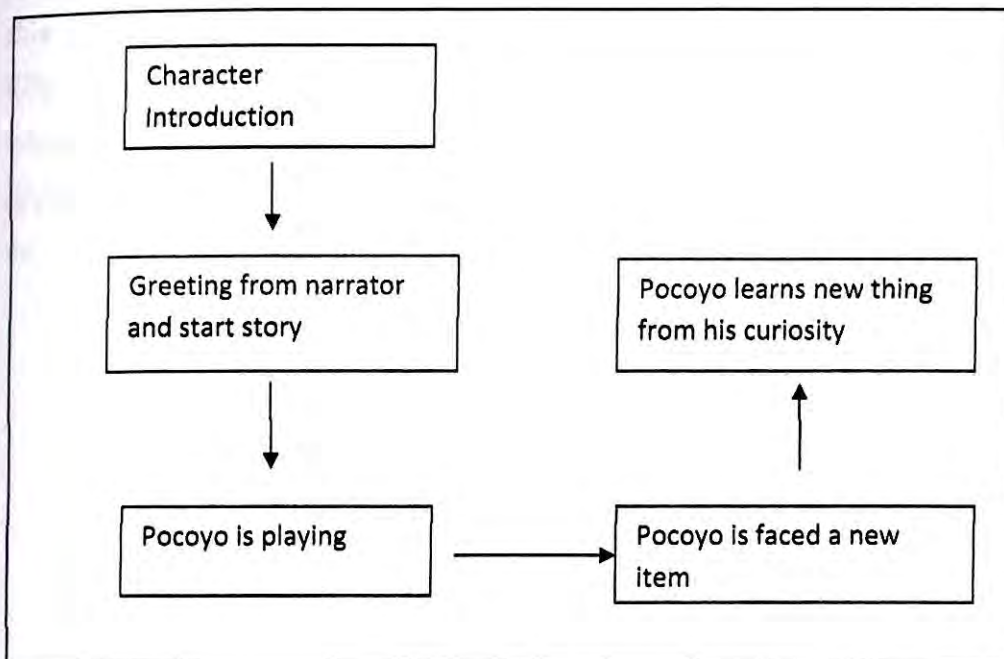
3.2 Dora Explorer Storyline

Dora the Explorer is an animated television series, which is classified as 2D animation. Dora the Explorer show is preschool show with main character named Dora, 7 years old. This show about Dora with adventures takes place in an imaginative, tropical world filled with jungles, beaches and rainforests. Dora explores her world just as preschoolers always do. In the show, the audience have been ask to join Dora and her best friend Boots for an exciting adventure.

Every step of the journey consists of a problem or puzzles that Dora and the viewers must solve in order to move to the next challenge. Dora is bilingual and the knowledge of English and Spanish been used to communicate with other friends, overcome the obstacles and reaching the goals. Dora teaches Spanish word or phrases to the audience and then asks viewers to use the word to solve a problem and forge ahead.

For the Dora's Halloween episode, there have a little monster that lost his way to go home. He has to go back before twelve and asking Dora helping her to find correct way to go back to his house. They have referred the given map to guiding them to send the little monster back to the home. A simple explaining were given about the map and been repeated couple of times to make audience remember it. Along the way back, the time of clock were thought of telling the audience about the current time.

iii) Pocoyo and Friend



3.3 Pocoyo Storyline

Pocoyo is a pre-school animated cartoon of edutainment, which is view in 3D animation. This type of show is using learning through laugh approach to educate children. Each show take around 7 minutes long to avoid the viewers getting bored.

Pocoyo who is full of curiosity and who loves to play games is the main character of the show. Featuring a cast of colorful, loveable characters, Pocoyo captures the imagination and stimulates children to watch, listen and interact towards the shows.

Besides that, learning through laughter is the way to promote creativity, self-awareness and self-confidence among the children. In the "The Big Sneeze" episode, the story is about the Elly is having a cold and her sneezes are knocking Pocoyo's tower of bricks down. From this, they were doing many ways to stop Elly from sneezing. During this episode, the characters have shown some facial expression such as angry because Elly cause the brick collapse. However, the facial expression shows in simple description where involved movement of eyes and mouth only. The main purpose of this learning approach is to create an enjoyable learning environment to the audience. This can attract the audience to keep watching and focus to the animation.

3.3 Requirement Analysis

Requirements Analysis is the process of understanding the customer needs and expectations from a proposed system or application and is a well-defined stage in the Production model.

Requirements are a description of how a system should behave or a description of system properties or attributes. It can alternatively be a statement of 'what' an application is expected to do.

Given the multiple levels of interaction between users, business processes and devices in global corporations today, there are simultaneous and complex requirements from a single application, from various levels within an organization and outside it as well.

The Software Requirements Analysis Process covers the complex task of eliciting and documenting the requirements of all these users, modeling and analyzing these requirements and documenting them as a basis for system design.

3.3.1 Project Requirement

2D Animation

i) Requirement Gathering

Requirement gathering is the technique analysis which will be evaluated at this project. There are four category of requirement gathering which are sequence diagram, storyline, data source and assessment to fulfill the project.

ii) Project specification

The project specification involve in this project are duration, frame rate that will contribute as a main functional to implement the project. The frame rate used is 25fps and it will take seven minutes due to kids' attention.

iii) Storyline

Journey to the Land of Imagination is for the child with an active imagination. This 2D animation is helping the children to encourage them to think creatively using their right brain.

The Journey to the Land of Imagination is about siblings gone to fantasy land full with imaginations. The surrounding in the Land of Imagination makes both siblings to think creatively. There are many unique things that the sibling thinks and became reality.

The Story will try to interact with the audience to solve all the problems that occur in the story. The logical of problem solving can teach the children about do and don't methods.

Storyline Flow:

Plot 1	Plot 2	Plot 3	Plot 4 (Climax)	Plot 5
1 minute	30 sec	1 min 30 sec	1 min 30 sec	30 sec

a) Plot 1

Duration: 1 minute

Location: Store room, living room

Flow:

Aiman search something in the store room. Siti pass by the store and saw someone in the store room. Siti take a peek to see that person in the store room. Siti approach to Aiman and ask him about what he doing. Aiman shock and turn back and replied. Aiman try to lift the box but not success. Siti help Aiman lifting the box. They leaving the store room

b) Plot 2

Duration: 30 seconds

Location: Bed room, in the box

Flow:

They finally reach at their bed room. Siti ask Aiman what he wants to do with the box. Aiman replied that he want to play with the box. Aiman offer Siti to play with him. The sibling entered the box. Aiman ask Siti where she wants to go. Siti replied that she want to go to beach. Both of them closed their eyes and try to imagine the beach.

c) Plot 3

Duration: 1 minute 30 seconds

Location: The Beach

Flow:

Aiman and Siti arrived at the beach suddenly. Both of them shock and opened their eyes. They come out from box. Both of them stroll along the beach. Both of them amaze of the beauty of the beach. All of sudden they heard someone call for help. They saw a cat was drowning at the sea. They ask the audition for their help. They offer three options to audience:

Option 1: Throw a brick to the cat

Option 2: Throw the box to cat

Option 3: Throw the buoy to the cat

After choosing the option, the consequence will show for the option.

Consequence 1: The brick hit the cat and the cat drown quickly

Consequence 2: The cat climb in the box but the box sunk

Consequence 3: The Cat safe.

The correct option Aiman throw the buoy to the cat. The cat safe and thank them. They leave the beach.

d) Plot 4

Duration: 1 minute 30 seconds

Location: The Jungle, Mountain

Plot: **Climax**

They reach at the jungle. Siti saw the weird flower and ask his brother about it. They reach at in front of mountain cliff. They want to climb up the cliff. They ask the audience for help.

Option 1: Use the ladder to climb up the cliff

Option 2: Use the rope to climb the cliff

Option 3: Use the string to climb the cliff

After choosing the option, the character will show the consequences

Consequence 1: They can't reach the top of cliff

Consequence 2: They finally reach the top of cliff

They finally reach the top of cliff. They saw a light and go to the light

e) Plot 5

Duration: 1 minute

Location: Bedroom

Flow:

Aiman and Siti mom search for them. Their mother saw a box and opens it. She found the sibling sleeping soundly in the box.

iv) RAW Data Source

The data source to be developed in this project is categorized into five parts which are character, problem solving, script, audio and text.

a) Character

There are three characters in this story which is Aiman, Siti and Maggie. Aiman and Siti is the main character. Maggie is side character. Aiman is the older brother who is very protective and helpful person. In this animation he shows his leadership as the older brother to help his sister to solve the problems. Siti, the younger one is imaginative and also very curious girl. She always tries to ask something she does not know to her brother. Maggie only occur at the beach scene where she almost drowning in the sea.

b) Problem Solving

The animation is focus more on the method of problem solving. The problem solving is always used in current system but didn't give the effect of the choices.

c) Script

For scripting, the Malay language will be used. Simple Malay language is reasonable by preschool child. The script is according to the storyline and will be consisted of character voice.

d) Audio

The audio used is a kindergarten song because it can attract target user from 3 until 6 years old kids. The simple and attractive song will be use and the format audio will be in .wav format so that the file size is not too large. The song is mostly at the beginning and end of the story. The suspend music when problem is occur will attract the audience. Cheerful music is used for the children relaxation.

e) Text

For text, the simple font will be used. The font is according to Malay language. This is due to the kids understanding.

3.3.2 Software Requirement

Software requirement is listed to make sure the needed requirement is been identified before the development process carry out. 2D animation project software requirement is more to multimedia software elements.

i) **Adobe Flash**

It is a multimedia platform used to add animation, video, and interactivity to Web pages .It also is an industry standard program for creating interactive features for websites. It can create interactive websites, rich media advertisements, instructional media, engaging presentations, games, and more. Adobe flash is the application that allows us to create and edit artwork and animation and add sound and interactivity. The projects that are created using this software stored in the .fla and .swf file format.

ii) **Sound Forge**

Sound Forge is chosen because it is very simple of using it to embed sound to the 2D cartoon animation film, where we can edit it and also compose our own music by mixing the existing sounds. The reason of using this application software is it has built-in support for video and can save to WAV file format where can import to flash

iii) **Adobe Premiere Pro**

This software is used for converting .swf format to .wmv format as final production.

iv) **Microsoft Project**

This software is used to record and keep track all project schedules. Gantt chart will be developed using this software.

3.3.3 Analysis Hardware Requirement

Hardware requirement is listed to make sure the needed requirement is been identified before the development process carry out. 2D animation project hardware requirement is more to animation production tools. Table 3.0 show the hardware requirement.

3.0 Hardware Requirement Analysis

Type	Description
Laptop	Aspire 4350
Processor	AMD Turion(tm) X2 Dual-Core Mobile RM-70
RAM	2.00GHz
Graphic Card	2.00 GB (1.75 GB usable)
Hardisk	nVidia GeForce 9100M G
Mouse	160 GB WDC WD1600BEVT-22ZCT0 ATA Device
Sound	Gigabyte USB Optical Wheel Mouse and Gateway mouse pad
DVD/CD-ROM	Realtek HD Audio Manager
	HL-DT-ST DVDROM GSA-T50N ATA Device

3.4 Project Schedule and Milestones

i) Task 1 – Submit Storyline to Supervisor

We are given time to come out with a few stories with plots and storylines. The storylines are submitted to our supervisor to decide which to be accepted.

ii) Task 2 – Discussion to Select Topic

We discuss the topic and group discussion is formed to come up with ideas to develop our project.

iii) Task 3 – Gather User Requirements

We gather user requirements through survey. Next, we will based to user requirements develop a story.

iv) Task 4 – Storyboard

We will draw and discuss the storyboard whether the story confusing, any too many or too few type of camera angle, or there is too much or too little attention being given to various characters in this task

v) Task 5 – Character Design and Testing Color

This phase is designing characters and testing color for the characters after storyboard are approved.

vi) Task 6 – Background Design and Record Sound

While the storyboards are being made, the voice characters are recording the sound track. Then, design the locations and props.

vii) Task 7 – Animate and Render

Follow the 2D animatics, animate the characters. After complete all of the motion, render the animation.

vii) Task 8 – Prepared for presentation

Burn the DVD include the doc file, .fla file, .avi file

Refer to appendix A for Gantt chart and Milestone

3.5 Conclusion

This chapter cover about the analysis of this 2D edutainment, the current scenario is about the children education using their right brain development. The requirement analysis show about the requirement gathering, the specification of the project produce, analyzes the raw data about 2D design & the development. There are also milestone of the project that show the progress of the project. It is very importance to fulfill the requirements in terms of hardware, software and user's. Hardware requirements is focus on the specification of the computer that used for complete the system. A software requirement is focus on the software program or application that needs to use in the project. Meanwhile, user's requirement sets its significance on the user's needs which move along with the completion of the project.

CHAPTER IV

DESIGN

4.1 Introduction

In this chapter, we will cover about design. The design is one of the production processes. Design is define as realization of a concept or idea into a configuration, drawing, model, mould, pattern, plan or specification on which the actual or commercial production of an item is based and which helps achieve the item's designated objective(s). The elements and principles of design are the building blocks used to create a work of art. The elements of design can be thought of as the things that make up a painting, drawing, design etc. Good or bad - all paintings will contain most of if not all, the seven elements of design.

The Principles of design can be thought of as what we do to the elements of design. How we apply the Principles of design determines how successful we are in creating a work of art.

4.2 Scene Sequence Diagram

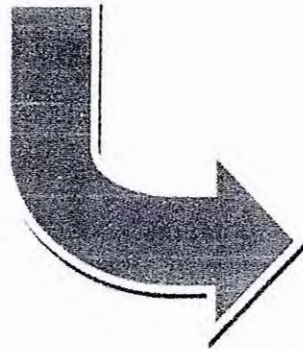
Plot 1:

Duration: 1 minute

Location: Store room, living room

Flow:

- Aiman search something in the store room
- Siti pass by the store and saw someone in the store room
- Siti take a peek to see that person in the store room
- Siti approach to Aiman and ask him about what he doing
- Aiman shock and tum back and replied
- Aiman try to lift the box but not success
- Siti help Aiman lifting the box
- They leaving the store room



Plot 2:

Duration: 30 seconds

Location: Bed room, in the box

Flow:

- They finally reach at their bed room
- Siti ask Aiman what he want to do with the box
- Aiman replied that he want to play with the box
- Aiman offer Siti to play with him
- The sibling entered the box
- Aiman ask Siti where she want to go
- Siti replied that she want to go to beach
- Both of them closed their eyes and try to imagine the beach

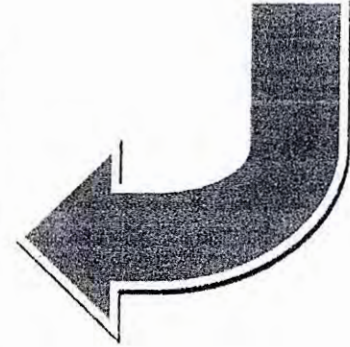
Plot 3:

Duration: 1 minute 30 seconds

Location: The Beach

Flow:

- Aiman and Siti arrived at the beach suddenly
- Both of them shock and opened their eyes
- They come out from box
- Both of them stroll along the beach
- Both of them amaze of the beauty of the beach
- All of sudden they heard someone call for help
- They saw a cat was drown at the sea
- They ask the audience for their help
- Option 1: Throw a brick to the cat
- Option 2: Throw the box to cat
- Option 3: Throw the buoy to the cat
- Consequence 1: The brick hit the cat and the cat drown quickly
- Consequence 2: The cat climb in the box but the box sunk
- Consequence 3: The Cat safe.
- Aiman throw the buoy to the cat
- The cat safe and thank them



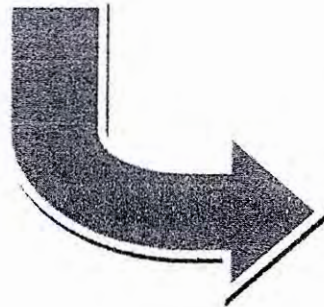
Plot 4:

Duration: 1 minute 30 seconds

Location: The Jungle, Mountain

Plot: Climax

- They reach at the jungle
- Both of them sightseeing in the jungle
- They reach at in front of mountain cliff
- They want to climb up the cliff
- They ask the audience for help
- Option 1: Use the ladder to climb up the cliff
- Option 2: Use the rope to climb the cliff
- Option 3: Use the string to climb the cliff
- Consequence 1: They can't reach the top of cliff
- Consequence 2: They finally reach the top of cliff
- Consequence 3: They fall because the string snap
- They finally reach the top of cliff
- They saw a light and go to the light



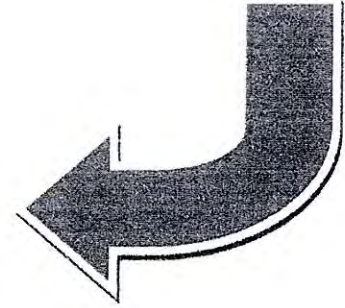
Plot 5:

Duration: 1 minute

Location: Bedroom

Flow:

- Their mom search for them
- Their mother saw a box and open it
- She saw the sibling sleeping soundly in the box.



Storyline Flow:

Plot 1	Plot 2	Plot 3	Plot 4 (Climax)	Plot 5
1 minute	30 sec	1 min 30 sec	1 min 30 sec	30 sec

4.3 Preliminary Design

4.3.1 Storyboard Design

Summary:

Journey to the Land of Imagination is for the child with an active imagination. This 2D animation is helping the children to encourage them to think creatively using their right brain. The Journey to the Land of Imagination is about siblings gone to fantasy land full with imaginations. The surrounding in the Land of Imagination makes both siblings to think creatively. There are many unique things that the sibling thinks and became reality. The Story will try to interact with the audience to solve all the problems that occur in the story. The logical of problem solving can teach the children about do and don't methods.

Storyboard Sketch:

Refer Appendix B

4.3.2 Character Profile

a) Aiman

Full Name: Aiman Danish Abdullah

Nickname: Aiman

Age: 6 years old

Character Category: Main Character

Race: Asian

Skin Tone: Caucasian

Height: 120 cm

Weight: 28 kg

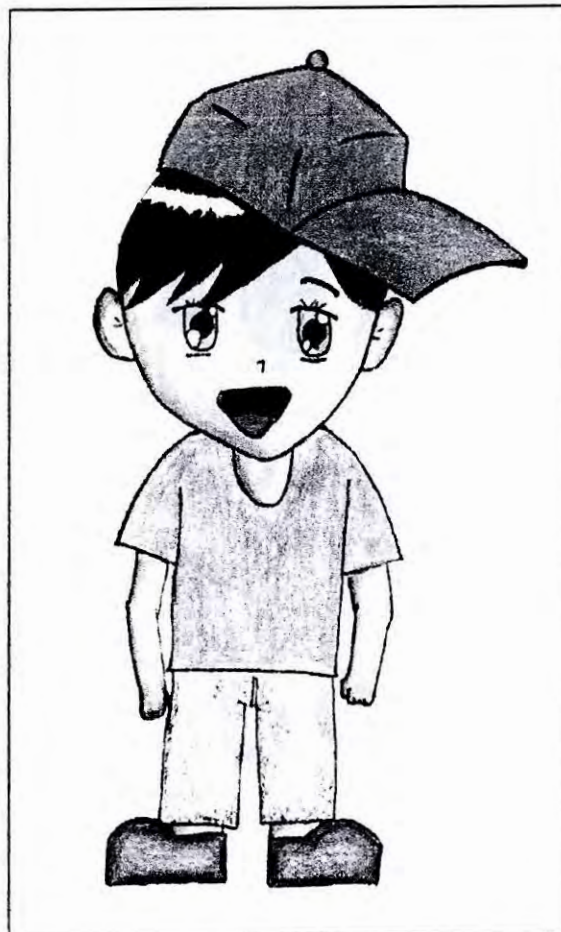
Hobby: Playing Football, Basketball,
Bicycle.

Favorite Food: Meat Pie, Pizza

Favorite drink: Fruit Juice

Favorite TV Program: Jimmy Neutron

HE is: Smiley, Aggressive, and Kind



b) Siti

Full Name: Siti Amisya Abdullah

Nickname: Siti

Age: 4 years old

Character Category: Main Character

Race: Asian

Skin Tone: Caucasian

Height: 115 cm

Weight: 20 kg

Hobby: Reading, Playing doll,

Favorite Food: Spaghetti, Pizza

Favorite drink: Milk

Favorite TV Program: Pucca

HE is: Kind, Helpful, and Curious



c) Maggie

Full Name: Maggie Silvestris

Nickname: Maggie

Age: 1 year old

Character Category: Side Characters

Race: Persian

Skin Tone: Yellow

Height: 87 cm

Weight: 15 Kg

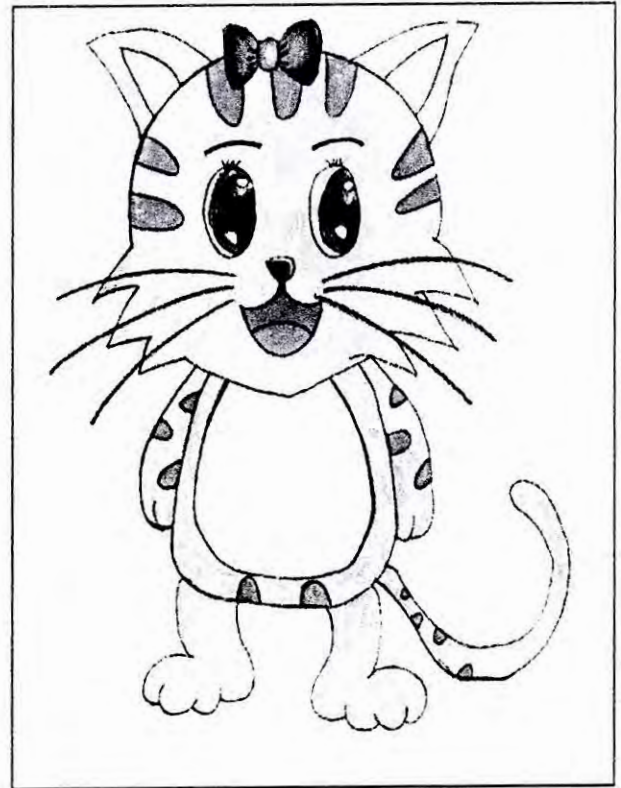
Hobby: Play with ball

Favorite Food: Fish

Favorite drink: Milk

Favorite TV Program: CatDog

SHE is: Cute, smiley, loyalty, peace-lover, likes to explore adventure



Attachment 4.0

Aiman Perspective



FRONT VIEW

¾ VIEW

SIDE VIEW

BACK VIEW

Attachment 4.1

Siti Perspective



FRONT VIEW

¾ VIEW

SIDE VIEW

BACK VIEW

Attachment 4.2

Maggie Perspective



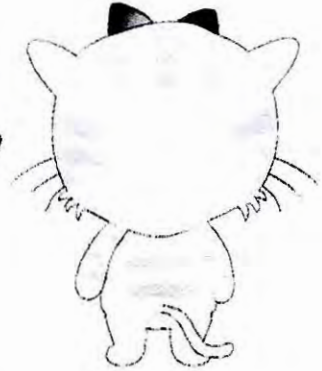
FRONT VIEW



¾ VIEW



SIDE VIEW

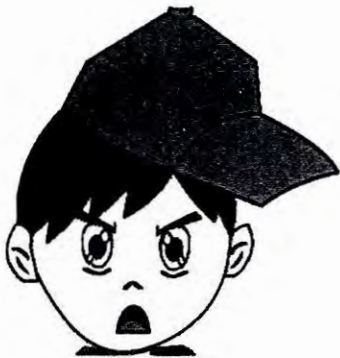


BACK VIEW

Facial Expression

Attachment 4.3

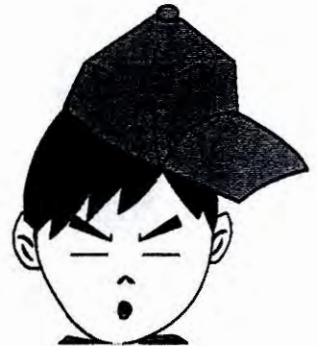
Aiman Expression



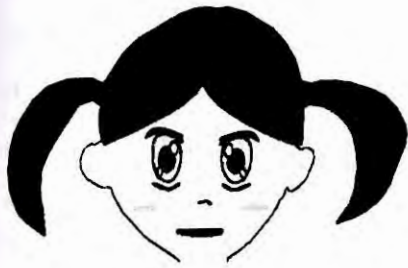
Angry



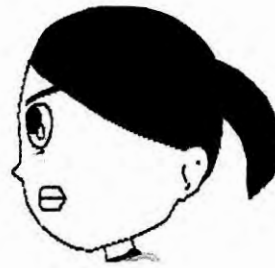
Work up



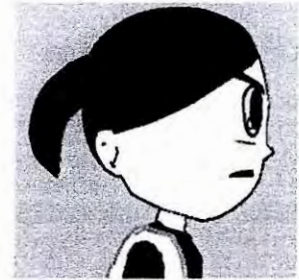
Sigh

Attachment 4.4 Siti Expression

Smile



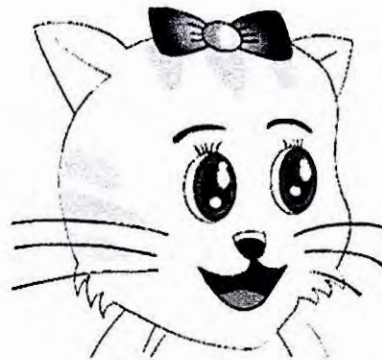
Work up



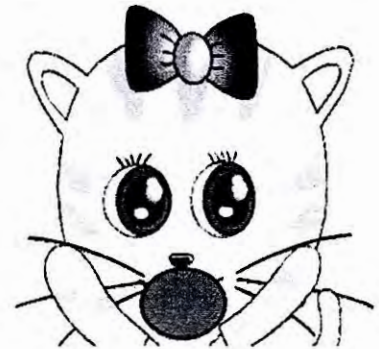
Angry

Attachment 4.5 Maggie Expression

Sleeping



Happy



Afraid

4.5 Conclusion

This chapter cover about the design of this 2D edutainment, the introduction is about the design definition and the important of the design. The scene sequence diagrams show the flow of the animation. The preliminary designs contain about the storyboard design, the storyboard design is important to show the length of the animation, camera angle, dialogue, and etc. There are 4 characters in this animation, Aiman, Siti, Maggie and mom. Aiman and Siti are the main characters, Maggie and mom is side characters. The next chapter we will discuss about implementation, in the next chapter we will describe about media creation, media integration, product configuration management, and implementation status.

CHAPTER V

IMPLEMENTATION

5.1 Introduction

In this phase, the production system is installed, initial user training is complete, user documentation is delivered, and the post implementation review meeting is held. When this phase is completed, the application is in steady-state production. Once the system is in steady-state production, it is reviewed to ensure that we met all of the goals in the project plan for a satisfactory result. Implementing and maintaining a fully operational, instructionally sound course requires functional support from a variety of areas. Personnel and processes are needed to manage, administer, support, and deliver the instruction.

Once the course is operational, it requires continuous support and maintenance to ensure that it operates effectively and cost-efficiently and produces learners who meet job performance requirements.

5.2 Media Creation

5.2.1 Production of Texts

For text, the simple font will be used. The font is according to Malay language. This is due to the kids understanding.

For this project fonts that were used are Arial and Verdana because it is not a serif font. So it will make the reading a lot easier since this project emphasize on text reading and memorizing notes. The fonts that were used are within the size 9 to 12. The selections of font size need to be perfect to avoid the small screen to be crowded with alphabets and numbers. Table 5.1 shows the description of the different text.

Table 5.1: Description of Text

Font Name	Times New Roman	Arial	Comic San	Vacant Capz BRK
Types of font	Serif	Sans Serif	Sans Serif	Sans Serif
Style	Regular	Regular	Regular	-
Size	28	36	42	40
Font	Times New Roman	Arial	Comic San	Vacant Capz BRK

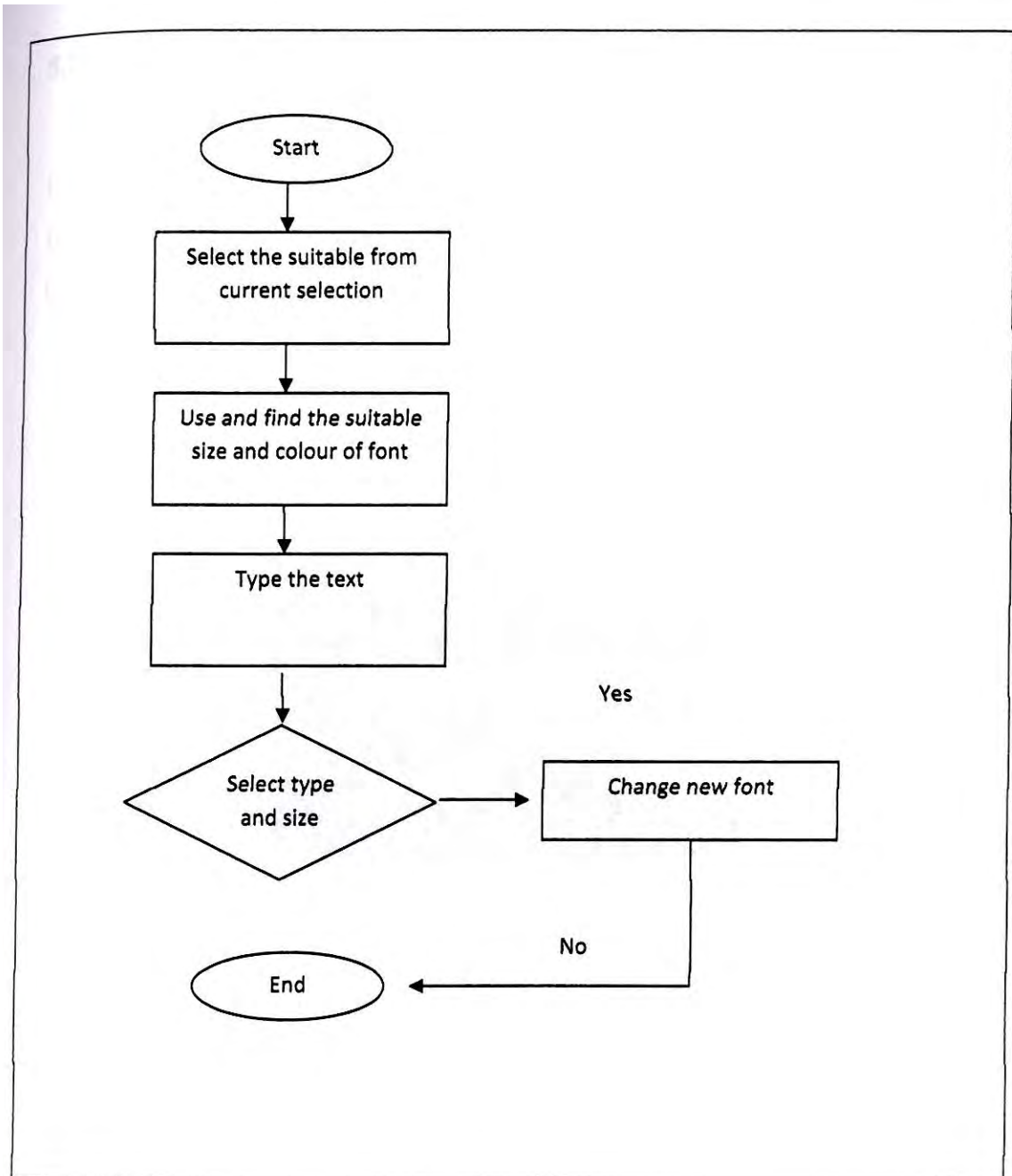


Figure 5.1: Process of Creating Text for Current Text

5.2.2 Production of Graphic

Graphics is another important element in multimedia because it is used to illustrate objects or information. An image can represent something and it can be functional, artistic and imaginary. But in this project, mostly graphics are used as representative of notes that needs memorization. There are basically two types of images which are bitmap and vector image. Figure 5.2 show the differences of vector and bitmap



Figure 5.2 Differences of Vector and Bitmap

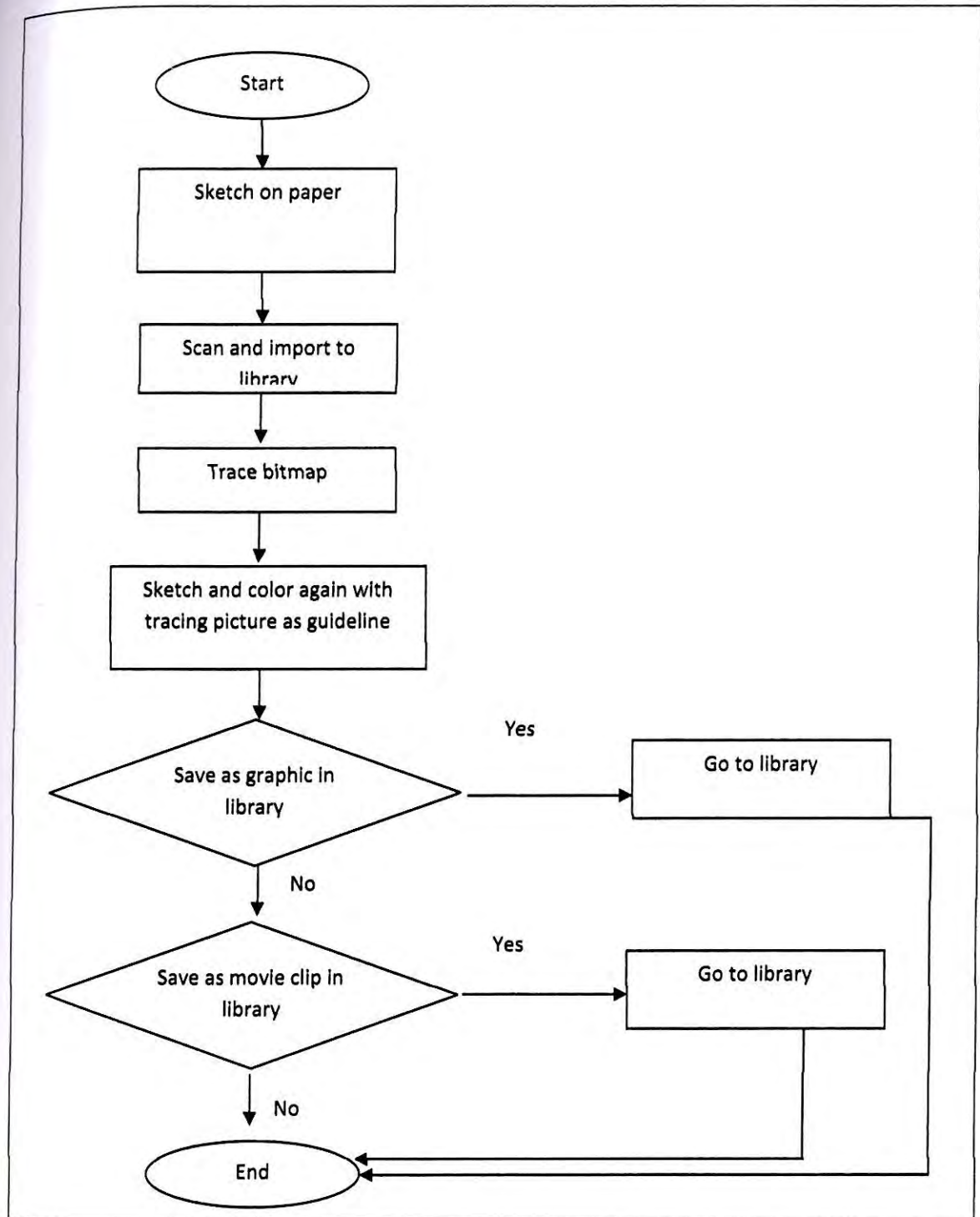


Figure 5.3: Production of Character and Background Graphic

5.2.3 Production of Audio

The audio used is a kindergarten song because it can attract target user from 3 until 6 years old kids. The simple and attractive song will be use and the format audio will be in .wav format because the voice has it originality. The song is mostly at the beginning and end of the story. The suspend music when problem is occur will attract the audience. Cheerful music is used for the children relaxation. Sound forge is used to convert the adult voice into the kid voice using the pitching and the amplitude of the voice. Figure 5.4 show production of background music and Figure 5.5 show production of Voice Over

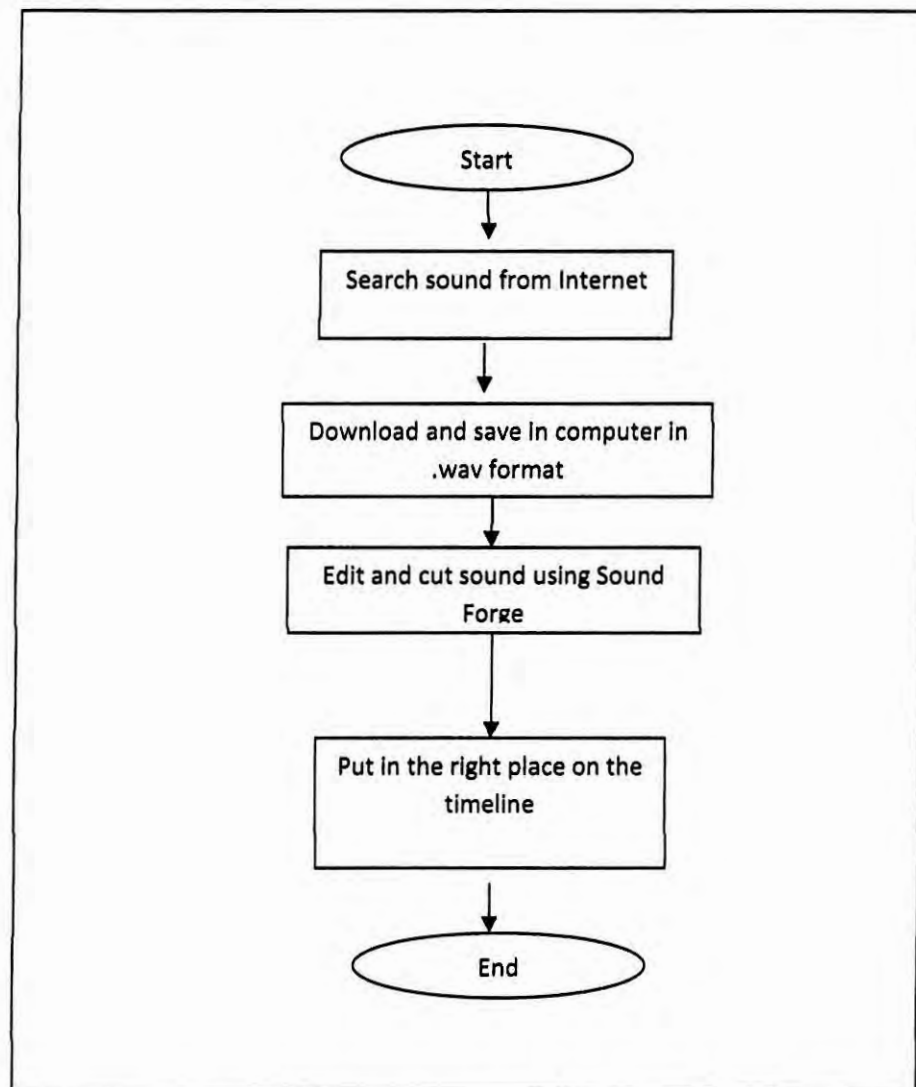


Figure 5.4 Production of background music

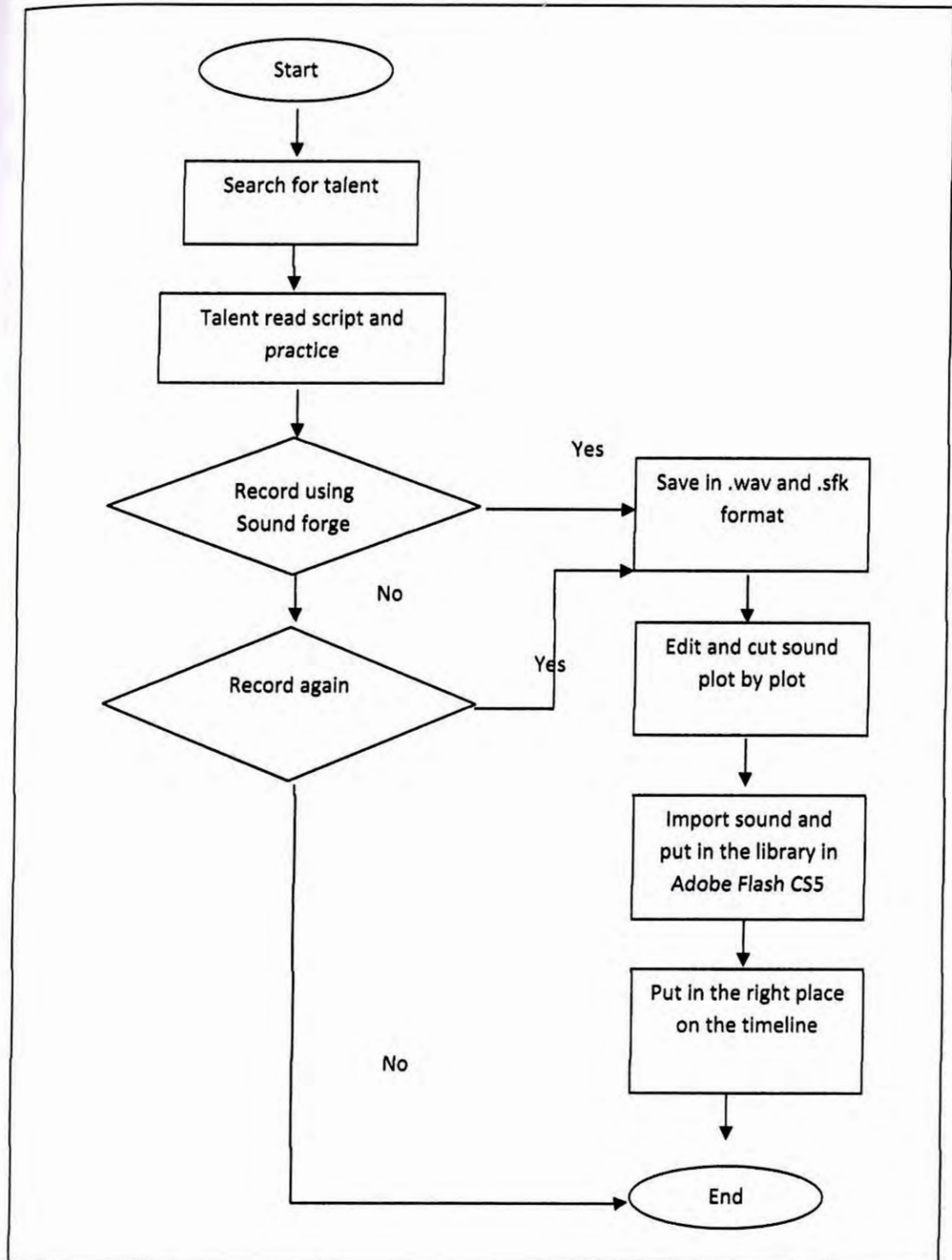


Figure 5.5: Production of Voice Over

5.2.4 Production of Animation

2D animation is defined as designing of moving images in a two-dimensional environment, for example, creating images using the traditional celluloid animation or by making use of the latest computerized animation software.

In other words, 2D animation motion graphics are made or created on a computer system by making use of 2D bitmap graphics or 2D vector graphics. It also encompasses the automated computerized variations of traditional animation techniques like the tweening, morphing, and onion skinning.

The 2D animation techniques commonly used for the creation of analog computer animation, flash animation and also the PowerPoint animation. It is said that the 2D computer graphics technology is actually the basis of generation of digital images which are mostly from two-dimensional models like the 2D geometric models.

5.3 Media Integration

After all production of all the multimedia elements has been done, process of integration can be started. The main platform used to integrate the whole component is Adobe Flash CS4 and using the Window Movie Maker.

5.4 Product Configuration Management

This section will explain the configuration and the standard output of the product.

5.4.1 Configuration Environment Setup

The 2D is designed for TV edutainment using Malaysian standard which are MPEG-4 and PAL (level 3). **Table 5.2** shows the configuration environment setup for this 2D edutainment.

Table 5.2: Configuration environment setup

Software	Configuration
Adobe Flash CS4	Stage Configuration Size : 600 x 800 pixels Width : 800 pixel Height : 600 pixel Background Color : White Frame Rate : 24 fps
Movie Maker	Publish Setting MPEG-4 PAL level 3 Ratio: 3:4 Audio Stream : MP3, 16kbps, Mono Audio Event : MP3, 16kbps, Mono

5.4.2 Version Control Procedure

There are 6 version of this project starting form the first stage of developing the background, text, images, animation and integration of the scenes.

In implementing this project, mane phase were gone through. In each phase, a version is set to make sure there are a backup if anything happens to the project. The versions mostly based on each scene and module.

5.5 Implementation Status

The ADDIE model provides a systematic methodology to plan, develop, and test the course before the product launches:

- a) The course meets important business goals
- b) The course covers content that learners need to know
- c) The course reflects the learners existing capabilities

Table 5.3 show all the tasks and the duration of developing the animation

Table 5.3 Duration Development

Task	Duration
Storyboard	1 week
Graphic Design	3 weeks
Animation Design	5 weeks
Integration	4 weeks
Alteration and Modification	1 week

5.6 Conclusion

This chapter has explained in details about the implementation of this project stage by stage. All material is either developed or obtained from a source which has been collected before arranging it onto the stage. The process started with development of all elements involved; which are production of texts, graphics, audio, animation and process of integration all the elements. The implementation phase is a collaborative process whereby each task must be handled carefully to avoid any difficulties in integration process.

The next chapter will be the testing phase to determine the usability of this project and to indicate that the project has met all the requirements. The test will be done by the user.

CHAPTER VI

TESTING AND EVALUATION

6.1 Introduction

This chapter will explain in details of the last phase of this whole project development. Testing is an activity done with a certain group of user in order to make sure that development met user's expectation and also to gain accuracy in terms of content presentation. In this phase, the result will show whether the application is successful or not.

In this phase, the production system is installed, initial user training is completed, user documentation is delivered, and the post implementation review meeting is held. When this phase is completed, the application is in steady-state production. Once the system is in steady-state production, it is reviewed to ensure that we met all of the goals in the project plan for a satisfactory result.

6.2 Test Plan

Planning in testing is important in order to create the proper result according to the user.

6.2.1 Test User

For this project, the testing phase involved 2 types of user. There were kindergarten who are the beta tester, alpha tester is the person who familiar with multimedia applications.

a) Alpha

This type of tester will test on the functionalities of the application whether it is a really multimedia application user. They also evaluated the design, the animations and other aspects of multimedia elements. Basically, this type of tester's comment will differ from students because they are more professional and evaluated it from a different perspective.

b) Beta

They usually are using their imagination and creativity to solve the problem. At this stage of human development, they usually attracted to sounds and colors. This concept is suitable for the children in order to develop their right brain and also their creativity. Exploration usually using narration to give the direction and the audience can interact to the character. Storytelling method is usually used in 2D animation and this method is continuously without interaction between the narrator and the audience. By combining both methods, the children can easily learn from this 2D edutainment.

6.2.2 Test Environment

Test Environment is important to execute the testing to the user

a) Alpha

For the alpha user, the test was held at their own PC and using the flash drive to transfer the animation.

b) Beta

For the beta tester, the test was held at their classroom. The children will have the experience watching the 2D edutainment with their children.

Refer appendix C for beta environment.

c) Device

A suitable environment will specify a suitable platform to run the application. Table 6.1 show the minimum requirement for testing

Table 6.1: Minimum requirement for testing

Hardware and Software	Description
Output Device (TV)	Brand : Samsung Type: LCD Resolution : 800 X 600 Video type: MPEG-4 Broadcast: PAL level 3
Software	Adobe Flash CS4
Laptop	Aspire 4350 AMD Turion(tm) X2 Dual-Core Mobile RM-70 2.00GHz 2.00 GB (1.75 GB usable) nVidia GeForce 9100M G
Others	Card reader or USB cable for transferring files.

6.2.3 Test Schedule

Test schedule is used to manage all the activity which involves testing. It is to manage the time and duration for tester to test the application. Overall, the testing was made in 2 cycles. The first one involves alpha user which is multimedia expertise; while the other cycle involves beta tester which is kindergartens. Table 6.2 shows the schedule of the testing activity.

Table 6.2: Schedule of testing activity

Test Description	Cycle 1	Cycle 2
Tester	Multimedia testers (Alpha Tester)	Kindergarten (Beta Tester)
Number of testers	10	11
Date	21 June 2011	28 June 2011

6.2.4 Test Strategy

Testers will be guided as they evaluate the application. There are guidelines to conduct the test so that the tester can determine level of software. The classes of test were divided into 5 levels.

- a) Bad – 1
- b) Sufficient – 2
- c) Satisfactory – 3
- d) Good – 4
- e) Excellent – 5

The questions vary among many criteria which are relevant to the animation.

a) Alpha

First, alpha testing was done among the multimedia testers and people who are in the information technology field. The multimedia expertises use their observation and their knowledge about the multimedia and give their suggestion and idea to improve the system for beta test. The questionnaire is much complicated rather than beta tester question.

Refer appendix D for the questions

b) Beta

Beta testing will be conducted after that, which involves the target main users. The kindergartens were representing the real users that will actually use the application. Developer will find out the target user's opinions and suggestion to improve the application.

Refer appendix E for the questions

6.3 Test Implementation

Test implementation will show the result from the testing rather the application is successful or not.

6.3.1 Test Description

Two main testing were done. For both of the tests, it is based on the classes which are module, animation and interactivity. All tests are conducted by the developer. The testing is categorized into functionality testing, usability testing and user acceptance testing.

All test questions will be answered by tester by marking in the numbers to which they agreed most. After that, testers will need to summarize the application after completing the questionnaire. This is to complete the user acceptance test which their opinion and feedback are needed.

6.3.2 Test Result and Analysis

From the tests conducted, these are the result which was gathered and after being calculated by developer. Table 6.3 shows the result for the testing in Alpha testing. While table 6.4 shows the result for the testing in Beta testing.

Table 6.3: Result of Alpha Testing

Data	BITM (3 persons)	BITS (2persons)	BITC (4persons)	DIT (1person)
Characters	3	4	5	5
Storyline	4	4	5	2
Interactivity	4	3	3	2

Table 6.4: Result of Beta Testing

Scale Criteria	1	2	3	4	5
Characters	0	0	8	0	3
Storyline	0	0	0	11	0
Sense of humor	0	0	8	3	0
Interactivity	0	0	0	6	5

*unit by person

6.3.3 Analysis Testing

After conducting all the tests, result were gathered and evaluated. It is to find the weaknesses of the application and solutions to enhance it. All the test result and analysis are taken from the questionnaires. The result is presented in the Table 6.5.

Table 6.5: Test Result Analysis

Criteria	Multimedia testers	Kindergarten
Characters	Average	Good
Storyline	Good	Good
Sense of Humor	Good	Average
Interactivity	Average	Average

6.4 Conclusion

At the end of this testing phase, a lot of feedback is either negative or positive were able to obtained from the testers. The feedbacks are important to know the standard of the application and to see if it has successfully meet the targets and goals. Testing phase enables the developer to see the system weaknesses and limitations. It will help developer to think of a better solution to produce a better application in the future. It can be conclude that the overall application can be considered as average.

Finally, next chapter will conclude everything from the development to the testing phase while developing this application.

CHAPTER VII

PROJECT CONCLUSION

7.1 Observation on Weaknesses and Strengths

There are a few weakness and strengths of using 2d edutainment to teach the children. For the weakness there are display limitations and movement. For the strength there are

The observation on application weaknesses are listed as below:

a) Display limitations – Unlike 3D animation, in 2D animation only one angle or side can be seen at a time, giving the image a flat look.

b) Movement - Objects in 2D animation can only move along a horizontal (x-axis) for simulating forward and backward movement, and a vertical (y-axis) for up and down movement.

The observation on system strength is listed below:

- a) **Easy to learn** – the children is attract to simple animation to make them learn about imagination and creativity.
- b) **Robustness** – The application is use MPEG-4 and PAL type for television broadcast make the system is suitable to in Malaysia
- c) **User friendly** – Only using the CD/DVD to deliver the product to the user.

7.2 Proposition for Improvement

The 2D edutainment offer offline notes where the notes are stand alone to watch. For future improvement this 2D edutainment can be view by the user through online and become more interactive.

7.3 Contribution

All this while, great efforts have been contributed in progress of making the project. With the most advises obtained from *Projek Sarjana Muda* (PSM) supervisor, Pn. Norazlin binti Mohammed, who provides much knowledge and ideas in order to make the project come true. For testing phase, thank for contribution from kindergartens at Tadika Kemas Taman Mulia, Cikgu Sharifah bt Yusof and all FTMK students













7.4 Conclusion

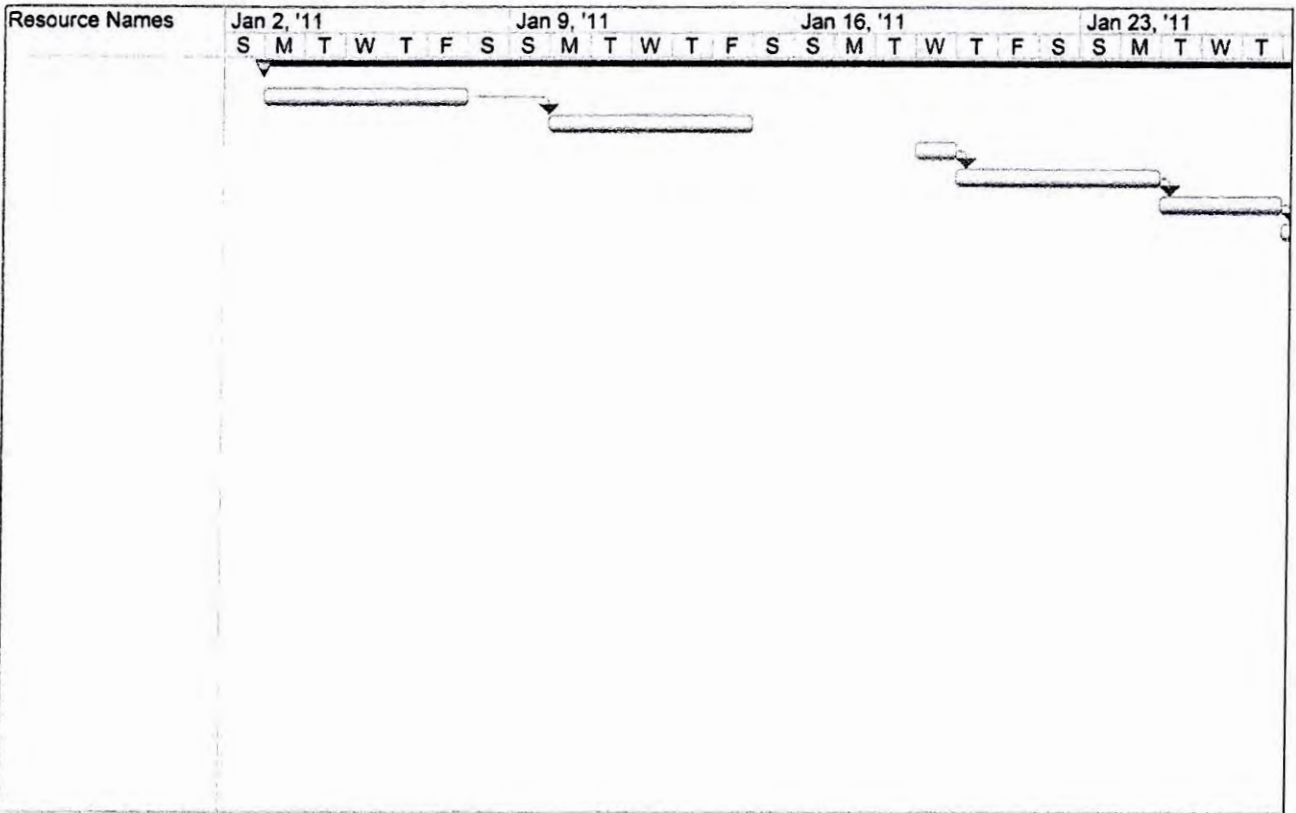
As a conclusion, this application will help children to gain more knowledge and develop knowledge using their right brain. The main reason for this application to be built is to tell the children to consequence of their choices. This 2D edutainment hopefully will help the children to gain knowledge and learn using their right brain actively

Appendix A
GANTT CHART

ID	Task Name	Duration	Start	Finish	Predecessors
1	Initial Phase	20 days?	Mon 1/3/11	Fri 1/28/11	
2	Submit Proposal	5 days?	Mon 1/3/11	Fri 1/7/11	
3	Update Proposal	5 days?	Mon 1/10/11	Fri 1/14/11	2
4	Presentation Proposal	1 day?	Wed 1/19/11	Wed 1/19/11	
5	Define Objective and Scope	3 days	Thu 1/20/11	Mon 1/24/11	4
6	Define Project Requirement	3 days	Tue 1/25/11	Thu 1/27/11	5
7	Submit Chapter I	1 day	Fri 1/28/11	Fri 1/28/11	6
8	Analyse Phase	24 days	Tue 2/1/11	Fri 3/4/11	
9	Define Analysis Problem	2 days	Tue 2/1/11	Wed 2/2/11	
10	Define Requirement Analysis	4 days	Thu 2/3/11	Tue 2/8/11	9
11	Define Software and Specification	3 days	Wed 2/9/11	Fri 2/11/11	10
12	Design Character, Props and Background	10 days	Mon 2/14/11	Fri 2/25/11	11
13	Submit Chapter II and III	15 days	Mon 2/14/11	Fri 3/4/11	
14	Presentation Prototype 1	1 day?	Fri 3/25/11	Fri 3/25/11	
15	Presentation	1 day?	Fri 3/25/11	Fri 3/25/11	
16	Design Phase	20 days	Mon 3/7/11	Fri 4/1/11	
17	Flowchart	12 days	Mon 3/7/11	Tue 3/22/11	
18	System Architecture	2 days	Wed 3/23/11	Thu 3/24/11	17
19	User Interface Design	4 days	Fri 3/25/11	Wed 3/30/11	18
20	Submit Chapter IV	4 days	Tue 3/29/11	Fri 4/1/11	
21	Presentation Prototype 2	7 days?	Mon 4/4/11	Tue 4/12/11	
22	Presentation	7 days?	Mon 4/4/11	Tue 4/12/11	
23	Progress Project Development	10 days	Tue 4/12/11	Mon 4/25/11	
24	Project Development	10 days	Tue 4/12/11	Mon 4/25/11	
25	Final Presentation 1	1 day	Tue 4/26/11	Tue 4/26/11	
26	Presentation	1 day	Tue 4/26/11	Tue 4/26/11	
27	Final Presentation 2	47 days?	Wed 4/27/11	Thu 6/30/11	
28	Presentation	47 days?	Wed 4/27/11	Thu 6/30/11	

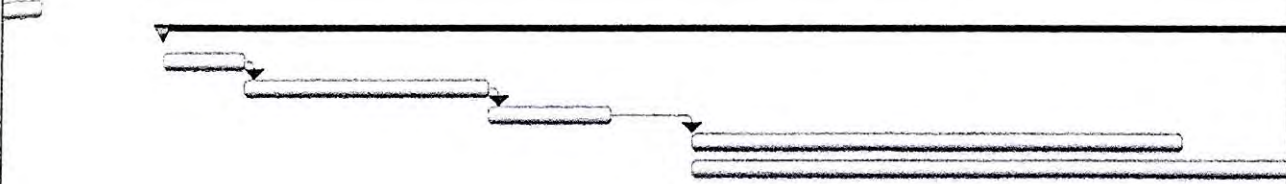
Project: Gantt chart for Journey to The
Date: Tue 7/12/11

Task		Rolled Up Progress	
Progress		Split	
Milestone		External Tasks	
Summary		Project Summary	
Rolled Up Task		Group By Summary	
Rolled Up Milestone		Deadline	



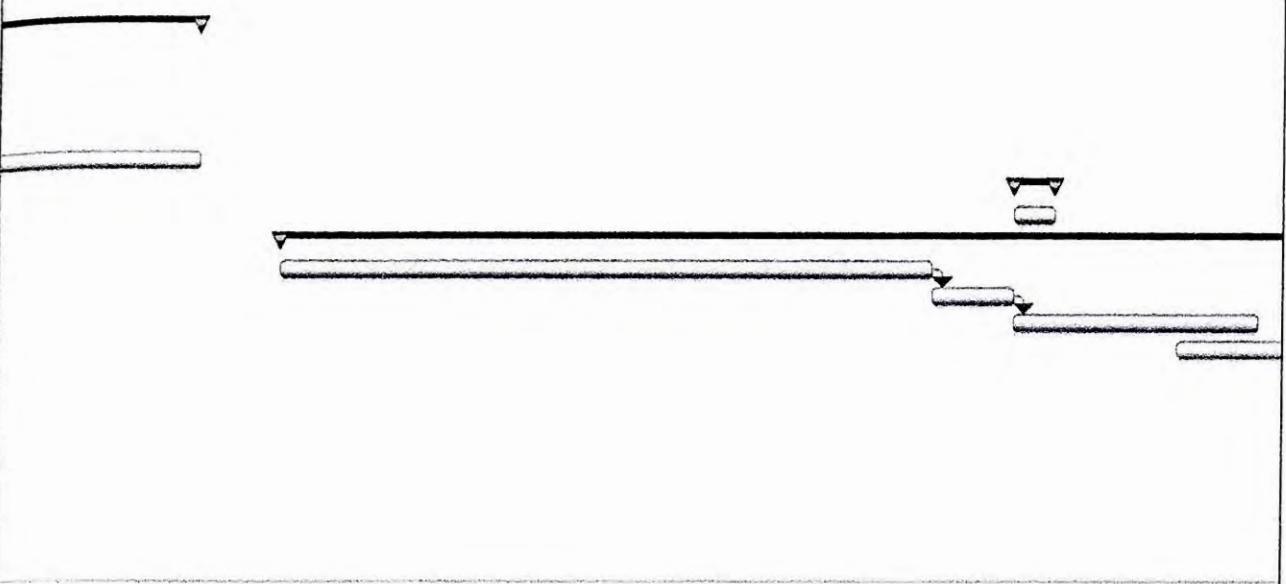
Project: Gantt chart for Journey to The
Date: Tue 7/12/11

Task		Rolled Up Progress	
Progress		Split	
Milestone		External Tasks	
Summary		Project Summary	
Rolled Up Task		Group By Summary	
Rolled Up Milestone		Deadline	



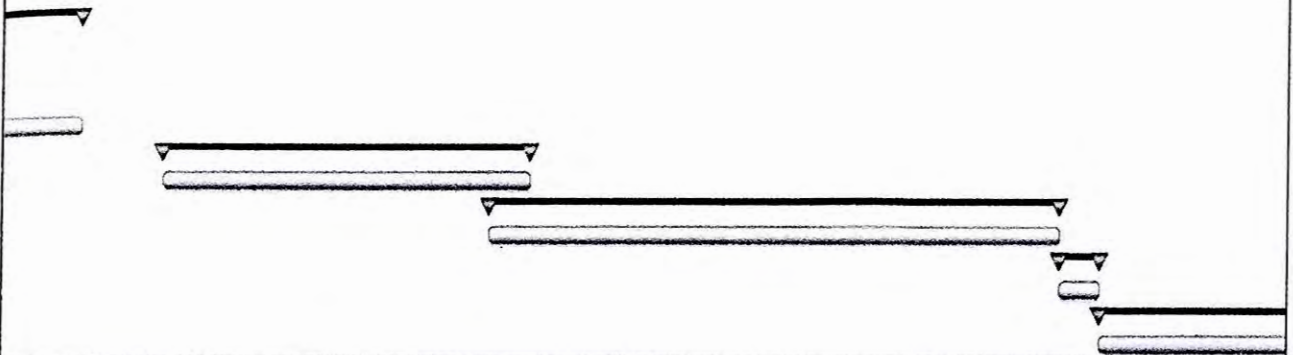
Project: Gantt chart for Journey to The
Date: Tue 7/12/11

Task		Rolled Up Progress	
Progress		Split	
Milestone		External Tasks	
Summary		Project Summary	
Rolled Up Task		Group By Summary	
Rolled Up Milestone		Deadline	



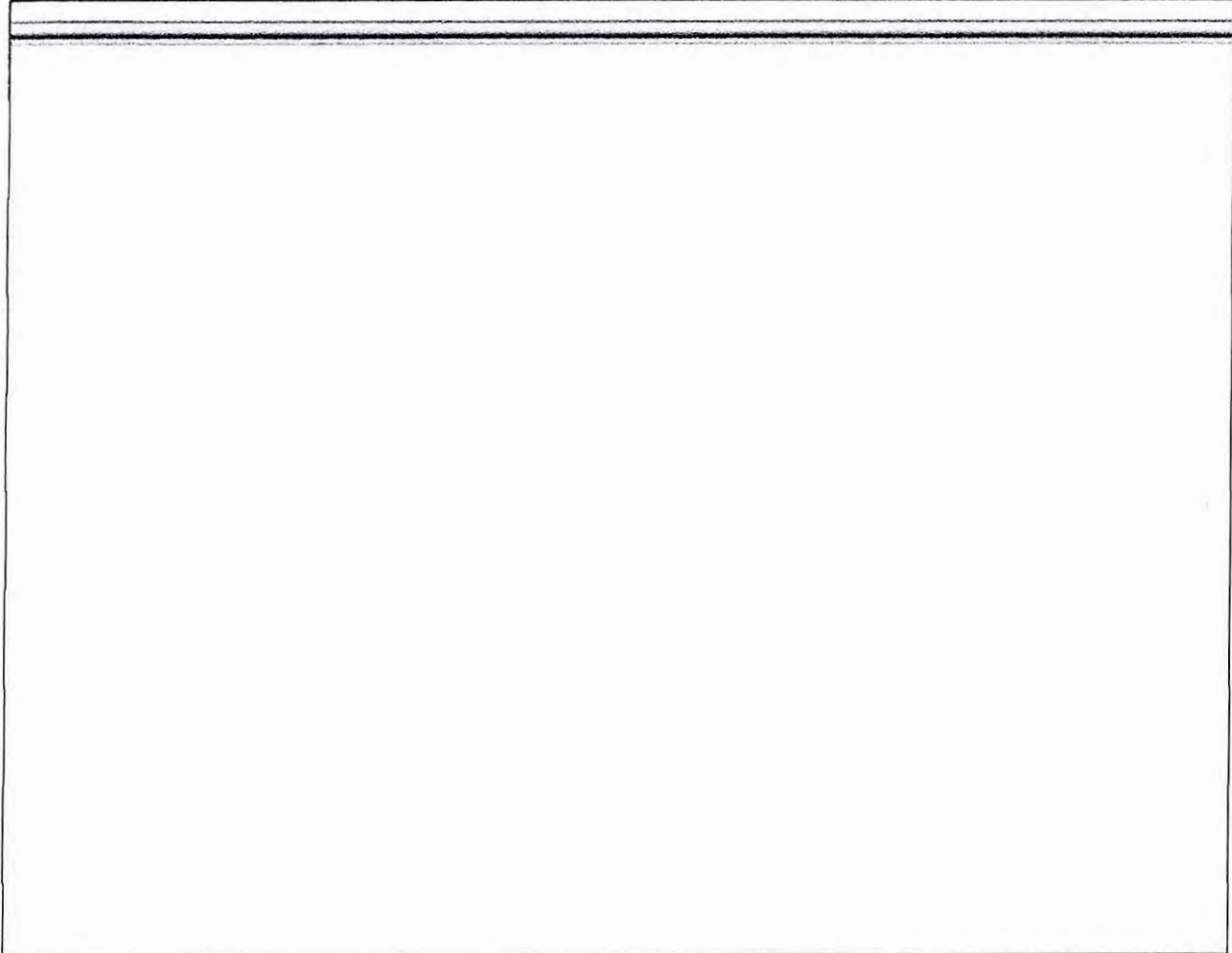
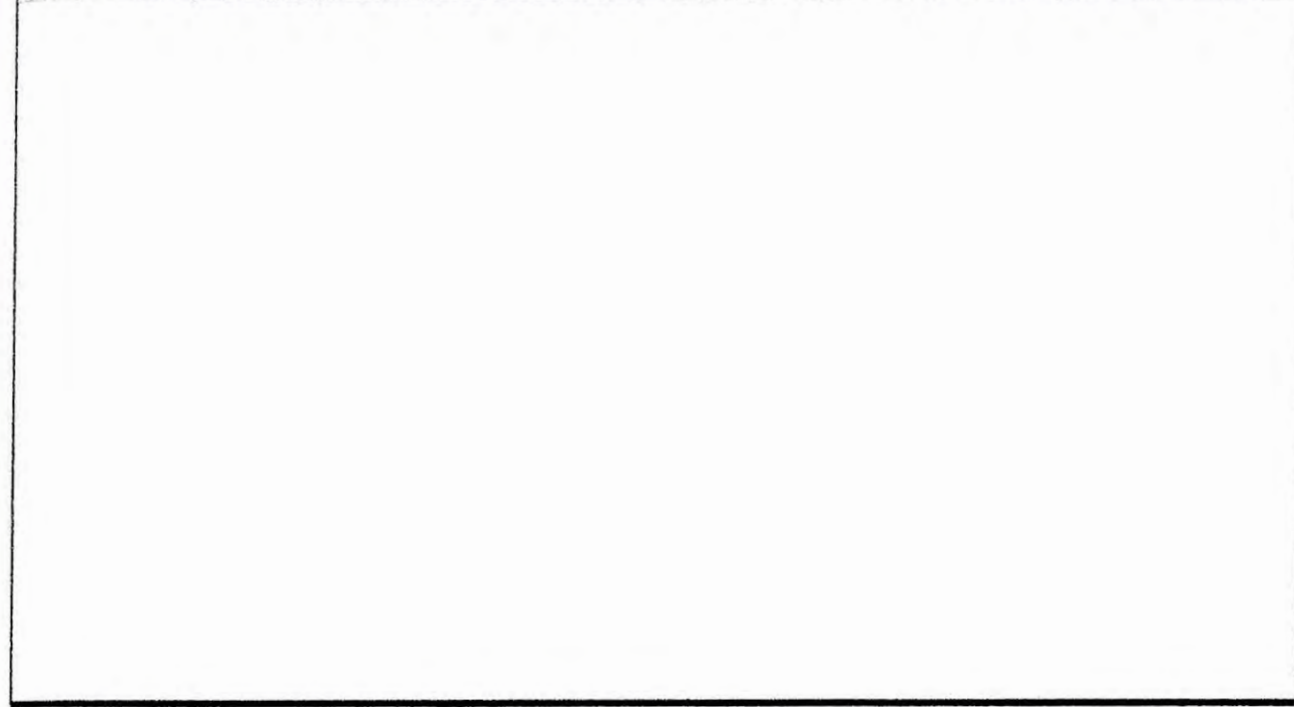
Project: Gantt chart for Journey to The Date: Tue 7/12/11

Task		Rolled Up Progress	
Progress		Split	
Milestone		External Tasks	
Summary		Project Summary	
Rolled Up Task		Group By Summary	
Rolled Up Milestone		Deadline	



Project: Gantt chart for Journey to The
 Date: Tue 7/12/11

Task		Rolled Up Progress	
Progress		Split	
Milestone		External Tasks	
Summary		Project Summary	
Rolled Up Task		Group By Summary	
Rolled Up Milestone		Deadline	



Project: Gantt chart for Journey to The Date: Tue 7/12/11	Task		Rolled Up Progress	
	Progress		Split	
	Milestone		External Tasks	
	Summary		Project Summary	
	Rolled Up Task		Group By Summary	
	Rolled Up Milestone		Deadline	

Jun 5, '11 Jun 12, '11 Jun 19, '11 Jun 26, '11
 W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F



Project: Gantt chart for Journey to The Date: Tue 7/12/11	Task		Rolled Up Progress	
	Progress		Split	
	Milestone		External Tasks	
	Summary		Project Summary	
	Rolled Up Task		Group By Summary	
	Rolled Up Milestone		Deadline	

Appendix B
STORYBOARD

TITLE: Journey To The Land of Imagination

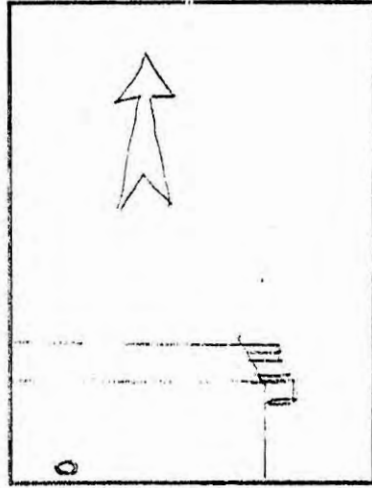
PAGE: 1

Plot 1

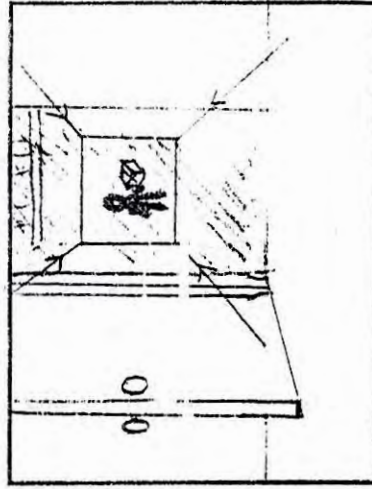
SC: 1 BG: 1 PANEL: 1



SC: 2 BG: 1 PANEL: 2



SC: 3 BG: 1 PANEL: 3



DIALOGUE:

The wind noise heard

ACTION:

-

SLUG:

Camera pan left

DIALOGUE:

The weird noise become louder

ACTION:

-

SLUG:

Camera pan left

DIALOGUE:

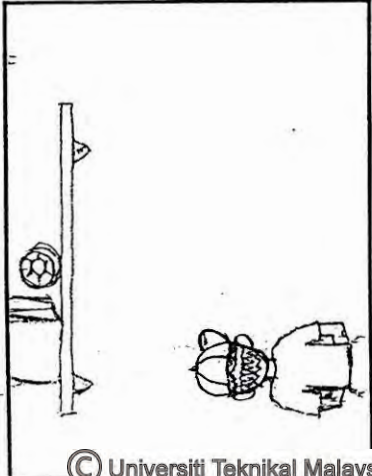
Some one in stare room

ACTION:


SLUG:

room in

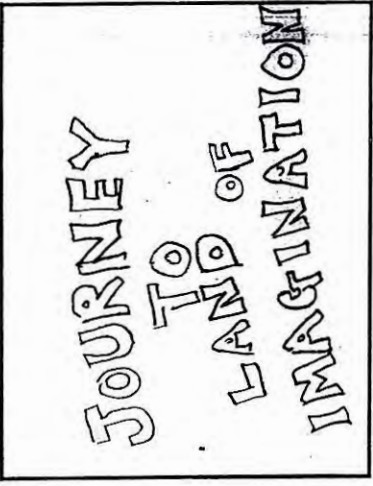
SC: 4 BG: 2 PANEL: 4



SC: 5 BG: 2 PANEL: 5



SC: 6 BG: 3 PANEL: 6

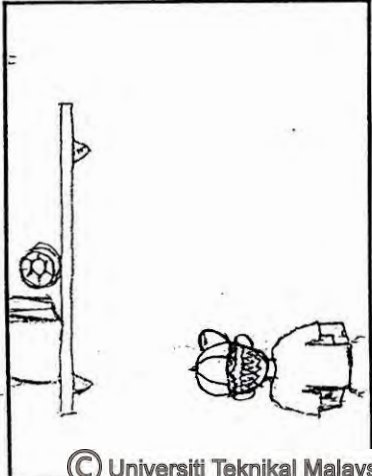


DIALOGUE:
Journey to land of imagination


ACTION:
Title show

SLUG:
Long shot, middle shot

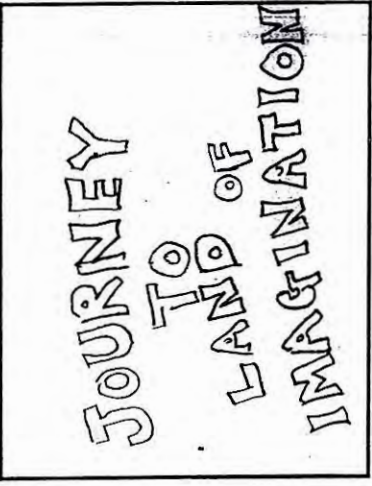
SC: 4 BG: 2 PANEL: 4



SC: 5 BG: 2 PANEL: 5



SC: 6 BG: 3 PANEL: 6

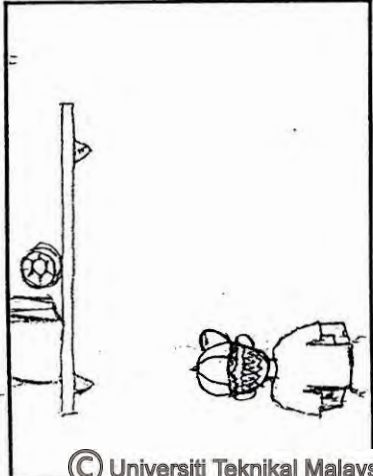


DIALOGUE:
Aiman: Waw!!!


ACTION:
Aiman found something interesting.

SLUG:
Middle shot

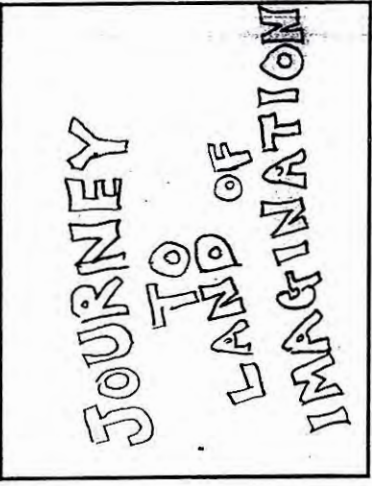
SC: 4 BG: 2 PANEL: 4



SC: 5 BG: 2 PANEL: 5



SC: 6 BG: 3 PANEL: 6

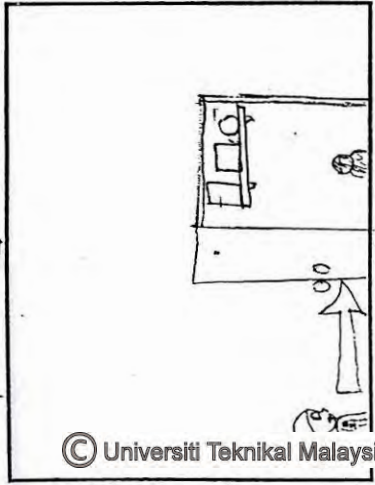


DIALOGUE:
Aiman: Hmm....

ACTION:
Aiman search for something in store room

SLUG:
Middle shot

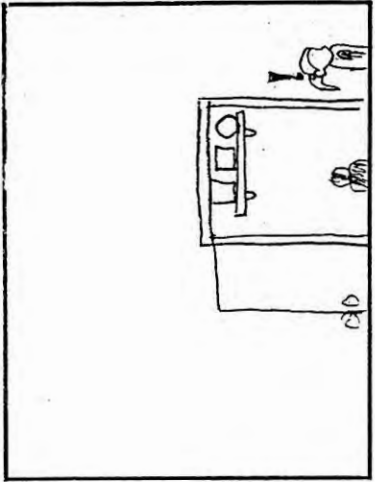
SC: 7 BG: 1 PANEL: 7 SC: 8 BG: 1 PANEL: 8 SC: 9 BG: 1 PANEL: 9



DIALOGUE:
Siti: Hm... Hm... Hm...

ACTION:
Siti pass by the store room

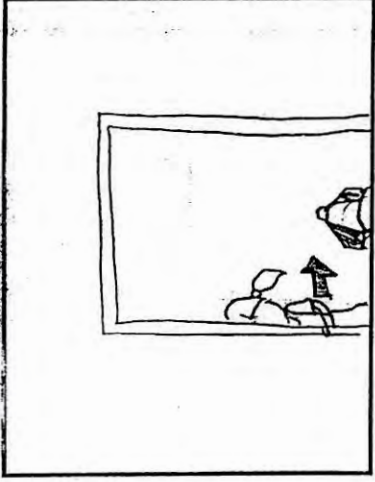
SLUG:
Middle shot



DIALOGUE:
Siti: ha?

ACTION:
Siti shock when she find out someone in the store room

SLUG:
Mid shot



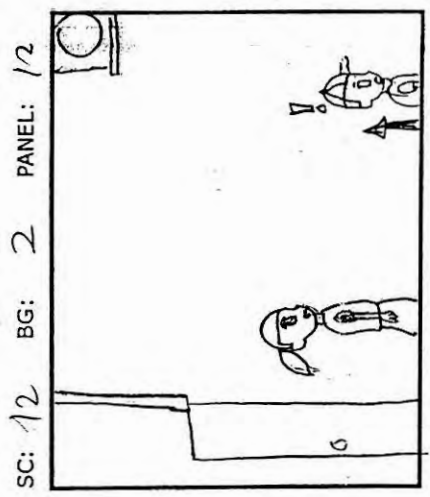
DIALOGUE:
-

ACTION:
Siti take a peek to the store room to find out who in the store room

SLUG:
Mid shot

TITLE: Journey to the land of imagination

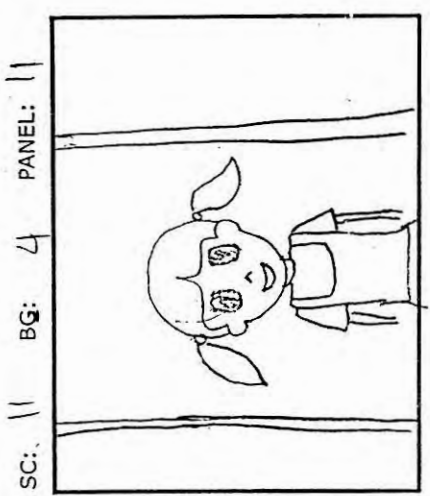
PAGE: 1



DIALOGUE:
Aiman: Opecat!!

ACTION:
Aiman shocked

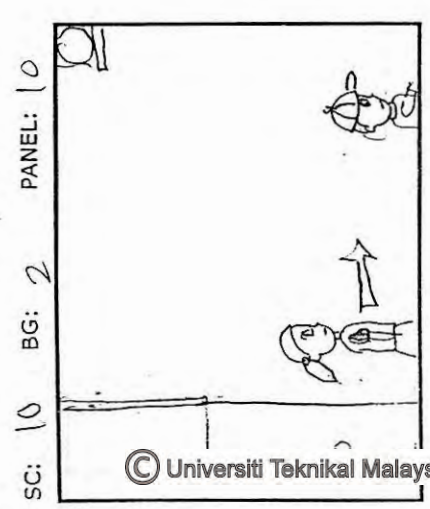
SLUG:
Mid shot



DIALOGUE:
Siti: Apa abang tengah buat?

ACTION:
Siti ciska Aiman what is he doing

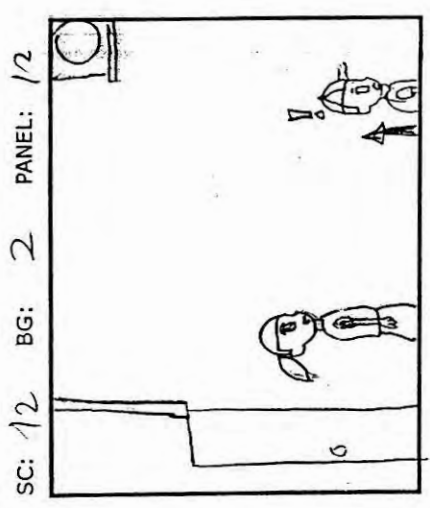
SLUG:
Close up, mid shot



DIALOGUE:
-

ACTION:
Siti approach his brother aiman

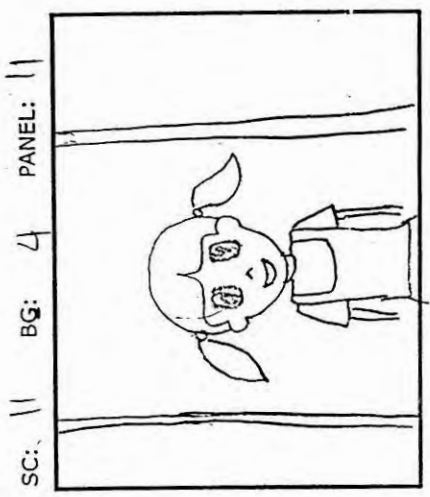
SLUG:
Mid shot



DIALOGUE:
Aiman: Opatat !!

ACTION:
Aiman checked

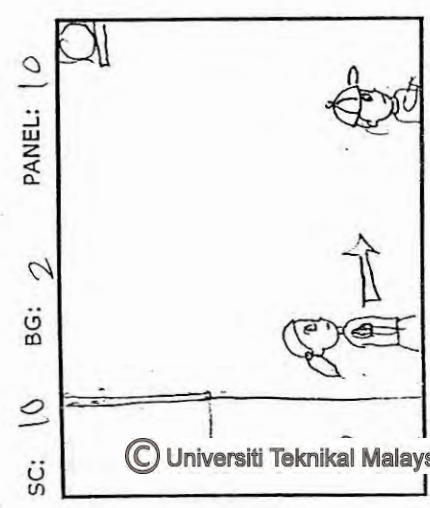
SLUG:
Mid shot



DIALOGUE:
Siti: Apa abang tengah buat?

ACTION:
Siti ask Aiman what is he doing

SLUG:
Close up, mid shot



DIALOGUE:
-


ACTION:
Siti approach his brother aiman

SLUG:
Mid shot 1

TITLE: Journey to the Land of Imagination

PAGE: 3

SC: 13 BG: 5 PANEL: 12

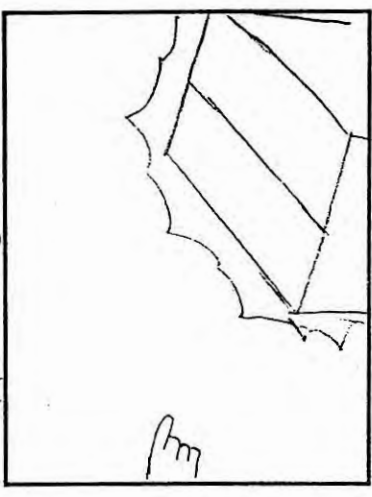


DIALOGUE:
Aman: Owh siti, abang inget sape tadi?

ACTION:
Aman explain to siti

SLUG:
Close up

SC: 14 BG: 6 PANEL: 14

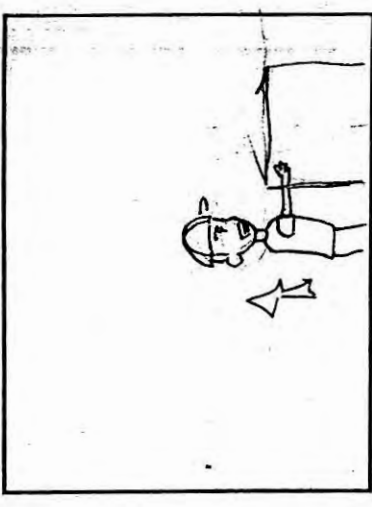


DIALOGUE:
Aman: Abang cari kotak ke.

ACTION:
Aman show the box that he found

SLUG:
Close up

SC: 15 BG: 7 PANEL: 15



DIALOGUE:
Aman: Egh!!!

ACTION:
Aman try to lift up the box but not success

SLUG:
Med shot

Plot: 2

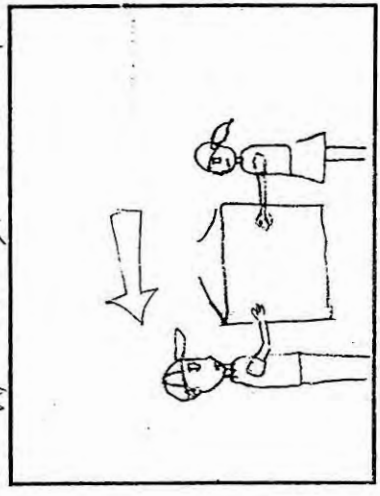
SC: 16 BG: 4 PANEL: 16 SC: 17 BG: 2 PANEL: 17 SC: 18 BG: 7 PANEL: 18



DIALOGUE:
-

ACTION:
Siti offer aiman her help

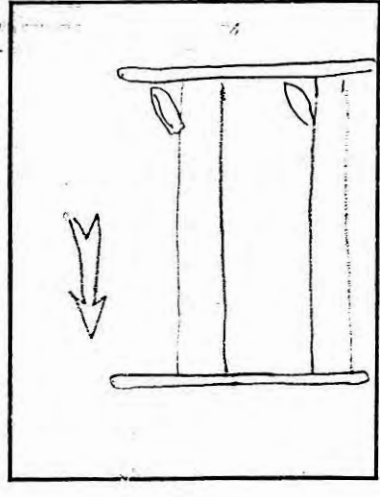
SLUG:
Close up



DIALOGUE:
-

ACTION:
Siti and aiman lift up the box and leave the store room

SLUG:
Med shot, pan right

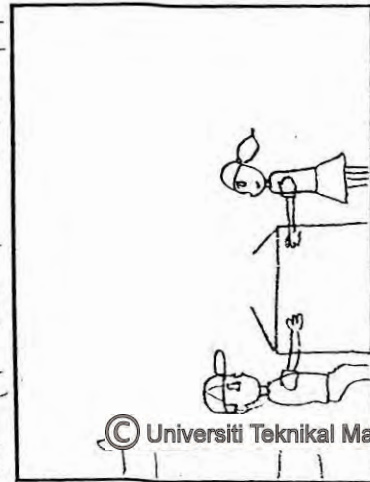


DIALOGUE:
-

ACTION:
Show their bed room

SLUG:
pan right, med shot

SC: 19 BG: 7 PANEL: 19



DIALOGUE:

Aiman: Fuh!!! bukannya kontak nie

ACTION:

Awan and Siti reach to their bedroom

SLUG:

Med shot

SC: 20 BG: 7 PANEL: 20



DIALOGUE:

Siti: Apa abang nak buat dengan kotak nie?

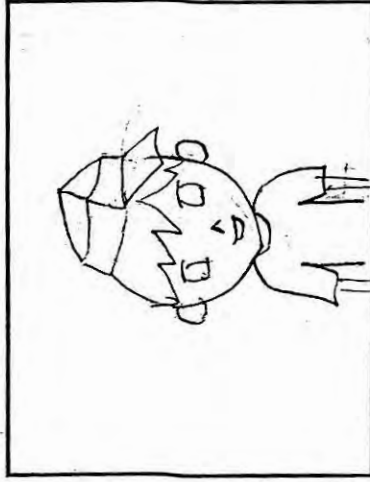
ACTION:

Siti ask Aiman about what he want to do with the box

SLUG:

Close up, med shot

SC: 21 BG: 7 PANEL: 21



DIALOGUE:

Aiman: Abang nak bermain dengan kotak nie. Adik leh join abang nie?

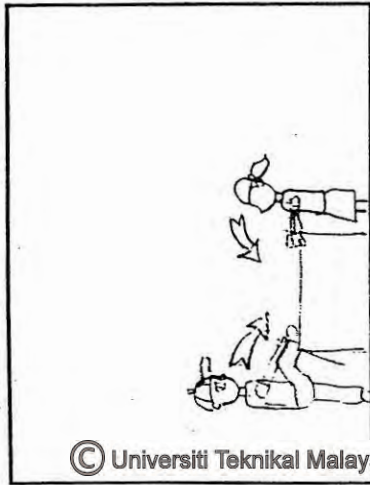
ACTION:

Aiman replied -

SLUG:

Close up, med shot

SC: 22 BG: 7 PANEL: 22

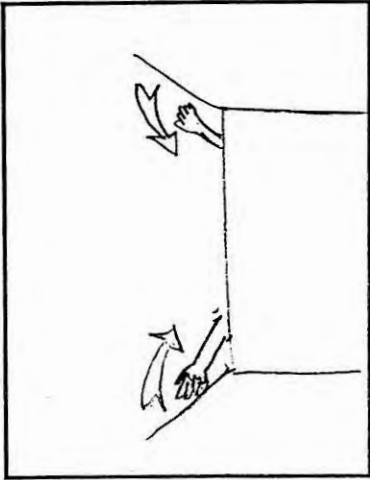


DIALOGUE:
Simon: Tom masuk dalam kotak nih

ACTION:
Both of them entered the box

SLUG:
long shot, med shot

SC: 23 BG: 7 PANEL: 23

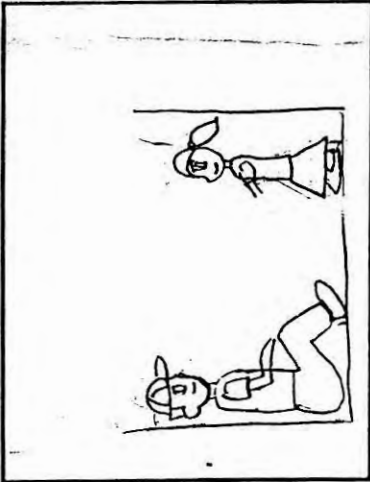


DIALOGUE:

ACTION:
The lid of box close

SLUG:
long shot, med shot

SC: 24 BG: 7 PANEL: 24



DIALOGUE:

ACTION:
They sit down in the box

SLUG:
med shot

SC: 05 BG: 8 PANEL: 25



DIALOGUE:

Aiman: Adik nak kite pergi mane?

ACTION:

Aiman ask siti where she want to go.

SLUG:

Close up

SC: 28 BG: 8 PANEL: 26



DIALOGUE:

siti: adik nak pergi pantau.

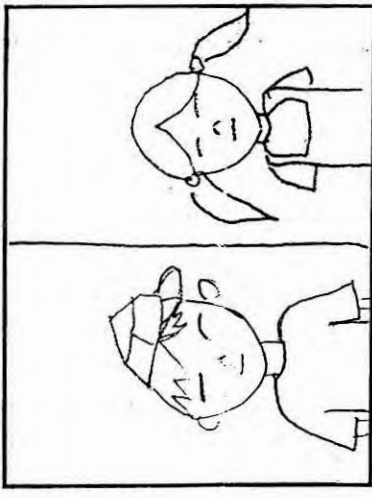
ACTION:

Siti replied

SLUG:

Close up

SC: 27 BG: 8 PANEL: 27



DIALOGUE:

-

ACTION:

Both of them close their eyes

SLUG:

Close up

Plot: 3
 SC: 30 BG: 11 PANEL: 30

DIALOGUE:
 Aiman: Ha??
 and sht

ACTION:
 They shock when they heard the beach noise

SLUG:
 Close up

Plot: 3
 SC: 29 -BG: 10 PANEL: 29

DIALOGUE:
 -

ACTION:
 They reach at the beach

SLUG:
 long shot,

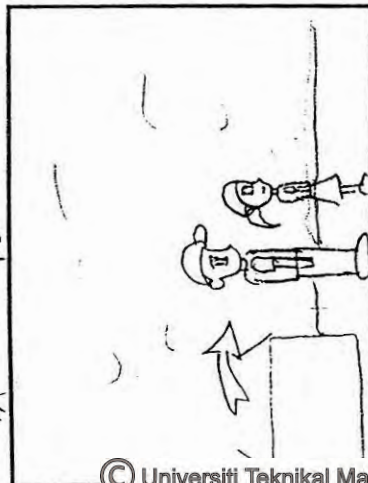
Plot: 3
 SC: 24 BG: 9 PANEL: 24

DIALOGUE:
 -

ACTION:
 The sparkle show

SLUG:
 long shot, med shot

SC: 21 BG: 10 PANEL: 31



DIALOGUE:

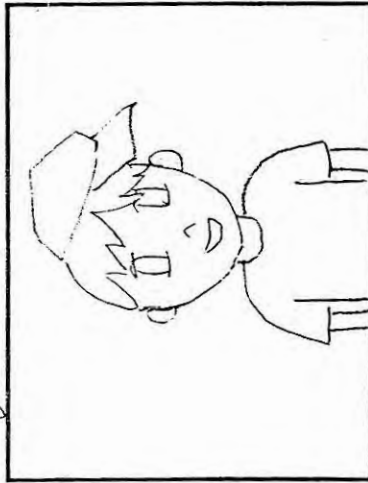
ACTION:

They stroll along the beach

SLUG:

Med shot, long shot

SC: 22 BG: 10 PANEL: 32



DIALOGUE:

Aiman: Cantik kan pantai nie?

ACTION:

Aiman amaze with the beauty of the beach

SLUG:

Close up

SC: 23 BG: 10 PANEL: 33



DIALOGUE:

Siti: Emm...

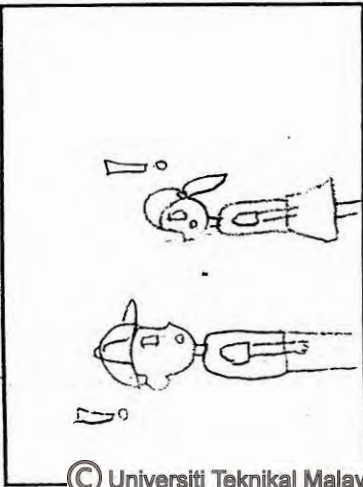
ACTION:

Siti agree with aiman

SLUG:

Close up

SC: 34 BG: 10 PANEL: 34

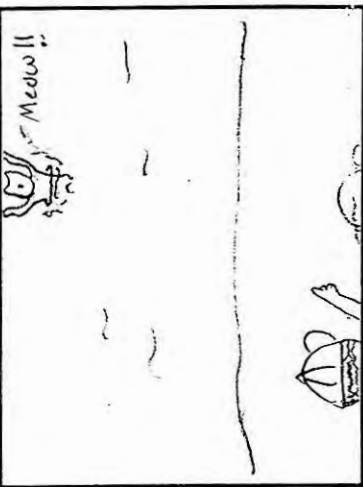


ALOGUE:
Aiman and: Ha?
Siti

ACTION:
Suddenly aiman and siti
heard something cried
for help.

SLUG:
Med shot

SC: 35 BG: 11 PANEL: 35




DIALOGUE:
Aiman: Eh ada kucing
lemas la...

ACTION:
They saw a cat was
drowning

SLUG:
lung shot, med shot

SC: 36 BG: 10 PANEL: 36

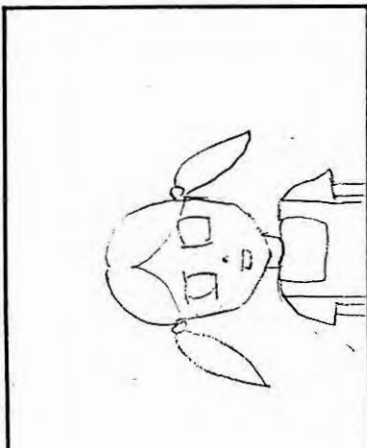


DIALOGUE:
Aiman: Apa patut lete
buat?

ACTION:
Aiman worried about
the cat

SLUG:
Close up

SC: 37 BG: 10 PANEL: 37

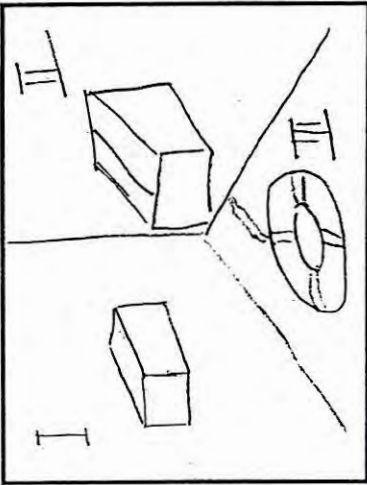


LOGUE:
Siti: Kami perlu bantuan anda.

ACTION:
Siti ask for audience help.

SLUG:
Close up

SC: 38 BG: 12 PANEL: 38



DIALOGUE:
Aiman: Kami ada baka baka, total dan petamping

ACTION:
There 3 options to help the cat

SLUG:
Middle shot

SC: 39 BG: 10 PANEL: 39

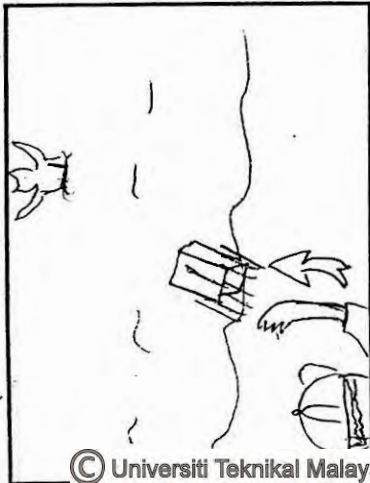


DIALOGUE:
Aiman: Kalau anda pilih bab baka....

ACTION:
If the first option selected.

SLUG:
Close up

SC: 40 BG: 11 PANEL: 40



DIALOGUE:

Aman: Hiyah!!!

ACTION:

Aman throw the brick to the cat.

SLUG:

long shot, mid shot

SC: 41 BG: 12 PANEL: 41



DIALOGUE:

Maggie: Meow!!!

ACTION:

Maggie hit with the brick and drows

SLUG:

mid shot

SC: 42 BG: 10 PANEL: 42



DIALOGUE:

giti: kalau anda pilih kotak

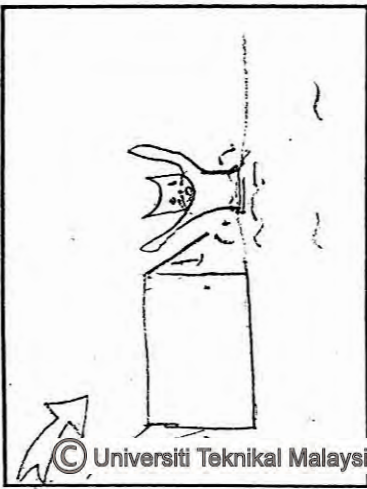
ACTION:

If the second option selected

SLUG:

close up

SC: 43 BG: || PANEL: 43



DIALOGUE:

Aiman: hiyah!!!

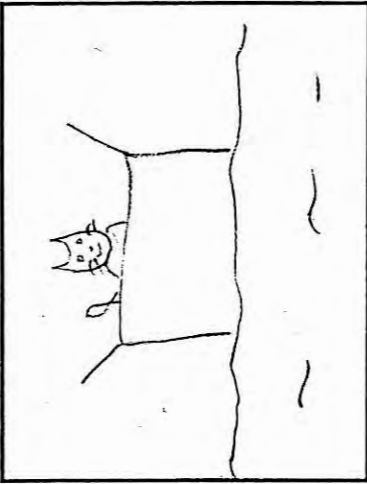
ACTION:

Aiman throw the box to the cat

SLUG:

Med shot

SC: 44 BG: || PANEL: 44



DIALOGUE:

-

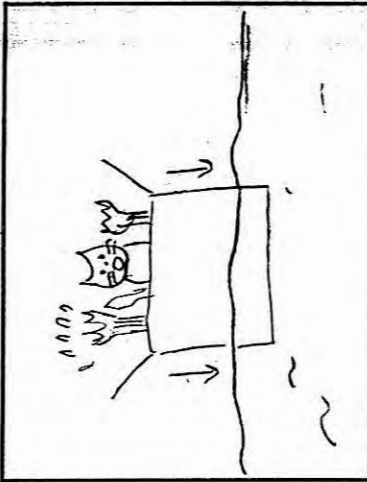
ACTION:

The cat climb up and entered the box

SLUG:

Med shot

SC: 45 BG: || PANEL: 45



DIALOGUE:

Maggie: Meow! Meow!!

ACTION:

The box sink and the cat drown

SLUG:

Med shot

TITLE: Journey to the land of imagination

PAGE: 16

SC: 46 BG: 10 PANEL: 46



DIALOGUE:

Aiman: Kalau anda pilih
pelaempung.

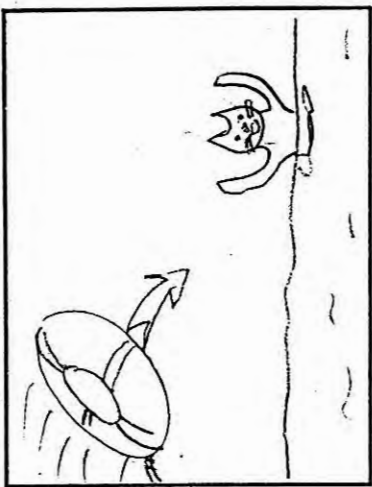
ACTION:

If third option selected

SLUG:

Close up

SC: 47 -BG: 11 PANEL: 47



DIALOGUE:

Aiman: Hiyah!!!

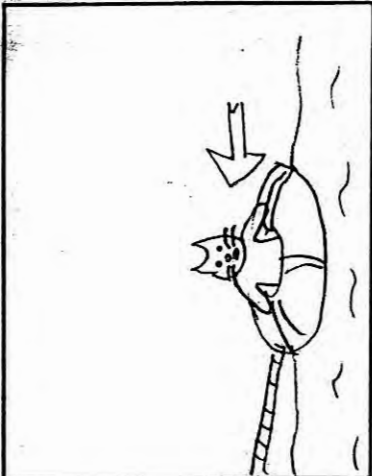
ACTION:

Aiman throw the
buoy to the cat

SLUG:

Med shot

SC: 48 BG: 11 PANEL: 48



DIALOGUE:

Maggie: Meow...-

ACTION:

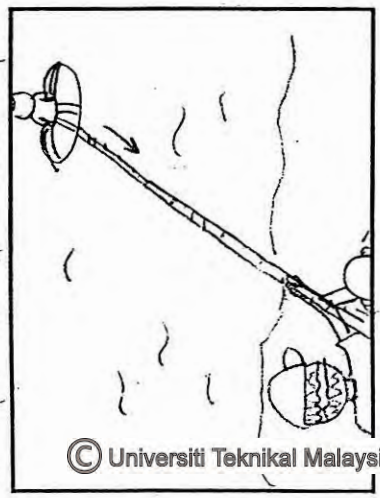
The cat grab the
buoy

SLUG:

Med shot

TITLE: Journey to the land of imagination PAGE: 11

SC: 49 BG: 11 PANEL: 49



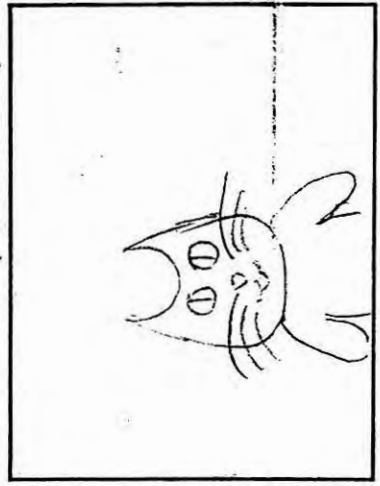
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DIALOGUE:
 Man: Tavik!!
 Tavik!!

ACTION:
 They pull the cat to the shore

SLUG:
 long shot, med shot

SC: 50 BG: 10 PANEL: 50

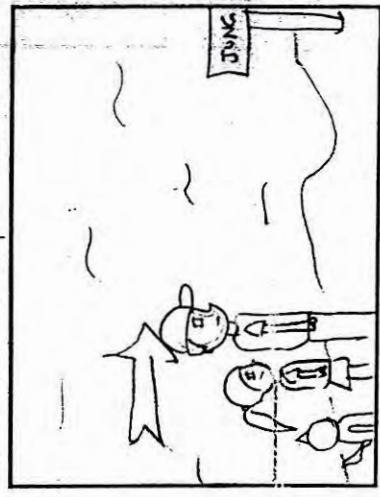


DIALOGUE:
 Maggie: Mrow!!!

ACTION:
 The cat thank them for save her life

SLUG:
 close up

SC: 51 BG: 1.4 PANEL: 51



DIALOGUE:
 -

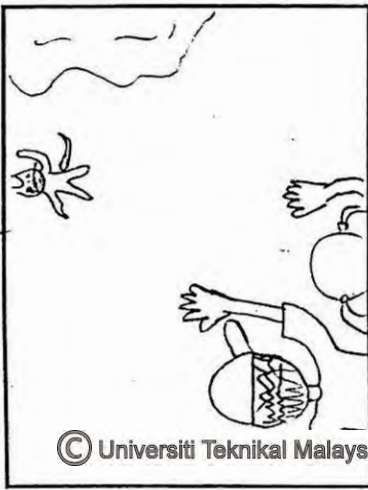
ACTION:
 The smell of long the beach until end of it.

SLUG:
 med shot

TITLE: Journey to the land of Imagination

PAGE: 10

SC: 52 BG: 14 PANEL: 52



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DI: GUE:

Siti: Bye 2 Maggie
Aiman: Jump lagi

ACTION:

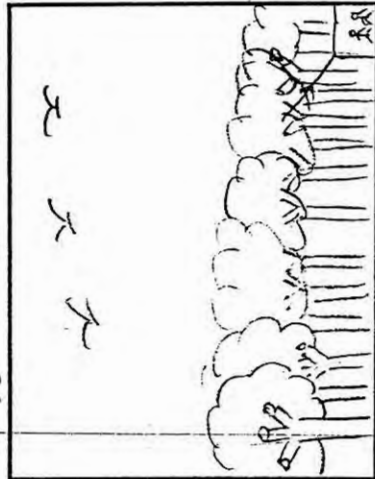
They give their farewell
to the cat

SLUG:

long shot, med shot

Plot: 4

SC: 53 BG: 15 PANEL: 54



DIALOGUE:

-

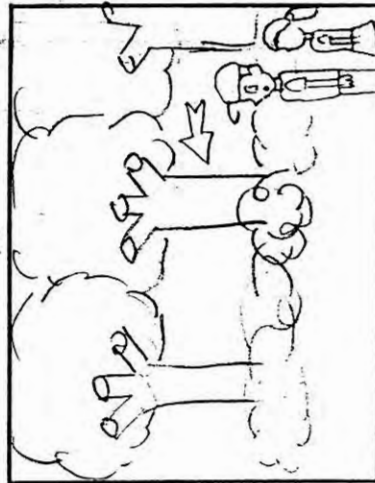
ACTION:

At the jungle

SLUG:

Zoom in, long shot

SC: 54 BG: 15 PANEL: 54



DIALOGUE:

-

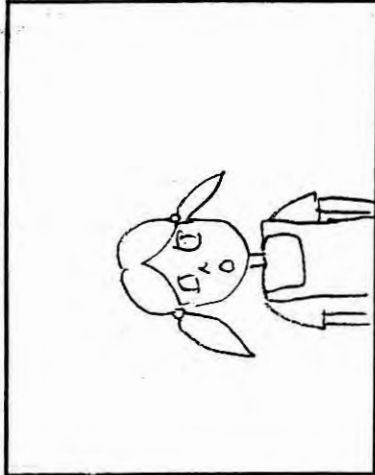
ACTION:

They sightseeing at the
jungle

SLUG:

Med shot, pan left

SC: 57 BG: 16 PANEL: 57



DIALOGUE:
Siti: Owh...--

ACTION:
Siti replied understandingly

SLUG:
Close up

SC: 56 -BG: 16 PANEL: 56

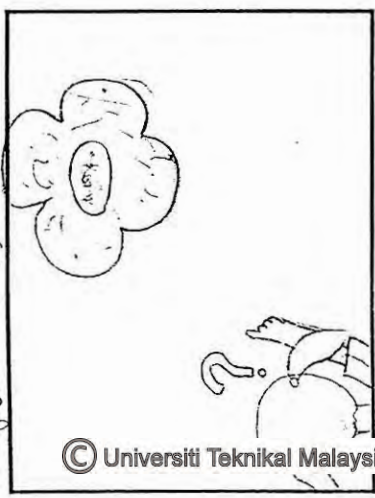


DIALOGUE:
Aiman: Tu bunga refleksia,
bunga terbesar di dunia
taw

ACTION:
Aiman answer his
sister question

SLUG:
Close up

SC: 55 BG: 15 PANEL: 55

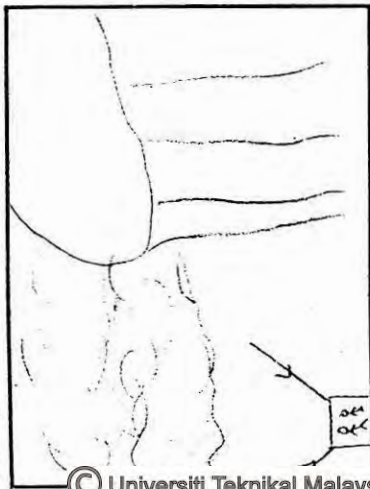


DIALOGUE:
Siti: Eh, bunga ape tu
abang?

ACTION:
Siti asked to aiman
the name of the weird
flower she saw

SLUG:
long shot, mid shot

SC: 58 BG: 17 PANEL: 58



DIALOGUE:

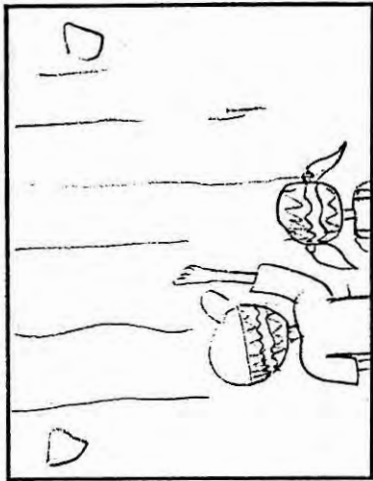
ACTION:

They reach in front of a cliff.

SLUG:

lung shot, med shot, zoom in

SC: 59 BG: 17 PANEL: 59



DIALOGUE:

Aiman: Tinggi betul tebing
MRC

Siti: Telah.

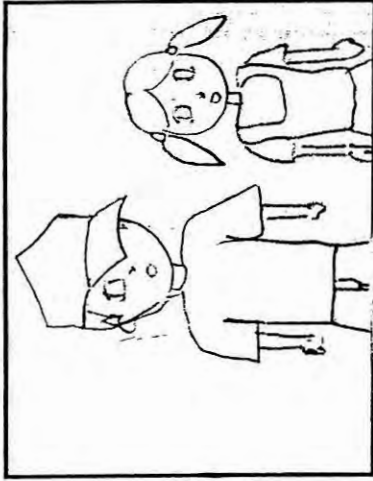
ACTION:

Aiman look up to the top of the cliff.

SLUG:

med shot

SC: 60 BG: 17 PANEL: 60



DIALOGUE:

Aiman: Macam mane kite nak pergi atas tebing nie?

Siti: Kami perlu bantuan anda.

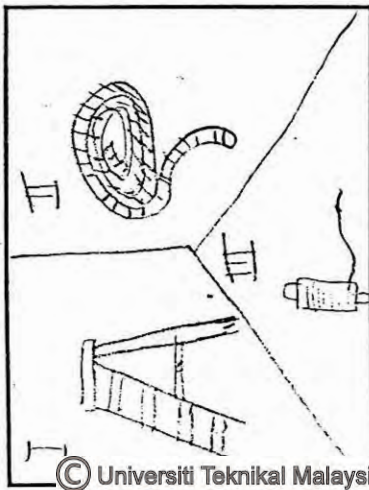
ACTION:

Aiman ask how to climb the cliff.
Siti ask the audience for help

SLUG:

Med shot

SC: 61 BG: 10 PANEL: 61



DIALOGUE:

Aiman: kami ada tangga, tall, dan benang

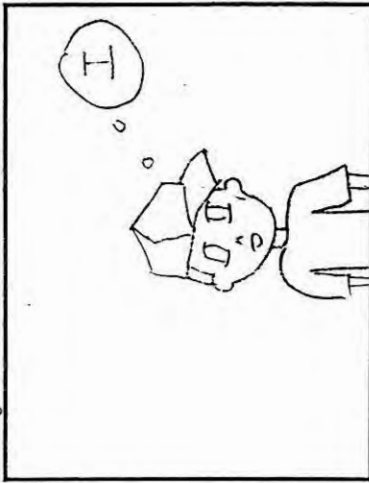
ACTION:

There are 3 options to climb up the cliff

SLUG:

Med shot, long shot

SC: 62 BG: 17 PANEL: 62



DIALOGUE:

Aiman: kalau anda pilih tangga

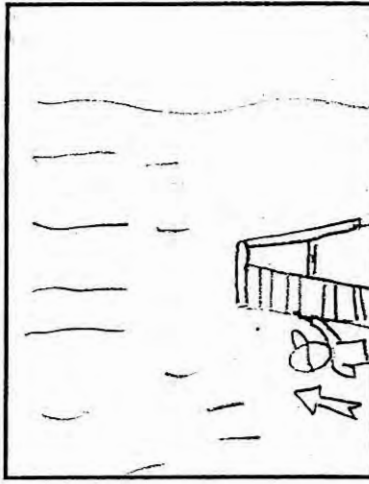
ACTION:

If the first option were selected

SLUG:

Close up

SC: 63 BG: 17 PANEL: 63



DIALOGUE:

Aiman: hm... hm... hm... hm...

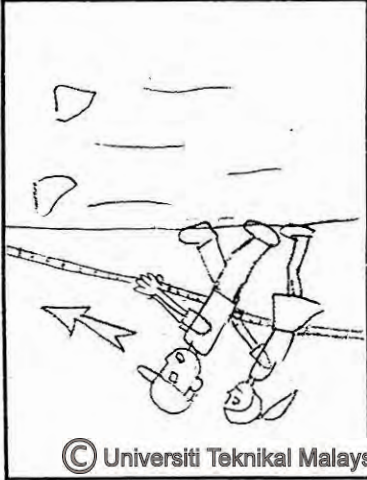
ACTION:

Aiman climb up the ladder.

SLUG:

long shot, med shot

SC: 65 BG: 20 PANEL: 65



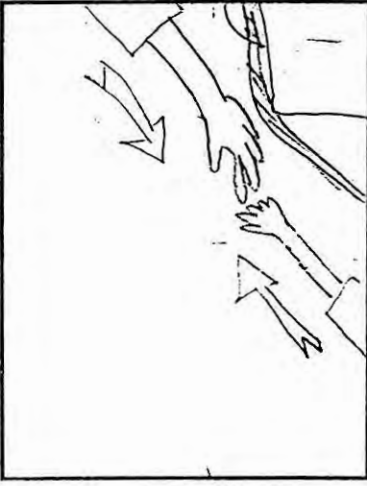
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DIALOGUE:
Aiman: Fuh!! Hati-hati adik
Siti: Bait abang

ACTION:
Aiman and Siti
climb up the cliff

SLUG:
long shot, med shot

SC: 66 - BG: 19 PANEL: 66

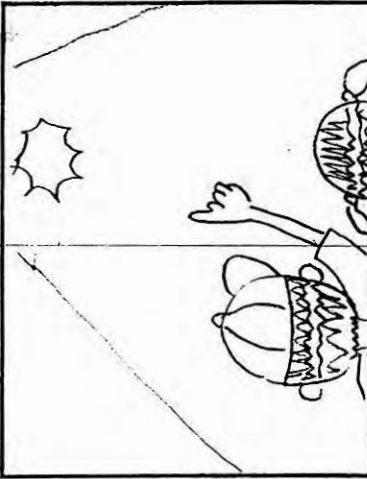


DIALOGUE:
Aiman: Meh tangin adik
Siti: Terima kasih abang

ACTION:
Aiman give his help to
Siti for climb up the
cliff

SLUG:
close up

SC: 67 BG: 21 PANEL: 67

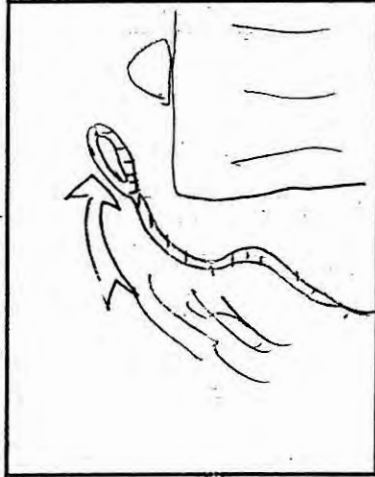


DIALOGUE:
Aiman: Eh sana ada
 sahaja la...
Siti: Jan pagi ke sana?

ACTION:
Aiman saw a light
at the end of
cliff.

SLUG:
long shot, med shot

SC: 64 BG: 19 PANEL: 66



DIALOGUE:

Aiman: Hiyah!!!

ACTION:

Aiman throw up the rope to the top of the cliff.

SLUG:

long shot, med shot

SC: 65 BG: 17 PANEL: 67



DIALOGUE:

Siti: Kalau anda pilih tali?

ACTION:

If second option where selected

SLUG:

Close up

SC: 64 BG: 17 PANEL: 64



DIALOGUE:

Aiman: Ish... Ish...
Tali sampai

ACTION:

Aiman try to reach the top of the cliff but fail

SLUG:

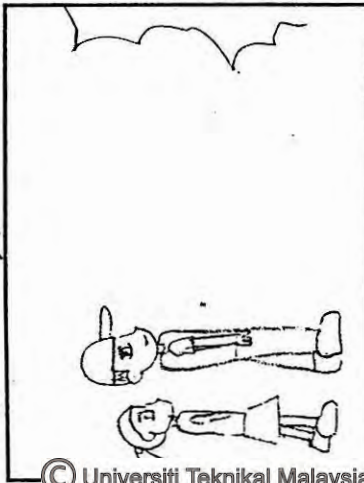
long shot, med shot

TITLE: Journey to the land of Imagination

PAGE: 24

Plot: 5

SC: 68 BG: 22 PANEL: 68



DIALOGUE:

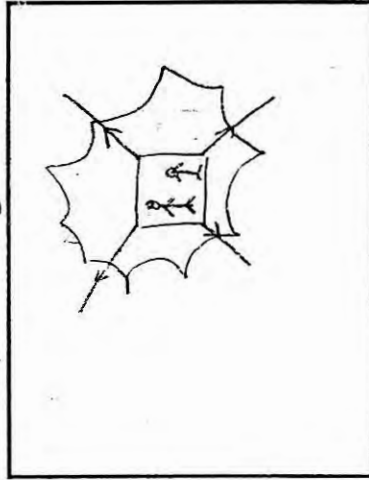
ACTION:

Aiman and siti walk toward the light

SLUG:

Med shot

SC: 69 BG: 23 PANEL: 69



DIALOGUE:

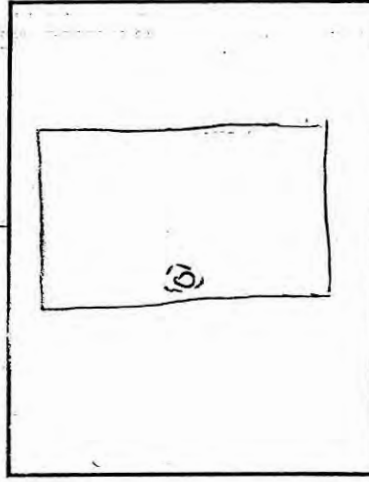
ACTION:

They disappeared in the light.

SLUG:

Zoom out, long shot

SC: 70 BG: 24 PANEL: 70



DIALOGUE:

Mum: Aiman ooo Aiman
Siti ooo Siti

ACTION:

Their mother open their bedroom door and call for her children

SLUG:

Med shot

Appendix C
BETA TEST ENVIRONMENT



UNIVERSITI TEKNIKAL MALAYSIA MELAKA
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76109 Durian Tunggal, Melaka
Tel : 06-331 6023 Faks : 06-331 6500
Email : ftmk@utem.edu.my

FAKULTI TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

Ruj. Kami (Our Ref) : UTeM.25.01/600-1/7/3 ()
Ruj. Tuan (Your Ref) :



32 Rejab1432H
22 Jun 2011

Kepada Sesiapa Yang Berkenaan

Tuan,

MEMOHON MENDAPATKAN MAKLUMAT DAN KAJIAN KES UNTUK MENYIAPKAN TUGASAN PROJEK

Dengan hormatnya saya merujuk perkara di atas.

2. Dimaklumkan bahawa penama tersebut adalah pelajar-pelajar Universiti Teknikal Malaysia Melaka (UTeM). Maklumat terperinci adalah seperti di bawah:

NO	PELAJAR	NO MATRIK	KURSUS
1.	Mohd Kamarul Amry bin Umar	B030810142	Ijazah Sarjana Muda Sains Komputer (Media Interaktif)

3. Untuk makluman tuan, pelajar-pelajar ini perlu menyiapkan satu tugas projek bagi mata pelajaran BITU3983 (Projek Sarjana Muda II). Sehubungan dengan ini, saya sangat berbesar hati sekiranya pihak tuan dapat memberi peluang kepada pelajar ini untuk membuat kajian kes tersebut di organisasi tuan.

Segala kerjasama daripada pihak tuan didahului dengan ucapan terima kasih. Sekian.

**'KOMPETENSI TERAS KEGEMILANGAN'
'BERKHIDMAT UNTUK NEGARA'**

Saya yang menurut perintah,

NOOR AZMAN BIN MANSOR
Penolong Pegawai Tadbir
Fakulti Teknologi Maklumat dan Komunikasi
Universiti Teknikal Malaysia Melaka
b.p. Dekan

Kompetensi Teras Kegemilangan
<http://www.utem.edu.my>







Appendix D
ALPHA QUESTIONNAIRE

Alpha Questionnaire

- 1) What is the most important element of animation?
A) Storyline
 B) Character Design

- 2) Which element that attract children?
 A) Music
B) Color
C) Text

- 3) Learning method that suitable for kids' age 2-6 years old?
A) Imaginative
 B) Theoretical
C) Both

- 4) Which platform most suitable to deliver the education?
A) Chalk and Blackboard
B) Television
 C) Computer

- 5) What do you understand about right brain development?
 A) Yes
B) No

Alpha Questionnaire

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Alpha Questionnaire

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 - C) Text

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Alpha Questionnaire

- 1) What is the most important element of animation?
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Alpha Questionnaire

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 A) Imaginative
 B) Theoretical
 C) Both

- 4) Which platform most suitable to deliver the education?
 A) Chalk and Blackboard
 B) Television
 C) Computer

- 5) What do you understand about right brain development?
 A) Yes
 B) No

Alpha Questionnaire

- 1) What is the most important element of animation?
A) Storyline
 B) Character Design

- 2) Which element that attract children?
 A) Music
B) Color
C) Text

- 3) Learning method that suitable for kids' age 2-6 years old?
A) Imaginative
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Appendix E
BETA QUESTIONNAIRE

Beta Questionnaires

1) Do you like cartoon?

A) Yes 10

B) No 1

2) How old are you?

_____ Years

4y - 2 p
5y - 7 p
6y - 2 p

3) Which cartoon do you like?

A) Mickey Mouse 6

B) Dora Explorer 5

C) Pocoyo 0

4) With whom you watch the cartoon?

A) Mother & Father 8

B) Sibling 2

C) Friends 1

5) Do you like my cartoon ("Journey to Land of Imagination")?

A) Yes 11

B) No