

**UNIVERSITI TEKNOLOGI MARA**

**MYbody: AUGMENTED REALITY  
MOBILE APPLICATION FOR  
UNDERSTANDING BODY  
BOUNDARIES**

**NURUL SHAKILA BINTI ABDUL RASHID**

**BACHELOR OF INFORMATION  
TECHNOLOGY  
FACULTY SCIENCE COMPUTER AND  
MATHEMATICS**

**SEPTEMBER 2019**

## **ACKNOWLEDGEMENT**

Alhamdulillah, praised and thanks to Allah because of His Almighty and His utmost blessings, I was able to finish my research within the given time. Firstly, I would like to express my deepest appreciation and sincere gratitude toward my supervisor, Dr Zan Azma Binti Nasruddin for trusting me, giving me the guidance and information and emotional support throughout the whole supervision process in completing the research. It was a pleasure to be able to work with her because she always makes time to assist me even when she is busy. Next, I would also like to extend my eternal appreciation to my Final Year Project lecturer, Dr. Emma Nuraihan Binti Mior Ibrahim for all the positive and helpful comments throughout the process. All of those comments help me to improve my research and my mobile application in so many ways. Thank you for patiently guiding the students, we won't be able to repay the time and effort she spends for us. On top of that, I would like to convey my gratitude to my examiner, Dr. Jasber Kaur for her worthy comments and recommendation on my project. Moreover, my special appreciation also goes to my beloved parents who gave endless emotional support, prayers and financial support for me throughout this project. Finally, I would like to give my gratitude to my lovely classmates for helping me during the development of my project. Lastly, thank you to those who were involve directly or indirectly in making this project a success.

## ABSTRACT

Child abuse is known to be one of the major epidemics in our society, these issues have driven the attention of modern society. One of the most essential moves to inhibit these issues from occurring is by educating children about body boundaries. Teaching body boundaries to children at early age helps them to understand the context of body boundaries better. Also, there are so many educational tools used to teach children about body boundaries such as physical storybooks and video content from YouTube. Hence, we should change our conventional teaching to a more interactive learning environment by utilizing the use of technology. This project proposed to use Augmented Reality (AR) as the advanced technology in developing an AR storybook mobile application. Furthermore, in the current context of an AR storybook. The view of the physical book is enhanced using virtual objects that are projected over a display device. Besides, this approach helps the user to become more engaged and retain more information while having fun learning about the respected topic. Thus, the objective of this project is to identify the user requirements of MYbody in enhancing user experiences and interaction mainly, to design and to develop MYbody AR mobile application by following the Mobile Application Development Lifecycle (MADLC) methodology throughout the development process. The AR technique used is marker-based where the user will track the marker provided in order to activate the AR storybook. Besides, the expected outcome from this project is to help in creating an awareness to parents and children about child sexual abuse. Teachers can use MYbody AR mobile apps during the class session to teach students about the body boundaries topic. The future work for MYbody AR mobile application is to add more scene examples and do a collaboration with the ministry of woman, family and community and ministry of education, to produce a better content.

**Keywords:** Body boundary, storybook, education tool, Mobile Application Development Lifecycle (MADLC), marker-based AR, storytelling, teacher, children, parents.

## TABLE OF CONTENTS

<b>CONTENT</b>	<b>PAGE</b>
SUPERVISOR APPROVAL	ii
STUDENT'S DECLARATION	iii
ACKNOWLEDMENT	iv
ABSTRACT	v
TABLE OF CONTENT	vi-x
LIST OF FIGURES	xi-xii
LIST OF TABLES	xiv
LIST OF ABBREVIATIONS	xv
CHAPTER ONE: INTRODUCTION	
1.1 Project Background	1-3
1.2 Problem Statement	3-5
1.3 Project Objective	5
1.4 Project Scope	6
1.5 Project Significance	7
1.6 Chapter Summary	8
CHAPTER TWO: LITERATURE REVIEW	
2.1 Sexuality Education	9
2.1.1 Body Boundaries	10
2.2 Digital Storytelling	11

# CHAPTER 1

## INTRODUCTION

### Chapter Overview

This chapter emphasises the research background such as the project's problem statement, objective, scope and significance. The project's background should give the reader a summary of what the project is really about. In addition, the problem statement refers to the current problems found by adhering to the project's need. Lastly, the scope is justified and the significance of the project is discussed.

### 1.1 Project Background

Over the year, we have heard about child sex abuse issues whether on social media platforms or television mediums. For the past five years, more than 20,000 abuse cases were recorded and according to the data collected, those 20,000 abused children might repeat the act when they grow up if we don't prevent this issue now by rehabilitation (Lajim, 2018).

However, most parents nowadays still feel uncomfortable and awkward talking up about these sensitive topics such as sex education. For instance, there is still various opinion from parents, teachers, students, public and government saying that by providing information on sex will lead to the curiosity which will end up to sexual experimentation. Thus, this opinion leads to the avoidance of teaching sex education to children. The urge and need in implementing sex education rapidly increase as the number of sexual problems among nowadays youth (Syairah, Ruzianisra, 2012).

One of the ways of preventing sexual child abuse is by teaching children about body boundaries. Body boundaries are guidelines, rules or limits that a person creates to identify for themselves what are reasonable, safe and permissible ways for other people to behave around them and how they will respond when