

SCOUTing: AN ANDROID BASED 2D
INTERACTIVE SCOUTS GUIDE

THESIS

JOLAINA KAY E. DUCTA
EMMERIZA P. LAPAZ

College of Engineering and Information Technology

CAVITE STATE UNIVERSITY

Indang, Cavite

Cavite State University (Main Library)



T7145

THESIS/SP 371.397 D85 2017

May 2017

SCOUTing: AN ANDROID BASED 2D INTERACTIVE SCOUTS GUIDE

Undergraduate Thesis
Submitted to the Faculty of the
College of Engineering and Information Technology
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Information Technology



DUCTA, JOLAINA KAY E.
// LAPAZ, EMMERIZA P.

May 2017

SCOUTing: AN ANDROID BASED 2D INTERACTIVE SCOUTS GUIDE

Undergraduate Thesis
Submitted to the Faculty of the
College of Engineering and Information Technology
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Information Technology



DUCTA, JOLAINA KAY E.
LAPAZ, EMMERIZA P.

May 2017

ABSTRACT

DUCTA, JOLAINA KAY E. and LAPAZ, EMMERIZA P. SCOUTing: An Android Based 2D Interactive Scouts Guide. Undergraduate Thesis. Bachelor of Science in Information Technology. Cavite State University, Indang Cavite. May 2017. Adviser: Ms. Charlotte B. Carandang.

The study was conducted to develop an Android Based 2d Interactive Scouts Guide that will eliminate the problems encountered in teaching scouting. The system provides functionality feature that allows information and guides about boy scouts and girl scouts.

The authors used the Mobile-D methodology as a paradigm in the development of the system. This methodology has the following phases: explore, initialize, productionize, stabilize and system test and fix.

The system was developed using different software tools such as Windows 10 as the Operating system, Android Studio as the programming language, ADK and SDK for developing the application, Adobe Photoshop CS6 for editing the images and icon used for the application and Microsoft Office Word 2016 for the documentation.

The system was evaluated by 132 respondents based on the given criteria: functionality, reliability, usability, efficiency, maintainability, portability and user-friendliness. The evaluators were composed of teachers and students from Tropical Village Elementary School in General Trias, Cavite and IT Experts from Cavite State University, Main Campus. It was successfully passed all given criteria in the evaluation and met all the aimed features and functionality as well as the requirements and objectives.

TABLE OF CONTENTS

	Page
APPROVAL SHEET	ii
BIOGRAPHICAL DATA	iii
ACKNOWLEDGEMENT	v
ABSTRACT	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF APPENDIX TABLES	xi
LIST OF APPENDIX FIGURES	xii
LIST OF APPENDICES	xiii
INTRODUCTION.....	1
Statement of the Problem.....	2
Objectives of the Study	3
Significance of the Study	4
Time and Place of the Study	5
Scope and Limitation of the Study.....	5
Theoretical Framework.....	6
Definition of Terms.....	8

REVIEW OF RELATED LITERATURE	9
METHODOLOGY	24
Materials	24
Methods.....	24
Explore Phase.....	25
Initialize Phase	26
Productionize Phase	26
Stabilize Phase	27
System and Fix Phase	27
RESULTS AND DISCUSSION	28
System Development	28
System Overview	29
Software Evaluation.....	38
SUMMARY, CONCLUSION AND RECOMMENDATIONS	46
Summary	46
Conclusion	47
Recommendations.....	48
REFERENCES.....	49
APPENDICES	51

LIST OF TABLES

Table		Page
1	Comparison and contrast of the proposed system	23
2	Mean and standard deviation based on the functionality of the system	40
3	Mean and standard deviation based on the reliability of the system	40
4	Mean and standard deviation based on the usability of the system	41
5	Mean and standard deviation based on the efficiency of the system	43
6	Mean and standard deviation based on the maintainability of the system.....	43
7	Mean and standard deviation based on the portability of the system	43
8	Mean and standard deviation based on the user-friendliness of the system	44
9	Assessment of the software in terms of the criteria of the system	45

LIST OF FIGURES

Figure	Page
1 Theoretical framework for SCOUTing: an Android based 2D interactive scouts guide.....	7
2 Mobile- D methodology.....	25
3 Android studio platform.....	30
4 Main menu	30
5 Information module	31
6 Tutorial module.....	31
7 Bandaging section.....	32
8 Knot tying section	32
9 Signaling section	33
10 Camp fire section	33
11 Tracking signs section	34
12 Camping tents	34
13 Quiz module	35
14 Start dialog box	35
15 Quiz section	36
16 About module.....	37

LIST OF APPENDIX TABLES

Appendix Table	Page
1 Frequency distribution for the functionality of the system	59
2 Frequency distribution for the reliability of the system.....	60
3 Frequency distribution for the usability of the system.....	61
4 Frequency distribution for the efficiency of the system	62
5 Frequency distribution for the maintainability of the system	63
6 Frequency distribution for the portability of the system.....	64
7 Frequency distribution for the user-friendliness of the system.....	65

LIST OF APPENDIX FIGURES

Appendix Figure	Page
1 Fishbone diagram of limited time allotted to conduct scouting activities	53
2 Fishbone diagram of limited number of teachers handling scouting	53
3 Fishbone diagram of students lack of familiarization in the equipment used....	54
4 Use case diagram of information module	55
5 Use case diagram of tutorial module	55
6 Use case diagram of quiz module	56
7 Use case diagram of about module	56
8 Gantt chart.....	57

LIST OF APPENDICES

Appendix	Page
1 Interview guide	67
2 Unit testing.....	70
3 Integration testing	72
4 Evaluation form	74
5 Forms	77
6 Letters and Certificate.....	80

SCOUThing: AN ANDROID BASED 2D INTERACTIVE SCOUTS GUIDE

Jolaina Kay E. Ducta
Emmeriza P. Lapaz

An undergraduate thesis manuscript submitted to the faculty of the Department of Information Technology, College of Engineering and Information Technology, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for the degree of Bachelor of Science in Information Technology with Contribution No. CEIT-2016-17-2-196. Prepared under the supervision of Ms. Charlotte B. Carandang.

INTRODUCTION

The Boy Scouts of the Philippines (BSP) is the National Scout Organization of the Philippines. Its mission is to imbue in the youth the love of God, country, and fellowmen; to train young people to become responsible leaders; and to contribute to nation-building (scouts.org.ph). While the Girl Scouts of the Philippines (GSP) is the National Guiding Association for girls and young women of the Philippines. Its mission is "to help girls and young women realize the ideals of womanhood and prepare themselves for their responsibilities in the home, and to the nation, and the world community." (girlscouts.org.ph). These two organizations usually introduced to elementary students as one of the extracurricular activities once they enter the first grade and orient the basics of scouting manually.

The scouting movement, through the Boy Scouts of the Philippines (BSP) and the Girl Scouts of the Philippines (GSP), is an effective program in the leadership and value formation of every child. The main objective of this Program is consistent with the