

FINAL YEAR PROJECT REPORT

TECHY TENNIS

In fulfillment of the requirement
For degree of
BSE (SOFTWARE ENGINEERING)

By

AAKASH HUSSAIN SHAH DANIYAL AMANULLAH (28238) (28249)

SUPERVISOR

ENGR. AYESHA ZAVERI

BAHRIA UNIVERSITY (KARACHI CAMPUS)



Intellectual Property Right Declaration

This is to proclaim that the work under the supervision of Engr. Ayesha Zaveri is having the title "Techy Tennis" did in halfway satisfaction of the requirements of the Bachelor of Engineering in Software Engineering is the sole property of the Bahria University, and the respective supervisor and is secured under the intellectual property right laws and traditions. It must be viewed as/ utilized for purposes like extension for further improvement, product development, selection for business/authoritative utilization, etc., with the consent of the University and respective supervisor.

Date: 23/05/18

Author(s):

Name: Aakash Hussain Shah

Signature: Aar Signature:

Supervisor(s):

Engr. Ayesha Zaveri

Signature: Signature:

ACKNOWLEDGEMENT

First of all we express our gratitude to the Almighty God for pouring out His blessings and endowments upon us to complete this project.

With this recognition, we express our sincere gratitude to all those who have been involved in this project and who have helped us and have made it a rewarding experience.

We are exceptionally grateful to Engr. Ayesha Zaveri, supervisor of our project and Engr. Nabiha Faisal, coordinator of our project, for their constant motivation, reinforcements, understanding and significant help. I likewise extend my gratitude to Final year project committee, who attended each and every presentation and listened to our project related problems and presented solutions and opinions.

We might want to express our gratitude to our group members Aakash Hussain Shah, and Daniyal Amanullah and more importantly to Almighty God for the help and guidance.

Abstract

The future for the gaming is vast as the competitors in the market are few in number. The main goal of this project is that games are developed to provide entertainment, and reduce stress. However, people are expecting more to prevent there state of boredom with new technologies.

Microsoft's Natal project uses no joystick or remotes as controls; they use object tracking to control the games. 3G wireless technologies enable the gamers to take their games to the next level of entertainment.

This game provides augmented reality and works using object tracking by recognizing with camera. This is

What makes this game unique because this doesn't need any expensive device like "Kinect". People will experience this kind of game for the first time with less cost and with augmented reality.

Our project will provide an environment that was not easier than this before to experience with less cost and for all class of people. This provides user new experience that will use object tracking. Using expensive recognition device like 'Kinect' may make people think of not to buying it because of its price. But our game uses camera that recognizes object tracking and performs pre-defined functionalities accordingly.

Keywords: Technologies, Joystick, Object tracking, Augmented Reality, Kinect, Techy Tennis, 3G Wireless Technologies

Table of contents

1.	INT	RODUCTION	11
	1.1	PROBLEM STATEMENT:	12
		PROJECT SCOPE	
	1.3	PROJECT OBJECTIVES	13
2.	BA	CKGROUND AND LITERATURE REVIEW	14
3.	AN.	ALYSIS AND DESIGN	15
		REQUIREMENT CAPTURE:	
		ARCHITECTURAL STRATEGIES:	
	3.2.		
	3.2.		
	3.2.		
	3.2.		17
	3.2.		
	3.3	DESIGN CONSTRAINTS	
	3.3.		
	3.3.	2 End User Characteristics:	18
4.	ME	THODOLOGY	19
	4.1	Work Flow	19
	4.2	WORK FLOW DESCRIPTION	
	4.3	PROJECT DESCRIPTION	
	4.4	Work Breakdown Structure	
	4.5	GANTT CHART	
	4.6	CONTEXT DIAGRAM:	
	4.7	SEQUENCE DIAGRAM:	
	4.8	ACTOR USECASE:	
	4.8. 4.8.	8	
5.	IM	PLEMENTATION	
	5.1	INTERFACES OF THE GAME	
6.	TE	STING	37
	6.1	TESTING APPROACHES	
	6.1.		
	6.1.	2 White Box Testing	40
7.	CO	NCLUSIONS	42
8.	. FU	TURE WORK	43
9.	AP	PENDICES	44
	9.1	Mouse dragging:	
	9.1	EXTRACTING COLORS AND STORING IT IN HISTOGRAM	
	9.2	OBJECT TRACKING	
	7.5	ODVECT TATIONAL MARKET AND	