DEVELOPMENT OF QUEUING SYSTEM USING BARCODE AND FACIAL RECOGNITION FOR CAVITE STATE UNIVERSITY- MAIN CAMPUS ADMINISTRATION BUILDING

THESIS

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DEVELOPMENT OF QUEUING SYSTEM USING BARCODE AND FACIAL RECOGNITION FOR CAVITE STATE UNIVERSITY-MAIN CAMPUS ADMINISTRATION BUILDING

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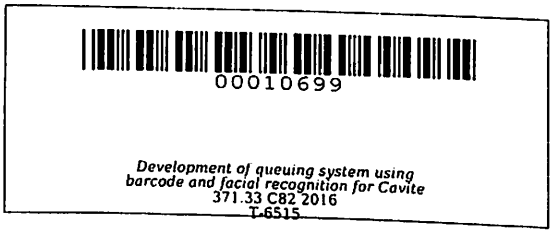

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ABSTRACT

COSCOLLUELA, CEDRIC D. and DIGMA, JOYCE E. Development of Queuing System Using Barcode and Facial Recognition for Cavite State University - Main Campus Administration Building. Undergraduate Thesis. Bachelor of Science in Computer Science. Cavite State University, Indang, Cavite. April 2016. Adviser: Ms.Ria Clarisse L. Mojica.

This study conducted from March 2015 to February 2016 at Cavite State University - Main Campus. The purpose of the study was to develop a queuing system using barcode and facial recognition that would minimize the common problems encountered by the long queue and to have a systemized queuing system.

Rapid Application Development Methodology was used as the methodology of the system. To implement the facial recognition feature of the system, Viola Jones and Principal Component Analysis Eigen Faces were used. 100 students of Cavite State University evaluated the system. The results were collected through a questionnaire based on ISO 9126.

According to the overall evaluation results, the system was judged to be excellent in all aspects such as functionality, reliability, usability, efficiency, and maintainability. Upon the completion of the study, the proponents concluded that this would be a solution for the common problems encountered by the long lines during enrollment.

TABLE OF CONTENTS

Page

BIOGRAPHICAL DATA ii

ACKNOWLEDGMENT iii

ABSTRACT v

LIST OF FIGURES viii

LIST OF TABLES ix

LIST OF APPENDIX FIGURES x

LIST OF APPENDIX TABLES xi

LIST OF APPENDICES xii

INTRODUCTION 1

Statement of the Problem 2

Theoretical Framework 3

Objectives of the Study 5

Significance of the Study 5

Time and Place of the Study 6

Scope and Limitation of the Study 7

Definition of Terms 8

REVIEW OF RELATED LITERATURE 10

MATERIALS AND METHODS 29

Materials 29

Methodology 29

RESULTS AND DISCUSSION 33

System Overview 34

Software Evaluation 39

SUMMARY, CONCLUSION, AND RECOMMENDATIONS 44

Summary 44

Conclusion 45

Recommendations 46

REFERENCES 47

APPENDICES 49

LIST OF FIGURES

Figure		Page
1	Theoretical framework for Queuing System	4
2	Line length and Numbers of line	11
3	Queue discipline	12
4	Components of queuing system	13
5	Steps of Face Recognition System Applications	18
6	Depiction of face recognition processing flow	19
7	An RFID System	25
8	Rapid Application Development Methodology	30
9	Screenshot of queuing system administrator log-in	34
10	Screenshot of add new validated payee	35
11	Screenshot of student already registered in the queue	36
12	Screenshot of main interface of machine2	37
13	Screenshot of cashier window virtual representation busy	37
14	Screenshot of administrator force out payee form	38
15	Screenshot of online queuing statistics	38

LIST OF TABLES

Table		Page
1	Participants' evaluation of the software in terms of its functionality	39
2	Participants' evaluation of the software in terms of its reliability	40
3	Participants' evaluation of the software in terms of its usability	41
4	Participants' evaluation of the software in terms of its efficiency	41
5	Participants' evaluation of the software in terms of its maintainability	42
6	Summary results of the evaluation	43

LIST OF APPENDIX FIGURES

Appendix Figure		Page
1	Fishbone Diagram (Payees are cutting in the line)	51
2	Fishbone Diagram (Not flexible queuing procedure)	51
3	Fishbone Diagram (No current means of real time information)	52
4	Gantt Chart of the Development	53
5	Use Case diagram of Queuing system	54

LIST OF APPENDIX TABLES

Appendix Tables		Page
1	Frequency distribution of scores of the functionality indicators	56
2	Frequency distribution of scores of the reliability indicators	56
3	Frequency distribution of scores of the usability indicators	56
4	Frequency distribution of scores of the efficiency indicators	56
5	Frequency distribution of scores of the maintainability indicators	57

LIST OF APPENDICES

Appendix		Page
1	Unit Testing	59
2	Integration Testing	66
3	Software Evaluation Sheet	68
4	Software Evaluation Sheet with answer	71
5	Sample Source Code	74
6	Letters, Forms, Certificates, ect	78

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INTRODUCTION

In this day and age of computers and advanced technology, several schools and institutions still operate manually in their different functions. It is perceived to be inefficient due to time and labor constraints, which should have been addressed by having an automated system that will enable integration of all processes and creation of almost paperless environment while ensuring efficient task management.

Manual system put pressure in our daily routine work like waiting in lines that part of our daily life, any time that there is more customer demand for a service than what can be provided, a waiting line forms. Such instances happen in movie theater, ticket booths, banks, at grocery stores, enrollment in universities and so on. A person's waiting time depends on the number of people waiting before him or her, the number of personnel's serving each queue and the amount of service time spent per customer. Mathematical analytical method of analyzing the relationship between congestion and