IMPLEMENTATION OF SMART CARDS IN DATABASE SYSTEMS FOR AUTHORISED ACCESS TO SGU ROOM MODEL

By

Ivan Angelo

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SWISS GERMAN UNIVERSITY
Campus Edutown – BSD City
Tangerang 15339 – Indonesia
www.sgu.ac.id

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, not material which to a substantial extent has been accepted for the award of may other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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Ivan Angelo Date

Approved by:

_____ _____

Dipl. –Ing. Maralo Sinaga Date

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Chairman of the Examination Steering Committee Date

ABSTRACT

IMPLEMENTATION OF SMART CARDS IN DATABASE SYSTEMS FOR AUTHORIZED ACCESS TO SGU ROOM MODEL

By

Ivan Angelo

SWISS GERMAN UNIVERSITY
Bumi Serpong Damai

Dipl. -Ing. Maralo Sinaga

Stand alone smart card system is the main topic of this thesis. This system connects between a contactless smart card reader and the microcontroller as the main controller device using a serial interface and the communication will be monitored in data terminal program. It will give an authorization to access the room by comparing the smart card data such as identification number of the SGU students to the database in the microcontroller. The system is added with keypad to input personal identification number (PIN) in order to provide higher level of security system. The LCD is an additional device to display the process that is done in the system.

To support the main system, the registration process is needed in order to write the identification number into the contactless blank smart card. In this registration process, it is also possible to read the data on the smart card. The registration process is done by the PC with connecting to the contactless smart card reader using also the serial interface.

Keywords: LCD, RFID, Contactless Smart Card, Physical Access, Data Terminal

DEDICATION

I dedicate this thesis to Jesus Christ who gives me strength and makes everything possible, to my beloved family especially for my mom and dad and my girlfriend who always supported me. Thank you for all the support, advised. Without their support this thesis would not be completed.

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