



© Hak Cipta milik Politeknik Negeri Jakarta

Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

**FINAL PROJECT
MAY 2023 SEMESTER**

**2D&3D INDONESIAN & MALAYSIAN ART & CULTURE
EXHIBITION**

BY:

MUHAMMAD NADHIF LUQMANUL HAKIM

**POLITEKNIK
NEGERI
JAKARTA**

**BACHELOR OF INFORMATION & COMMUNICATION
TECHNOLOGY
SCHOOL OF SCIENCE AND TECHNOLOGY
ASIA e UNIVERSITY**



© Hak Cipta milik Politeknik Negeri Jakarta

Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian , penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

This report is prepared to fulfill the
requirement of
CPP400 Final Project

By:

MUHAMMAD NADHIF LUQMANUL HAKIM

C30109190022

**POLITEKNIK
NEGERI**

**SCHOOL OF SCIENCE & TECHNOLOGY
JAKARTA
ASIA e UNIVERSITY**

JANUARY 2023 SEMESTER



© Hak Cipta milik Politeknik Negeri Jakarta

Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

DISCLAIMER CPP401 - FINAL PROJECT

I am responsible for the accuracy of all opinions, technical comments, factual reports, data, figures, illustrations, and photographs highlighted in this report. I bear full responsibility for the submitted report being reviewed and subject to copyright or ownership rights. Asia e University will not bear any liability for the accuracy of any comment, report, and other technical and factual information, and the copyright or ownership right claims.

Indonesia, 21 August 2023

M NADHIF LUQMANUL HAKIM

C30109190022

**POLITEKNIK
NEGERI
JAKARTA**

ACCEPTANCE PAPER

Thesis submitted by:

Name : Muhammad Nadhif Luqmanul Hakim

Student ID : 1907433023

Study Program : Teknik Multimedia Digital AeU

Project Title : 2D&3D Indonesian &
Malaysian Art & Culture
Exhibition

Has accomplished his/her Final Year Project by the
Examiner in the thesis session on Sunday, 27th,
August, 2023 and declared **PASS**

Legitimate by

Advisor	: ROSNAH AMAL WAN ABD RAZAK	(
Examiner	: ROSNAH AMAL WAN ABD RAZAK	(

Knowing :

Head of Computer and Informatic Engineering Department



Dr. Anita Hidayati, S.Kom., M.Kom.

NIP. 197908032003122003



© Hak Cipta milik Politeknik Negeri Jakarta

Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta



Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengemukakan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

ACKNOWLEDGEMENT

First and foremost, I would like to thank Allah, because, over His blessings and graces, the authors were able to complete this final project entitled 2D&3D Indonesian & Malaysian Art & Culture Exhibition on the Virtual Exhibition Platform. This writing is required to fulfill one of the requirements so that we are able to graduate. With the help and support from many parties finishing this final project, it is easier for the authors to finish. Therefore, the authors would like to express sincere gratitude for the support to:

1. Pn. Rosnah Amal Binti Wan Abd Razak as our supervisor from Asia e University has provided time, energy, and thoughts to guide the author in preparing this final report;
2. All the lecturers in Major ICT at both Asia e University and Jakarta State Polytechnic have provided time, energy, and thoughts to guide the author in making this final report and project;
3. Parents and families who assist materially and non-material;

Jakarta, Indonesia

Muhammad Nadhif Luqmanul Hakim

**POLITEKNIK
NEGERI
JAKARTA**



Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengemukakan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

ABSTRACT

Indonesia and Malaysia have similar and influential cultures and traditions to one and another because both have history and life that are closely related. As an effort to introduce and strengthen relations between the two countries, a 2D&3D exhibition was held which highlighted the cultural and traditional similarities between Indonesia and Malaysia. In this exhibition, visitors can learn about history, beliefs, art, and culture of people from both countries in an interactive way. The hope is that this exhibition can facilitate access for the people of Indonesia and Malaysia and can increase understanding and mutual respect between the people of Indonesia and Malaysia, as well as inspire the younger generation to preserve this very valuable cultural heritage. In making this virtual exhibition we use the MDLC Method. To support this virtual exhibition objective, several 3D & 2D assets are required. These assets will later be used to make it easier for users to understand more deeply the art that will be displayed in the virtual exhibition later

Keywords: *Virtual Exhibition, 2D asset, 3D Modeling, Culture, Art, Malaysia, Indonesia*

**POLITEKNIK
NEGERI
JAKARTA**



Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

TABLE OF CONTENT

DISCLAIMER	iii
ACKNOWLEDGEMENT	vi
ABSTRACT	vii
TABLE OF CONTENT	viii
LIST OF FIGURES	x
LIST OF TABLES	xi
1. INTRODUCTION	2
1.1 Overview	2
1.2 Problem Statement	2
1.3 Objectives	3
1.4 Scope	3
1.5 Target User	3
1.6 Project Timeline	3
2. LITERATURE REVIEW	5
2.1 Introduction	5
2.2 Related Concept for The Proposed System	7
2.3 Review of the Existing System	7
2.3.1 Review of System #1 - Smart Exhibition	7
2.3.2 Review of System #2 - History Treasure Exhibition	8
2.4 Proposed System	9
2.4.1 Proposed System Description	9
2.4.2 What Methodology to use	9
2.4.3 Which Model to select	9
2.5 Conclusion	9
3. SYSTEM ANALYSIS	11
3.1 Introduction	11
3.2 System Development Process	11
3.2.1 Project planning and oversight	11
3.2.1.1 Hardware Constraint	11
3.2.1.2 Software Constraint	11
3.2.2 System requirement analysis	11



© Hak Cipta milik Politeknik Negeri Jakarta

Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian , penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengemukakan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

3.3 System Modelling.....	12
3.3.1 Process Modelling.....	13
3.3.2 Logical Modelling	14
3.4 System Design	16
3.4.1 Introduction	16
3.4.2 Design Forms and Report.....	16
4. IMPLEMENTATION.....	19
4.1 2D Graphic Design	19
4.2 3D Design.....	20
4.3 Build Application	26
4.4 Input Main Menu Featur.....	27
5. CONCLUSION.....	29
5.1 Introduction.....	29
5.2 Problem Faced	29
5.3 Strength and Weakness	29
5.3.1 Strength.....	30
5.3.2 Weakness.....	30
5.4 Conclusion.....	30
REFERENCES	31

POLITEKNIK
NEGERI
JAKARTA



LIST OF FIGURES

Figure 2.1 Smart Exhibition	7
Figure 2.2 History Treasure Exhibition	8
Figure 3.1 Multimedia Development Life Cycle	12
Figure 3.2 Flow Chart	14
Figure 3.3 Logical Modelling	15
Figure 5.1.1 Figma interface	20
Figure 5.1.2 Text MeshPro Unity.....	21
Figure 5.2.1 Introduction board	21
Figure 5.2.3 Welcome TV	22
Figure 5.2.4 Open Hall	23
Figure 5.2.5 Front of Indonesian Hall	23
Figure 5.2.6 Front of Malaysian Hall.....	24
Figure 5.2.7 inside the Malaysian cultural hall.....	25
Figure 5.2.8 inside the Malaysian cultural hall.....	25
Figure 5.2.9 inside the Indonesian cultural hall	26
Figure 5.2.10 inside the Indonesian cultural hall	27
Figure 5.2.11 inside the Indonesian cultural hall	27
Figure 5.3.1 Figma Setting.....	28
Figure 5.4.1 How to add 2D screen menu to unity.....	29

Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian , penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta



Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian , penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

LIST OF TABLES

Table 1.1 Project Timeline	3
Table 2.1 Cultural That Have Similarities	5
Table 3.1 Storyboard	16





Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengemukakan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

CHAPTER 1 INTRODUCTION

1.1 Overview

3D and 2D cultural art exhibitions are a form of art exhibition that displays artworks designed with 3D or 2D technology. This exhibition can contain art, culture and culinary between 2 countries that influence each other.

3D and 2D cultural art exhibitions have many benefits for today's younger generation, including:

- Increase interest and appreciation for art and culture: 3D and 2D cultural art exhibitions can introduce and increase the younger generation's interest in art and culture. Through these exhibitions, they can see and feel the beauty of art firsthand, as well as learn the history and meaning of the artwork.
- Broaden horizons: 3D and 2D cultural art exhibitions can also help the younger generation to broaden their horizons and knowledge about the art and culture of the 2 countries.
- Inspire and motivate: 3D and 2D cultural art exhibitions can be a source of inspiration and motivation for the younger generation who are interested in the arts. Through these exhibitions, they can see and learn from the works of art produced by the 2 countries.

3D and 2D cultural art exhibitions can be organized virtually. The exhibition can be accessed through a website or application that allows users to view the artworks more easily. Visitors can also find information about the artworks and artists involved in the exhibition. In addition, 3D and 2D cultural art exhibitions can also attract visitors and provide greater insight.

1.2 Problem Statement

Hearing the words art and culture is often considered outdated or old-fashioned by some people. Public awareness of art and culture is often overlooked because art and culture exhibitions are only held in certain places. Creating art and culture



© Hak Cipta milik Politeknik Negeri Jakarta

Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

exhibitions that cover two countries is quite difficult in addition to the high cost because it has to be held in two locations. Moving artworks from one place to another is considered less effective and efficient

1.3 Objectives

Due to lack of knowledge about art and culture that are interconnected between Indonesia and Malaysia, 2D and 3D based virtual exhibitions were made. With these 2D & 3D exhibitions, it is hoped that users from different countries between Indonesia and Malaysia can easily access and know every art and culture of each country that strengthens Indonesia and Malaysia's relations with each other.

1.4 Scope

The implementations we create are interactive media in the form of virtual exhibition art, including assets in the form of 3D objects and 2D assets.

1.5 Target User

This exhibition is about art and culture between countries, so our main target is young adults aged 15-25 to be more aware of the cultural heritage that has been passed down from generation to generation. But, this can also reach a younger age range.

1.6 Project Timeline

Table 1.1 Project Timeline

No	Activity	1st Month				2nd month				3rd month				4th month				
		Week																
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Pre-Production																		
1	Data Collection (Observation, Interview, etc)																	



© Hak Cipta milik Politeknik Negeri Jakarta

Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian , penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengemukakan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

2	Concept																		
3	Final Concept																		
4	Storyboard																		
5	Compilation and Submission Proposal																		
No	Activity	5th Month				6th month				7th month				8th month					
		Week																	
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Production																			
1	2D and 3D asset																		
2	Video and photo asset																		
3	User interface																		
4	Mapping																		
5	Assembly																		
Post Production																			
1	Testing																		
2	Evaluating																		



Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengemukakan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

CHAPTER 5 CONCLUSION

5.1 Introduction

The conclusion is 2D and 3D Malaysian & Indonesian Art and Culture Exhibition offers such a great experience in exploring some assets containing culture between both countries. 2D and 3D Malaysian and Indonesian Art Culture Exhibition providing immersive experience with 2D photo assets and video assets to enhance the user experience. Besides that, users can also learn about the culture from both countries and understand it.

5.2 Problem Faced

There are several problems and challenge we faced during developing the Virtual Exhibition:

1. Heavy and high load software

We are adding some videos to make the exhibition more interesting, so in developing this Virtual Exhibition we need high specs of Computer to load the Videos, photos, render texture, 3D asset, lighting and real time rendering while the first-person view moves.

2. Errors

When we add the first page that contains a button to start, about us, setting, there's several errors we should face due to being unconscientious and mistyping the code.

3. Asset collecting

In collecting content of this virtual exhibition, we carefully research the culture between Indonesia and Malaysia. But it can be solved by finding a journal and article related to the content through Google scholar and perpunas.go.id.

5.3 Strength and Weakness

Here's the strength and weakness of Malaysian and Indonesian Cultural Exhibition

5.3.1 Strength



Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengemukakan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

1. 2D and 3D Malaysian and Indonesian exhibitions provide a more immersive experience to explore the culture between Malaysia and Indonesia.
2. Not only 2D photo asset, but there's video to make users or visitors more interested to explore Malaysia and Indonesia culture
3. Easy to use because there's no complicated UI inside the exhibition. So users or visitors can fully enjoy the exhibition and learn the culture between Malaysia and Indonesia.
4. We provide comprehensive content between Malaysian and Indonesian Cultural to tell the youth about the cultural between both countries

5.3.2 Weakness

1. Heavy software to open due to lot of video content inside the virtual exhibition
2. There's still empty space to put some more asset
3. The explanation only explain generally

5.4 Conclusion

2D and 3D Malaysian and Indonesian Art and Cultural virtual exhibition is an interactive digital platform that promotes and preserves the culture and heritage of Malaysia and Indonesia. Through detailed 2D real photos and educational resources, this exhibition provides a global audience the opportunity to explore and appreciate the rich culture of Malaysia and Indonesia as two ASEAN countries. Visitors can engage with the exhibition by navigating the virtual space, observing the booths from various angles, and watching the videos provided. Additionally, they can access supplementary information about each booth, which in turn enhances their understanding of the significance of Malaysia and Indonesia Art and culture.



Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengemukakan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta

References

- Florin Gheorghe FILIP, C. (2016). New Researches on the Role of Virtual Exhibitions in Digitization, Preservation and Valorization of Cultural Heritage. *Informatica Economică*, 20, 26-33. doi:10.12948/issn14531305/20.4.2016.03
- Ciurea, C., Zamfiroui, A., & Grosu, A. (2014). Implementing Mobile Virtual Exhibition to Increase Cultural Heritage. *Informatica Economică*, 24-31. doi:10.12948/issn14531305/18.2.2014.03
- Dumitrescu, G., Lepadatu, C., & Ciurea, C. (2014). Creating Virtual Exhibitions for Educational and Cultural Development. *Informatica Economică*, 102-110. doi:DOI: 10.12948/issn14531305/18.1.2014.09



© Hak Cipta milik Politeknik Negeri Jakarta

Appendix



Hak Cipta :

1. Dilarang mengutip sebagian atau seluruh karya tulis ini tanpa mencantumkan dan menyebutkan sumber :
 - a. Pengutipan hanya untuk kepentingan pendidikan, penelitian , penulisan karya ilmiah, penulisan laporan, penulisan kritik atau tinjauan suatu masalah.
 - b. Pengutipan tidak merugikan kepentingan yang wajar Politeknik Negeri Jakarta
2. Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin Politeknik Negeri Jakarta