UNIVERSITI TEKNOLOGI MARA

MOBILE APPLICATON IN AUGMENTED REALITY (UMAAR)

NUR ATIQAH BINTI ISMAIL

Report submitted in partial fulfilment of the requirements for the degree of

Master of Science in Information Technology

Faculty of Computer & Mathematical Sciences

ABSTRACT

Mobile Application tends to increase around the worldwide. It is spreading in all aspects in life including the religion. Umrah Mobile Application in Augmented Reality is one of the applications in religion. Currently, there is many Umrah Mobile Application existed in the market but it is not satisfied the requirements of the user. A part from that, this study suggested the new way in delivery the knowledge regarding the Umrah which is Augmented Reality (AR). This study tends to identify the current problems in the existing Umrah Mobile Application and identify the requirements need from the user in Umrah Mobile Application by the previous research and also the interviews. The interview discovers about their experience in getting the knowledge of Umrah. The following results are expected to be achieved: a) The requirements to Umrah Mobile Application; b) A prototype of Umrah Mobile Application in Augmented Reality (UMAAR) The result of this study will become a reference to the developers in developing the Umrah Mobile Application in Augmented Reality (UMAAR) for the pilgrims.

ACKNOWLEDGMENT

Alhamdulillah, thanks to Allah the Most Gracious, I was able to finish this research. Firstly, my special thanks to En.Azhar Abdul Aziz as my supervisor for guiding me and help me a lot by sharing his knowledge and experience, and give sincere and valuable guidance.

Then, special appreciation for my friends for having helped provide support and encouragement, has always been a motivation for me in completing my research.

Last but not least, the highest appreciation are goes to my mother, that are always praying for me to achieve this success.

Thank you very much.

TABLE OF CONTENTS

AUTHOR'S DECLARATION ABSTRACT ACKNOWLEDGMENT TABLE OF CONTENTS				I II	
					III
				IV	
				LIST OF TABLE	S
LIST OF FIGUR	ES			VI	
CHAPTER 1				1	
INTRODUCTION	N			1	
1.1 Background	of	the	Study	1	
1.2 Problem Sta	tement			2	
1.3 Research Question				3	
1.4 Research Objective				3	
1.5 Research Scope				4	
1.6 Research Sig	gnificant			5	
CHAPTER 2				6	
LITERATURE R	EVIEW			6	
2.1 Umrah				7	
2.2 Virtual <i>Umr</i>	2.2 Virtual <i>Umrah</i> Components				
2.2.1 Conter	nts			8	
2.2.2 Usabil	ity Evaluation			8	
2.2.3 User Profile					
2.2.4 Multimedia Elements				9	
2.2.5 Virtual	Reality (VR) Tecl	hnology		7	
2.3 Definition	of	Virtual	Reality	9	

2.4 Definition of Augmented Reality	10		
2.4.1 Augmented Reality in Education	11		
2.4.2 Application of Augmented Reality	11		
2.5 Reviewing the Existing of <i>Umrah</i> Mobile Applications			
2.6 Mobile Applications Development Life Cycle (MADLC)			
2.7 Summary	13		
	14		
CHAPTER 3			
METHODOLOGY			
3.1 Mobile Application Development Life Cycle (MADLC)			
3.2 Research Design			
3.3 Identification Phase			
3.3.1 Literature Search	17		
3.3.2 Interview			
3.3.3 Design Phase			
3.3.4 Development Phase			
3.4 Summary	19		
CHAPTER 4 ERROR! BOOKMARK NOT DEFI	NED.		
DATA ANALYSIS ERROR! BOOKMARK NOT D			
4.1 Requirement in developing the Umrah Mobile Application in Augmente	ed		
Reality	20		
4.1.2 Functional Requirements			
4.1.3 Non-Functional Requirements			
4.2 Design of the <i>Umrah</i> Mobile Application	22		
4.2.1 User Interface Design	24		