

2D ANIMATION: THE STORY OF SERI RAMA AND SITI DEWI  
USING SILHOUETTE TECHNIQUE

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This report is submitted in partial fulfillment of the requirement for the  
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## DECLARATION

I hereby declare that this project report entitled

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

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## **DEDICATION**

parents and my family, who have encouraged, guide and inspired me throughout my journey of education. Also to my supervisor Mr. Shahril Bin Parumo and all my understandable friends. Thank you for the support and guidance given throughout the completion of my PSM.

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## ABSTRACT

Animation “The Story Of Seri Rama and Siti Dewi” is an animation that developed by using silhouette technique. This animation is based on wayang kulit story and adapt from wayang kulit environment. It uses puppets which is elaborately carve and colorfully decorated to make the character alive suits with the storyline. The character design also followed the original character design of the story. Besides, the voice character involved one person that imitates the all characters at the same time. This project was developed to make it looks like the real performances of *wayang kulit* so that people can watch this traditional performance at home.

## ABSTRAK

si yang bertajuk “Kisah Seri Rama dan Siti Dewi” merupakan animasi yang menggunakan teknik *silhouette*. Animasi ini berdasarkan cerita wayang kulit dan menggunakan latar belakang wayang kulit. Watak-wataknya merupakan patung yang diukir dan dicorakkan untuk menghidupkan watak yang dibawa. Reka bentuk karakter juga adalah berdasarkan patung sebenar wayang kulit. Selain itu, penggunaan suara karakter hanya melibatkan seorang individu yang akan memainkan peranan bagi semua watak. Projek ini dibangunkan untuk menjadikan wayang kulit dalam bentuk 2D animasi seperti wayang kulit yang sebenar supaya individu boleh menonton di rumah sahaja.

## TABLE OF CONTENTS

|                   | <b>SUBJECT</b>                                       | <b>PAGE</b> |
|-------------------|--|-------------|
|                   | <b>DECLARATION</b>                                   | <b>ii</b>   |
|                   | <b>DEDICATION</b>                                    | <b>iii</b>  |
|                   | <b>ACKNOWLEDGEMENT</b>                               | <b>iv</b>   |
|                   | <b>ABSTRACT</b>                                      | <b>v</b>    |
|                   | <b>ABSTRAK</b>                                       | <b>vi</b>   |
|                   | <b>TABLE OF CONTENTS</b>                             | <b>vii</b>  |
|                   | <b>LIST OF TABLES</b>                                | <b>xi</b>   |
|                   | <b>LIST OF FIGURES</b>                               | <b>xii</b>  |
|                   | <b>LIST OF ABBREVIATIONS</b>                         | <b>xiv</b>  |
|                   | <b>LIST OF APPENDICES</b>                            | <b>xv</b>   |
| <br>              |  |             |
| <b>CHAPTER I</b>  | <b>INTRODUCTION</b>                                  |             |
|                   | 1.1 Project Background                               | 1           |
|                   | 1.2 Problem Statement                                | 2           |
|                   | 1.3 Objectives                                       | 3           |
|                   | 1.4 Scopes   | 3           |
|                   | 1.5 Project Significance                             | 4           |
|                   | 1.6 Conclusion                                       | 4           |
| <br>              |  |             |
| <b>CHAPTER II</b> | <b>LITERATURE REVIEW AND PROJECT<br/>METHODOLOGY</b> |             |
|                   | 2.1 Introduction                                     | 5           |
|                   | 2.2 Domain   | 6           |
|                   | 2.3 Existing System                                  | 10          |

|     |                            |    |
|-----|----------------------------|----|
| 2.4 | Project Methodology        | 12 |
| 2.5 | Project Requirements       | 15 |
|     | 2.5.1 Software Requirement | 15 |
|     | 2.5.2 Hardware Requirement | 17 |
| 2.6 | Conclusion                 | 18 |

## **ANALYSIS**

|     |                                 |    |
|-----|---------------------------------|----|
| 3.1 | Introduction                    | 19 |
| 3.2 | Current Scenario Analysis       | 20 |
|     | 3.2.1 Background Current System | 21 |
| 3.3 | Requirement Analysis            | 22 |
|     | 3.3.1 Project Requirement       | 23 |
|     | 3.3.1.1 Process Stage           | 23 |
|     | 3.3.1.2 Production Stage        | 24 |
|     | 3.3.1.3 Requirement Gathering   | 27 |
|     | 3.3.1.4 Technique Animation     | 32 |
|     | 3.3.2 Software Requirement      | 32 |
|     | 3.3.2.1 Development Software    | 32 |
|     | 3.3.2.2 Management Software     | 33 |
|     | 3.3.2.3 Operating System        | 34 |
|     | 3.3.3 Hardware Requirement      | 34 |
|     | 3.3.4 Other Requirements        | 35 |
| 3.4 | Project Schedule and Milestones | 35 |
| 3.5 | Conclusion                      | 36 |

## **CHAPTER IV DESIGN**

|     |                         |    |
|-----|-------------------------|----|
| 4.1 | Introduction            | 37 |
| 4.2 | Sequence Diagram        | 38 |
| 4.3 | Preliminary Design      | 40 |
|     | 4.3.1 Storyboard Design | 41 |



|       |                   |    |
|-------|-------------------|----|
| 4.3.2 | Plan              | 49 |
| 4.3.3 | Script            | 50 |
| 4.3.4 | Character Profile | 53 |
| 4.4   | Conclusion        | 59 |

## **IMPLEMENTATION**

|       |                                  |    |
|-------|----------------------------------|----|
| 5.1   | Introduction                     | 60 |
| 5.2   | Media Creation                   | 61 |
| 5.2.1 | Production of Text               | 61 |
| 5.2.2 | Production of Graphic            | 62 |
| 5.2.3 | Production of Audio              | 65 |
| 5.2.4 | Production of Video              | 67 |
| 5.2.5 | Production of Animation          | 67 |
| 5.3   | Media Integration                | 68 |
| 5.4   | Product Configuration Management | 69 |
| 5.4.1 | Configuration Environment Setup  | 69 |
| 5.4.2 | Version Control Procedure        | 70 |
| 5.4   | Implementation Status            | 71 |
| 5.5   | Conclusion                       | 72 |

## **CHAPTER VI TESTING AND EVALUATION**

|       |                          |    |
|-------|--------------------------|----|
| 6.1   | Introduction             | 73 |
| 6.2   | Test Plan                | 74 |
| 6.2.1 | Test User                | 74 |
| 6.2.2 | Test Environment         | 75 |
| 6.2.3 | Test Schedule            | 75 |
| 6.2.4 | Test Strategy            | 76 |
| 6.3   | Test Implementation      | 77 |
| 6.3.1 | Test Description         | 78 |
| 6.3.2 | Test Data                | 80 |
| 6.3.3 | Test Result and Analysis | 81 |

|       |                  |    |
|-------|------------------|----|
| 6.3.4 | Analysis Testing | 82 |
| 6.4   | Conclusion       | 87 |

### **PROJECT CONCLUSION**

|     |                                       |    |
|-----|---------------------------------------|----|
| 7.1 | Observation on Weakness and Strengths | 88 |
| 7.2 | Propositions for Improvement          | 88 |
| 7.3 | Contribution                          | 89 |
| 7.4 | Conclusion                            | 89 |

|                   |    |
|-------------------|----|
| <b>REFERENCES</b> | 90 |
|-------------------|----|

|                     |    |
|---------------------|----|
| <b>BIBLIOGRAPHY</b> | 91 |
|---------------------|----|

|                   |    |
|-------------------|----|
| <b>APPENDICES</b> | 92 |
|-------------------|----|

**LIST OF TABLES**

| ----- | <b>TITLE</b>  | <b>PAGE</b> |
|-------|---|-------------|
| 3.1   | Characteristic of puppets                                 | 31          |
| 4.1   | Sequence Diagram  | 39          |
| 5.1   | Configuration Environment Setup                           | 70          |
| 5.2   | List of Software Version                                  | 71          |
| 5.3   | Implementation Status                                     | 71          |
| 6.1   | Hardware and Software Requirement for Testing Environment | 75          |
| 6.2   | Test Schedule   | 76          |
| 6.3   | Description of Test Case                                  | 78          |
| 6.4   | First Test Case   | 79          |
| 6.5   | Second Test Case  | 79          |
| 6.6   | Third Test Case   | 80          |
| 6.7   | Fourth Test Case  | 80          |
| 6.8   | Testing Result  | 81          |

## LIST OF FIGURES

| FIGURE | TITLE                                  | PAGE |
|--------|--|------|
| 2.1    | Picture of Thaumatrope                 | 7    |
| 2.2    | Picture of Phenakistoscope             | 8    |
| 2.3    | Picture of Wayang Kulit                | 9    |
| 2.4    | Picture of Prince Ahmed Animation      | 11   |
| 2.5    | Picture of Silat Lagenda Animation     | 11   |
| 2.6    | Rapid Application Design Lifecycle     | 12   |
| 4.1    | Timeline 2D <i>Wayang Kulit</i> Story  | 38   |
| 4.2    | <i>Maharisi</i> Front View             | 53   |
| 4.3    | <i>Maharisi</i> Side View              | 53   |
| 4.4    | <i>Siti Dewi</i> Front View            | 54   |
| 4.5    | <i>Siti Dewi</i> Side View             | 54   |
| 4.6    | <i>Seri Rama</i> Front View            | 55   |
| 4.7    | <i>Seri Rama</i> Side View             | 55   |
| 4.8    | <i>Laksamana</i> Front View            | 56   |
| 4.9    | <i>Laksamana</i> Side View             | 56   |
| 4.10   | <i>Wana</i> Front View                 | 57   |
| 4.11   | <i>Wana</i> Side View                  | 57   |
| 4.12   | <i>Memanda</i> Front View              | 58   |
| 4.13   | <i>Mamanda</i> Side View               | 58   |
| 5.1    | Font Arial                             | 62   |
| 5.2    | Examples of Graphics Used In Animation | 63   |
| 5.3    | Graphic Production                     | 64   |

|     |  |    |
|-----|--|----|
| 5.4 | Editing Process of Audio in Adobe Audition 1.5                   | 66 |
|     | duction  | 66 |
|     | Production   | 78 |
|     | f General Opinion of the <i>Wayang Kulit</i> in<br>tion          | 82 |
|     | f the Presentation of Storyline                                  | 83 |
|     | f Quality of Video   | 83 |
| 6.4 | Analysis of Character Design                                     | 84 |
| 6.5 | Analysis of Interface and Background Color                       | 84 |
| 6.6 | Analysis of Subtitle (Font Criteria)                             | 85 |
| 6.7 | Analysis of Background Music                                     | 85 |
| 6.8 | Analysis of Character Voices                                     | 86 |
| 6.9 | Analysis of Clearness of Background Music and Character<br>Voice | 86 |

**LIST OF ABBREVIATIONS**

|        |   |   |
|--------|---|---|
| PSM    | - | Projek Sarjana Muda                       |
| UTeM   | - | Universiti Teknikal Malaysia Melaka       |
| FTMK   | - | Fakulti Teknologi Maklumat dan Komunikasi |
| ICT    | - | Information and Communication Technology  |
| CD ROM | - | Compact Disc Read Only Memory             |
| CD     | - | Compact Disc                              |
| 2D     | - | Two Dimension                             |
| DVD    | - | Digital Versatile Disc                    |
| RAD    | - | Rapid Application Development             |
| AVI    | - | Audio Video Interlace                     |
| MP3    | - | MPEG-1 Audio Layer 3                      |

**LIST OF APPENDICES**

| <b>X</b>   | <b>PAGE</b> |
|------------|-------------|
| Appendix A | 92          |
| Appendix B | 95          |

# CHAPTER I

## INTRODUCTION

### 1.1 Project Background

Nowadays, media has the greatest potential to deliver message through television, internet or cell phone. Animation is the creation an illusion of movement that made up of sequences of images displayed one after the other. Actually, this images only static images that combine together into a series of pictures that produce the illusion of movement into our eyes. The evolution of animation technique always changes due to the development of technology. As we know, animation technology has come long way since the early technique of hand drawn cartoons. The tools have change dramatically, but the technique and creativity of the individual that builds the animation is important to produce the valuable art work.

2D animation is one type of media that can deliver information, entertainment, education and moral value. Therefore for the *Projek Sarjana Muda I (PSM I)* I want to develop a 2D animation by applying the silhouette technique. Silhouette is the stop motion animation technique that represent in black and white drawing and painting for the characters. This technique just not represents black and white but also several of color to make it interesting because the medium important is a shadow play.



The developing of this 2D animation is based on *wayang kulit* method but make of animation effect and technique. Recently, *wayang kulit* shows no big people suitable with the development of many media electronics television that now entertain them. Due for this situation, *wayang* is not existing if young generations are not exposed about the history of *wayang kulit*. One of the ways to solve this problem is develop the *wayang kulit* using animation platform.

## 1.2 Problem Statement

In Malaysia, *Wayang kulit* is the first multimedia entertainment that applies the shadow or silhouette technique. This shadows theaters involves two dimensional figures that casting their shadows on the screen by *Tok Dalang*. The important thing to performed *Wayang Kulit* is to manipulate the figures of characters between the lamp and screen to bring the shadows alive.

Lately, this classic entertainment seem to be forgotten by people after the present of many tools of media electronic like television and radio which is more interactive and interesting. By develop the 2D animation in *wayang kulit* method it can preserve the *wayang kulit* from being forgotten and also we can introduce this classic entertainment to new generation. It just not for only entertainment but also can deliver message and advices.

### 1.3 Objectives

- To develop a 2D animation based on Kelantan's *wayang kulit* stories.

This 2D animation based on Malay story that adaptation of the *Ramayana* which is the Indian classic epic but the name of character are called in slightly different from the original *Ramayana*.

- To apply the silhouette technique.

Silhouette is an animation technique that represents black and white drawing and painting for the characters and background environment. The important medium for this technique is to manipulate the light source for the better shadow result.

- To present *wayang kulit* in 2D animation platform

It is the same stories of *wayang kulit* that convert into 2D animation. Several effect of animation is added to make it more interesting.

### 1.4 Scope

- Developing the 2D animation by applying the silhouette technique.
- Duration of this animation is 5 minutes.
- Software that will be used is Flash Professional CS3.
- The target audience is children, teenagers and adult. (Suitable for all age)
- Content of story is based on Ramayana epic story.

## 1.5 Project Significance

As technology arises by time, there were certain heritage and cultures seem to be forgotten and one of them is *wayang kulit*. By develop the 2D animation based on *wayang kulit* method, people who like to watch *wayang kulit* can still enjoy watching it with different approach. New generation also will know about their late grand family entertainment and hope they will proud and appreciate of these classic shadow plays. This project also will show how the *wayang kulit* will be displayed in 2D animation with new style and interactivity.

## 1.6 Conclusion

By doing the *wayang kulit* in 2D animation, it will give a new approach for the fan of *wayang kulit* theater and the new generation to watch it. From this 2D animation it can preserve the *wayang kulit* from being forgotten and also we can introduce this classic entertainment to new generation besides to deliver message and moral value.

For the conclusion, this chapter have discuss about project that I want to develop which is 5 minutes 2D animation by applying silhouette technique. The best example of this technique is *wayang kulit* which seem to be fading away. Basically, the objective of this project is to develop 2D animation by using silhouette technique. It uses the Malay *wayang kulit* story adaption from the Indian classic epic Ramayana. The target user for this project is children, teenagers and adult.

The next chapter is chapter two which is discuss about literature review and project methodology. It consist of the domain project that want to develop and comparison with the existing system. The project methodology and instructional design will be added to define the flow of the project.

## CHAPTER II

### LITERATURE REVIEW AND PROJECT METHODOLOGY

#### 2.1 Introduction

Literature review is about summarizing, interpreting and evaluating existing literature or published material in order to establish current knowledge of a subject. The purpose for doing so is relates to ongoing research to develop that knowledge. The literature review may resolve a controversy, establish the need for additional research and define a topic of inquiry.

Methodology is a codified set of recommended practices, sometimes accompanied by training materials, formal educational programs, worksheets, and diagramming tools. It documented a set of procedures and guidelines for one or more phases of the software life cycle, such as analysis and design. Many methodologies include a diagramming notation for documenting the result of the procedure and an objective set of criteria for determining whether the results of the procedures are acceptable quality. There are diversities of methodology that could be applied for developing the new system. Each of them has differences and comparison to each other between the processes being done. The development methodology are many, methodology that commonly used nowadays are Rapid Application Development (RAD), Joint Application Development (JAD), Spiral Model, Prototyping, Waterfall Model (SDLC), Object Oriented Analysis and Design (OOAD), Analysis Design

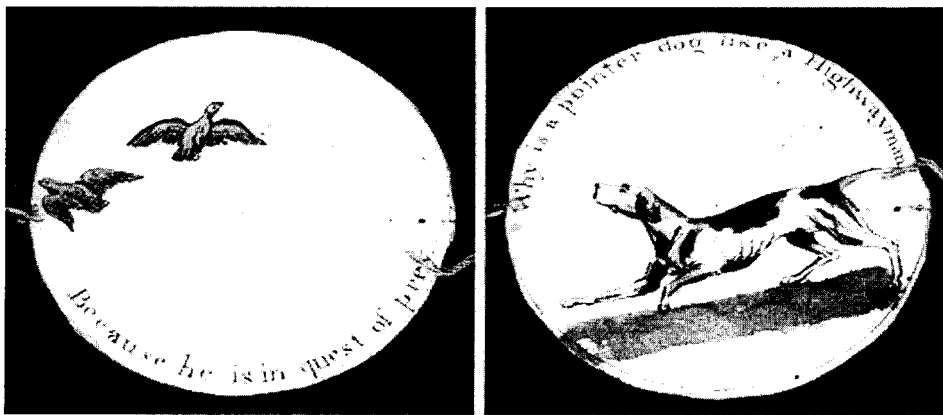
Develop Implement Evaluate (ADDIE) and many more approaches for developing and maintaining a software. As for this section, each development methodology will be reviewed on its step to develop software, the stages of concern in the methodology, then followed by the selected methodology.

## 2.2 Domain

In the development of the science and technology, media has the greatest potential to deliver message and information through internet, television, radio and cell phone. Animation is the one way to deliver message or moral value through television besides the acting of real world and human. Regularly, children is more tend to interested to the animation film and and have the highest percent to the animation broadcasting in televisions besides teenagers and adults has the lowest percent because they more attract to the reality film.

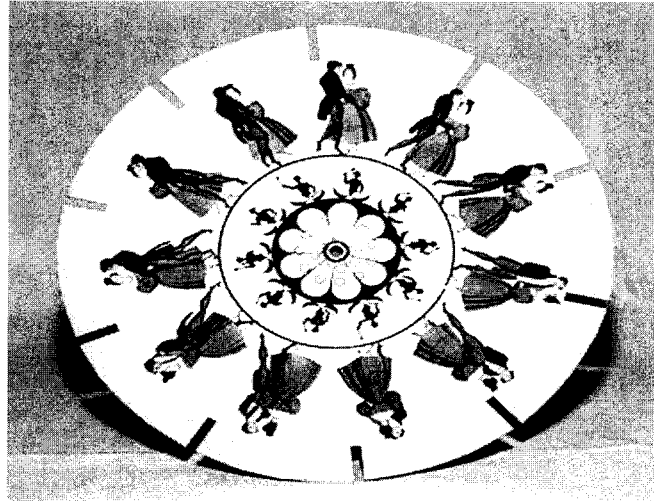
Animation is the creation an illusion of movement that made up of sequences of images displayed one after the other. It simply making objects move in a two dimensional space. We can treat video like a graphic element and animate it the same way in creating layering effects. As example, when we watch television, we see a lot of things moving around. Actually, we really are being tricked into believing that we see seeing movement of the character. In the case of television, the illusion of movement is created by displaying a rapid succession of images with slight changes in the content of movement. The human eyes perceive these changes as movement because of its low visual sharpness. The human eye can be tricked into perceiving movement with as low as 12 frames of movement per second. So, frame per second (fps) is the standard unit of measure for animation into seeing movement.

Since the beginnings of time, human beings have tried to capture a sense of motion in their art. True animation cannot be achieved without first understanding a fundamental principle of the human eye (the persistence of vision). Two other inventions helped to further the cause of animation. First is a Frenchman named Paul Roget invented something known as the thaumatrope, which was a disc with a string attached to both sides. One side of the disc had the drawing of a bird and the other side an empty cage. When the disc was twirled using the strings, the bird appeared as if it was inside the cage. Such early inventions were forerunners to the present day animation.



**Figure 2.1: Picture of Thaumatrope**

Second is phenakistoscope was invented by Joseph Plateau, which was a circular card with slits around the edge. The viewer had to hold the card up to a mirror and peer through the slits as the cards whirled. A series of drawings would be present around the circumference of the card. What the viewer would see was the optical illusion of a moving picture.



**Figure 2.2: Picture of Phenakistoscope**

Decades later, the invention of computers and software literally changed the way animation was done. Now literally nothing is impossible as far as animation goes. Using current animation software, anyone can create an animation.

As we know, there are many animation series that broadcast in television including 2D animation and 3D animation. This animation have diversity of featured content like computer animation films that have been computer animated to appear three dimensional on a movie screen, features length films, films based on cartoon and others featured content. There are many different types of animation, all useful in different instances and techniques like clay animation techniques, rotoscoping, silhouette, cut-out technique and other approach to suits the animation best need.

So, based on the explanation above, silhouette technique will be apply to develop the 2D animation for the *Projek Sarjana Muda* (PSM). Silhouette is the shadowing technique that always represent black and white painting and drawing for the character. Although this technique uses black and white as are main color, we can use several of color to make it interesting and suits with the animation. The important part to produce of silhouette pictures or film is to make drawing outline of an object that we build and filled it with suitable color. The origin of sillhouette is an outline of an object against the

light, commonly use a profile portrait in black. The important of these techniques is they provide rich information about both the shape and motion of an object.

Shadows play is called *wayang kulit* in Malaysia. This art is one of platforms performances that not use human as an actor. Otherwise, it uses puppets which is elaborately carve and colorfully decorated to make the character alive suits with the storyline. By using the silhouette technique, the development of 2D animation is based on *wayang kulit* stories. *Wayang kulit* is the example of media entertainment show that using silhouette technique to audience. *Wayang kulit* performances use light when projected on white screen and always perform at night. The person who responsible for the performance is called shadow puppeteer or narrator also known as *Tok Dalang*. *Tok Dalang* skillfully manipulates the puppets while weaving his tale on the screen. Dialogues recites by him do not have any established texts. Instead, *dalang* recites stories which have been orally handed down generations with his own high skill improvisation.



**Figure 2.3: Picture of Wayang Kulit**