



FINAL YEAR PROJECT REPORT

**INTERACTIVE WAY TO LEARN TRAFFIC
RULES.**

In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)

By

**IBRAHIM ABDUL KHALIQ
MUHAMMAD FARRUKH ALI
AMEER HAMZA**

**54410 BSCS
54199 BSCS
54085 BSCS**

SUPERVISED

BY

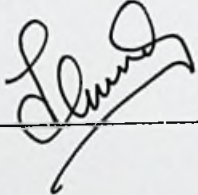
SIR TALHA ALAM

BAHRIA UNIVERSITY (KARACHI CAMPUS)

FALL-2022

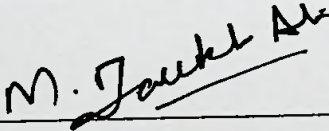
DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

Signature : 

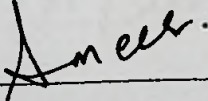
Name : Ibrahim Abdul Khaliq

Reg No. : 54410

Signature : 

Name : Muhammad Farrukh Ali

Reg No. : 54199

Signature : 

Name : Ameer Hamza

Reg No. : 54085

Date : 12/01/2022

The copyright of this report belongs to Bahria University according to the Intellectual Property Policy of Bahria University BUORIC-P15 amended on April 2019. Due acknowledgement shall always be made of the use of any material contained in, or derived from, this report.

© 2019 Bahria University. All right reserved.

ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express our gratitude to our research supervisor, Mr Talha Alam for his invaluable advice, guidance, and his enormous patience throughout the development of the research.

In addition, we would also like to express my gratitude to our loving parent and friends who had helped and given me encouragement.

INTERACTIVE GAME TO LEARN TRAFFIC RULES.

ABSTRACT

Game-based learning is one of teaching approach quite popular presently. Our project is based on a animated game which is a learning game for youngsters and new drivers through this game they can learn about different traffic rules our primary aim is to spread awareness about road ethics , road side rules and road safety rules our basic plan is to develop multiple levels each one of those levels is design on several different traffic rules for passing these levels player have to follow the all rules and answer a questioner based on these rules at the end of each level to unlock the next level if player failed to follow any rule during the game he/she will not be able to unlock next level until they not follow every rule . The questioner is basically a bonus for a player to get an extra star or coins. If player get full marks in questioner, he/she will get a extra star. Animation is a more effective way to attract someone. Through the sound effects, animated environment we can attract the more teenagers. Through this approach we can lay a solid base for following a traffic rule in youngsters sub conscious mind. According to Gabe Zimmermann who is a social worker who work for the developing a tolerance in society towards the rules which many neglect but these rules are for in their own wellbeing.

“Games are the only known source in the universe that can get people to actions against their self-interest, in a predictable way without using force” [5].

Another saying by Walt Disney who is the founder of The Walt Disney company which is the most reputed company in field of animation state that the animation is the most effective way to explain something to human’s mind:

“Animation can explain whatever the mind of man can conceive. This facility makes it the most versatile and explicit means of communication yet devised for quick mass appreciation” [5].

TABLE OF CONTENTS

	DECLARATION	ii
	APPROVAL FOR SUBMISSION	iii
	ACKNOWLEDGEMENTS	v
	ABSTRACT	vi
	TABLE OF CONTENTS	vii
	LIST OF FIGURES	xi
	LIST OF SYMBOLS / ABBREVIATIONS	xii
	LIST OF APPENDICES	xiii
CHAPTER		
1	INTRODUCTION	1
	1.1 Background	1
	1.2 Game beyond entertainment:	1
	1.3 Application Areas	2
	1.4 Problem Statement	3
	1.5 Aims and Objectives	4
	1.6 Scope of Project	5

2	LITERATURE REVIEW	6
2.1	Existing Simulator:	6
2.2	Existing Game Development platform:	6
2.3	Advantages of Having a Combined Technology & Traffic Awareness	7
2.4	Car Parking Simulation:	7
2.5	Car Driving School Simulation:	8
2.6	Finalizing Unity Platform:	8
2.7	Technology Education and Mobile Application:	9
3	DESIGN AND METHODOLOGY	10
3.1	Methodology:	10
3.1.1	Technology adapted:	10
3.1.2	Tool Used	10
3.1.3	Approach	11
3.1.4	Concept	11
3.1.5	Designing Phase	12
3.1.6	Development Phase	12
3.2	Design Phase	15
3.2.1	Overview	15
3.2.2	Why Water-fall model?	17
4	IMPLEMENTATION	18
4.1	Player Controlled Car Module	18
4.2	Pointing System	18
4.3	Traffic Rules Implementation	18
4.4	Collision Detection	18
4.5	Player Vehicle	19
4.6	Network Lobby module	19

4.7	Virtual Environment	19
4.8	Modelling 3D object	19
4.8.1	Blueprint	19
4.8.2	Blocking	20
4.8.3	Adding Polygon	20
4.8.4	Smoothing	20
4.8.5	Trim the Mesh	20
4.8.6	Slanting	21
4.9	Classes of Game object	21
4.9.1	Classes of Car object	21
4.9.2	Classes of Environment objects	21
5	RESULTS AND DISCUSSIONS	22
5.1	Result:	22
5.2	Discussions:	23
6	TESTING AND EVALUATION	24
6.1	Test Procedure.	24
6.2	Integration Testing	24
6.3	Unit Testing	25
6.4	User Accepting Testing.	26
7	CONCLUSION AND FUTURE WORK	27
	REFERENCES	29
	APPENDICES	30