

**SMARTCARD FOR DOORS IN SMART HOME**

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## **ACKNOWLEDGEMENT**

First of all, thanks to God for give we time to finish this Project Report 1 in time and we would like to thank our supervisor, En. Ali Othman for his kindness, support and concern along our journey to finish the report for Smartcard Project. We had make discussion with our supervisor about on how to solve our problem like planning the work plan, and then complete our project report. We also get some information from him that can be use to our project, Smart Card for doors in Smart Home.

In this part, we would like to express our thanks to our friends who also give some help and support for our project. For example, they give some useful web addresses, which have some important information that we need to finish this report.

And also our thanks to our family for their support and understanding our life as a student of Electrical Engineering.

## **ABSTRACT**

Smart Card system is a security system that designed to avoid unknown intruder from break down to our house by using some material that can open the doors. In our project, Smart Card with the IC becomes our priority in security because it contact to many data. Our project is out of the smart size because there has bulky size at the smart card writer. Smart card comes in many types, such as magnetic strip, barcode, and the smart card with the IC. We choose and program the IC smart card by looking the benefit from other smart card such as the Bar Code card and the magnetic strip card.

The magnetic strip usually we look in the hotel. This card we can program and re-program if we want. For example if the card want to open the room at number 1659, we can write the 1659 at the card by using the driver from Personal computer.

The code bar card usually we look in the shopping market and in the student card. The program must read the bar and the gap in every part of the bar code. The bar code happens from the data numeric and to convert to the bar. The bar code usually has low security for owner because it has one data if we compare to the IC smart card which is has up to 132 k bytes in nowadays and will be up the memory in the future

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# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Smart card is one of the home security systems in our life today. Five years ago, the number of smart cards in use worldwide was less than one hundred million. Today the annual issue of smart cards is estimated at several hundred million. Nowadays, there are many type of smart card such as magnetic strip, barcode, finger sensor and many more products in the market but in this project, we used the smart card with IC. Experts predict that by the years 2002, smart card will be excess of a billion. It has 16K bytes of memory if we compare with other including 8K bytes memory storage. In addition to the rapid growth in the number of the smart card used, the storage and processing capability of these cards has advanced dramatically.

The applications of this smart card can be used diverse. Some of these include banking applications, personal identification, automatic tolls, prepaid telephone cards, and medical applications where medical records are stored on the smart card. Knowledge of smart cards system is thus becoming more valuable to computer scientists.

This report documents the work done on the project to design and develop a smart card reader/ writer for doors. Although smart card readers are available commercially, it was decided to design and develop one for several reasons:

- i. To provide the greatest flexibility for this and future projects
- ii. To investigate possible optimizations to the currently available readers