

Universiti Teknologi MARA

**Masjid Racer: Islamic Themed Mobile Game Using
Accelerometer Technology**

Ahmad Rasyad Bin Noor Azman

Thesis submitted in fulfillment of the requirement for
Bachelor of Science (Hons.) Computer Science
Faculty of Computer and Mathematical Sciences

July 2012

ACKNOWLEDGEMENT

In the name of Allah, The Most Gracious and The Most Merciful

First of all, I want to express my gratitude to Allah S.W.T, The Almighty for giving me strength and patient in completing this project in a given time.

I would like to express my deep and sincere gratitude to my supervisor, Dr. Fakhrol Hazman Mohd Yusoff. His wide knowledge and his logical way of thinking have been of great value for me. His understanding, encouragement and personal guidance have provided a good basis for this thesis.

I am deeply grateful to all my lecturers in Faculty of Computer and Mathematical Sciences for their detailed and constructive comments, and for their important support throughout this work. I wish to thank Dr. Sharifahlillah Nordin and Dr. Noor Elaiza Abd Khalid for their valuable advice and friendly help. Their extensive discussion around my work and interesting explorations in operations has been very helpful for this study.

I owe my loving thanks to my family especially my mother.

and my siblings. Without their encouragement and understanding it would have been impossible for me to finish this work. I also wish to thank all my friends that always give their great opinion and advice.

Lastly, I offer my regards and blessings to all of those who supported me in any respect during the completion of the project.

Thank you.

ABSTRACT

This paper describes about mobile games that has an Islamic theme which uses accelerometer sensor of a mobile device. Mobile devices have become an integral part of our everyday lives. The market for mobile devices is constantly growing and the market for electronic entertainment such as computer games is also growing. The mobile and gaming platform provides an excellent opportunity to explore the different themes of games. The goal of this project is to develop a simple mobile game integrating the Islamic theme while using the accelerometer sensor that exists in mobile devices.

TABLE OF CONTENTS

CONTENTS	PAGE
SUPERVISOR'S APPROVAL	
DECLARATION	
ACKNOWLEDGEMENT	
ABSTRACT	
TABLE OF CONTENTS	
CHAPTER ONE : INTRODUCTION	1
1.1 Background Of The Project	1
1.2 Problem Statement	1
1.3 Research Questions	2
1.4 Project Objectives	2
1.5 Project Scopes	2
1.6 Project Significance	3
CHAPTER TWO: LITERATURE REVIEW	4
2.1 Application Domain	4
2.2 Related Techniques Used In Mobile Games Development	10
2.3 Different Techniques Used In Similar Domain	18
2.4 Related Works	25
2.5 Summary	27
CHAPTER THREE: RESEARCH METHODOLOGY	28
3.1 Introduction	28
3.2 Research Framework	28
3.3 Conceptual Model	32
3.4 Knowledge Acquisition	33
3.5 System Requirements	33
3.6 Data Collection	34
3.7 System Design	34
3.8 System Construction	43
3.9 Testing and Analysis	43
3.10 Documentation	44
3.11 Summary	44
CHAPTER FOUR: ANALYSIS AND DISCUSSION	
4.1 Introduction	45
4.2 Functionality Test Of The Game Functions	45
4.3 Usability And Performance Test	50
4.4 Summary	52

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION	53
5.1 Objectives Achievement	53
5.2 Issues Of The Game	53
5.3 Future Enhancement	54
BIBLIOGRAPHY	55
APPENDICES	58