DEVELOPMENT OF CARD ACCESS OPERATED STAND ALONE COMPUTER SERVICES SYSTEM

Design Project

KD G. AMADOR

CRISTAN A. RODERNO

College of Engineering and Information Technology

CAVITE STATE UNIVERSITY

Indang, Cavite

Cavite State University (Main Library)

DP348

DP 621.389 Am1 2012

April 2012

DEVELOPMENT OF CARD ACCESS OPERATED STAND ALONE COMPUTER SERVICES SYSTEM

An Undergraduate Design Project
Submitted to the Faculty of the
Cavite State University
Indang,Cavite

In partial fulfillment
of the requirements for the Degree of
Bachelor of Industrial Technology Major in Electronics

00008020

Development of card access operated
stand-alone computer services system
621.389 Am1 2012
DP-348

AMADOR, RD G.
RODERNO, CRISTAN A.
April, 2012

ABSTRACT

AMADOR, RD G., and RODERNO, CRISTAN A., Development of Card Access Operated stand alone Computer Services System. Undergraduate Thesis Bachelor of Industrial Technology, Major in Electronics. Cavite State University, Indang, Cavite April 2012. Adviser Mrs. Rhodora V. Nuestro.

This project was developed to provide student easy access on computer services during their urgent needs such as creating, editing, painting and even researching using internet. Materials and devices used in the construction of the project were carefully checked to make sure that it can render services very well. The design project was constructed at Indang, Cavite. Smart card and smart card reader were connected to switch on the computer. The user needs to tap the smart card to enable the computer. The smart card to be used must be registered to the computer system. Registered smart card will be preloaded by a certain amount desired by the student. Once the load of the card was fully consumed, it can be loaded again by the administrator.

Series of tests were conducted to determine if the project is ready to be evaluated. Evaluators of the design project were students and technical experts. The design was evaluated according to its efficiency, accessibility, usefulness and availability. Results revealed favourable outcome with an overall descriptive rating excellent.

The design project was able to meet the specific function needed in the operation however there were still recommendations to further improve the services that the project can render.

TABLE OF CONTENTS

	Pages
BIBLIOGRAPHICAL DATA	iii
ACKNOWLEDGEMENT	v
ABSTRACT	ix
TABLE OF CONTENTS	x
LIST OF TABLES	xii
LIST OF APPENDIX TABLE	xiii
LIST OF APPENDIX FIGURE	xiv
LIST OF APPENDICES	xv
INTRODUCTION	1
Statement of the problem	2
Importance/Significance of the study	3
Objectives of the study	4
Time and Place of the Study	4
Definition of Terms	5
Scope and Limitations of the study	7
REVIEW OF RELATED LITERATURE	9
MATERIALS AND METHODS	15
Materials	15
Personal Computer	15
Methods	16

Computer Setup 17

Installation of Card Reader (ACR 120) 30

RESULTS AND DISCUSSION 31

Project Structure 31

Project Capabilities and Limitations 31

Testing 32

Evaluation 33

Cost of Materials 37

Cost Analysis 38

SUMMARY, CONCLUSION, AND RECOMMENDATION 39

Summary 39

Conclusion 39

Recommendation 40

BIBLIOGRAPHY 41

APPENDICES 42

LIST OF TABLES

Table		Pages
1	Materials needed for the assembly of the project	15
2	Criteria for rating the obtained operation of the design project	34
3	Evaluation summary result obtained from the student evaluators . . .	35
4	Evaluation result obtained from panel of experts indicate favourable outcome	36
5	Cost of Materials	37

LIST OF APPENDIX TABLE

Appendix Table		Pages
1	EVALUATION FORM FOR THE DESIGN PROJECT . . .	44
2	DETAILED COMPUTATIONS OF EVALUATION	45

LIST OF APPENDIX FIGURES

Appendix Figures		Pages
1	DESIGN OF SMART CARD	49
2	DIAGRAM FOR ACR120 TO PC	50
3	BLOCK DIAGRAM OF CARD READER	51
4	FLOW CHART (PC)	52
5	FLOW CHART (PRINTER)	53
6	CABINET DIMENSION FOR THE COMPUTER SYSTEM	54
7	FUNCTION OF EACH LOGO (ADMIN USER'S)	56
8	FUNCTIONS OF EACH LOGO (CLIENT USER'S)	65
9	OUTPUT OF THE PROJECT	70
10	CARD READER IN GOOD CONDITIONS	73

LIST OF APPENDICES

Appendices		Pages
A	TECHNICAL SPECIFICATION OF CARD READER....	75
B	INSTALLATION OF CARD READER	78
C	USER'S GUIDE	91
D	SOURCE CODE	93
E	APPROVAL LETTERS	121

DEVELOPMENT OF CARD ACCESS OPERATED STAND ALONE COMPUTER SERVICES SYSTEM[1/]

RD G. AMADOR
CRISTAN A. RODERNO

[1/]A design project manuscript presented to the faculty of the Department of Industrial Engineering Technology, College of Engineering and information Technology Cavite State University Indang, Cavite in partial fulfillment of the requirements for the degree of Bachelor of Industrial Technology major in Electronics Technology with Contribution No._____. Prepared under the supervision of Professor Rhodora V. Nuestro.

INTRODUCTION

Personal Computer (PC) has become powerful and extremely versatile tools that have revolutionized how people work, learn, communicate, and find entertainment. Many households in the United States now have PCs, thanks to affordable prices and software that has made PCs easy to use without special computer expertise. Personal computers are also a crucial component of information technology (IT) and play a key role in modern economies worldwide. The usefulness and capabilities of personal computers can be greatly enhanced by connection to the Internet and World Wide Web, as well as to smaller networks that link to local computers or databases. It can also be used to access content stored on compact discs (CDs) or digital versatile discs (DVDs), and to transfer files to personal media devices and video players.