

~~M~~DAS WHEEL OF SOLVING: DEVELOPMENT OF 2D ANDROID GAME

Undergraduate Thesis
Submitted to the Faculty of the
Cavite State University- Indang Campus
Indang, Cavite

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

**JOVANY G. ~~E~~SPERANZA
ARJHON C. JIMENEZ**

May 2018

ABSTRACT

ESPERANZA, JOVANY G. and JIMENEZ, ARJHON C. MDAS Wheel of Solving: Development of 2D Android Game. Undergraduate Thesis. Bachelor of Science in Information Technology. Cavite State University, Indang, Cavite. May 2018. Adviser: Mr. Marlon R. Pereña.

The study was conducted from March 2017 to April 2018 at Cavite State University, Indang, Cavite to develop an MDAS Wheel of Solving: Development of 2D game for android. The development of mobile application for MDAS Wheel of Solving: Development of 2D Game for Android was conducted to help the players to enhance their mathematical skills, to give entertainment and at the same time gaining information about mathematics, and alsoto practice their solving skills.

The methodology used was the agile methodology. It consists of six phases: brainstorm, documentation, design, development, quality testing, and deployment.

For the development of the 2D android game, the researchers used a computer system with the following specifications: Windows 10 Enterprise 64 bits Operating System and 4GB RAM. The developers also used Construct2 Integrated Development Environment, Adobe Photoshop CS6 for graphics making, and C2Buildozer.

For the implementation, the minimum specification used for the system requires 16 Android API or Android 4.0, 2 GB of RAM, and 1024x768 pixel screen resolution. It is recommended to exceed with the minimum requirement stated to be able to experience the navigation without any interruption.

The system was evaluated by 30 respondents composed of 20 students coming from Grade 1 students of Holy Redeemer School and 10 IT experts from the Department of Information Technology. The respondents evaluated the system based on its functionality, reliability, usability, efficiency, maintainability, and portability. The results

were tabulated, analyzed, and statistically treated using mean and standard deviation. Based on the results, the system was assessed as excellent which proves that the objectives and requirements of the system were achieved and it can be a solution to the identified problems.

TABLE OF CONTENTS

	Page
APPROVAL SHEET	ii
BIOGRAPHICAL DATA	iii
ACKNOWLEDGEMENT	v
ABSTRACT	vi
LIST OF TABLES	x
LIST OF FIGURES	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	3
Time and Place of the Study	4
Scope and Limitation of the Study	4
Definition of Terms	7
Theoretical Framework of the Study	10
REVIEW OF RELATED LITERATURE	12
METHODOLOGY	26
Materials	26
Methods	26
Statistical Treatment of Data	29

RESULTS AND DISCUSSION	31
System Description	31
System Overview	31
System Evaluation	44
SUMMARY, CONCLUSION AND RECOMMENDATIONS	56
Summary	56
Conclusion	57
Recommendations	57
REFERENCES	58
APPENDICES	60