

**AUXILIUM: RESCUE AND RESPONSE SYSTEM FOR DISTRICT IV OF
CAVITE**

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

In partial fulfilment
of the requirements for the degree
Bachelor of Science in Computer Science

JOHN ERIC D. PAGLINAWAN
FLEURDELIZ E. TAYCO
May 2017

ABSTRACT

PAGLINAWAN, JOHN ERIC D. and TAYCO, FLEURDELIZ E. Auxilium: Rescue and Response System for District IV of Cavite. Undergraduate Thesis. Bachelor of Science in Computer Science, Cavite State University, Indang Campus. March 2017. Adviser: Ms. Julie Ann C. Lontoc. Technical Critic: Mr. Russel Villacarlos.

Auxilium: Rescue and Response System for District IV of Cavite was developed to provide assistance to the citizens and Emergency Rescue Groups when experiencing a life-threatening situation. The proponents used Haversine Formula in order to get the nearest coordinate. It has a mobile application with web-based system and allows three (3) levels of access – citizens, field authorities and head offices or administrators. The study was conducted from February 2016 to March 2017 at Cavite State University - Main Campus.

In developing the software, Agile Software Development Methodology was used. The software was evaluated by 130 participants - 100 citizens of Cavite, 10 police field officers, 5 police administrators, 5 fire field officers and 10 IT experts. A software evaluation sheet based on ISO 9126 was used as the research instrument.

The overall result of software evaluation with the criteria of functionality, reliability, usability, portability, efficiency, and maintainability shows that the software was excellently done. It means that proponents met all the expectations and desired output for the software.

TABLE OF CONTENTS

	Page
BIOGRAPHICAL DATA	ii
ACKNOWLEDGMENT	iii
ABSTRACT	v
LIST OF FIGURES	viii
LIST OF TABLES	x
LIST OF APPENDIX FIGURES	xi
LIST OF APPENDIX TABLES	xii
LIST OF APPENDICES	xiii
INTRODUCTION	1
Statement of the Problem	2
Objectives of the Study	4
Significance of the Study	4
Time and Place of the Study	5
Scope and Limitation of the Study	6
Theoretical Framework	8
Definition of Terms	12
REVIEW OF RELATED LITERATURE	15
Related Studies	31
METHODOLOGY	35
Materials	35
Methods	36

Statistical Treatment	39
RESULTS AND DISCUSSION	41
System Requirements	41
Software Requirements	42
Analysis	42
Program Design	44
Coding	45
Testing	45
Operations	46
System Overview	46
Software Testing	58
Software Evaluation	58
SUMMARY, CONCLUSION, AND RECCOMENDATIONS	64
Summary	64
Conclusion	66
Recommendations	67
REFERENCES	68
APPENDICES	71