SMART CARD AT FRONT DOOR

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ABSTRACT

Smart Home is the terms commonly use to define a residence that uses a Home Controller to integrate the residences various home automation systems. One of the devices commonly found in Smart Home technology is the 'Smart Card' design. Smart Card is one of the key, functioning to support the home security system. Smart Card is usually use at front door as the key for the owner to pass through the main entrance. It will detect any terms that is compatible to the card sensor. It could be the magnetic tape, copper chip, or card scanner. In this project, one of the smart card designs has being selected. That is a card scanner because of its special designed operation and for its easy construction. Card scanner is one of the smart card technologies even though it is the simplest system compared to other smart card systems available in markets. In this project, the card scanner system is forms of the combination of three simple circuits. They are Touch switch circuit, Light on relay circuit and Digital code lock circuit. This three circuits are connected together in order to build a smart card system at front door.

TABLE OF CONTENTS   **PAGE**

CHAPTER 1

INTRODUCTION

1.1 Background

A smart card is used in an application as a portable token, which can be carried on the person of an individual who can use it (the smart card) in the context of an application system. The smart card will typically carry sensitive information that the cardholder and the system want to keep private from others. In addition to carrying sensitive information, the smart card also can provide services to the cardholder or application system in the form of secure and therefore trusted, computations.

This smart card or card scanner is a combination of three types of circuits energized by the 9V DC supply. For the project we specifically used LED because it is enough practical to activate our circuits function. The circuits will start from the touch switch circuit where it will turn the LED 'ON' and will be detected by the LDR contains in light on relay circuit. After this two circuits activated, the relay will turn on the digital code lock circuit where the user have to press the correct button before the door is being unlock. This smart card or card scanner will be located at the front door of the house.

1.2 Scope of work

In KEU 380, all the students who are major in electronics has to do a combination project named 'Smart Home'. This project consists of ten subprojects where were being divided to the pair of students. One of the subprojects is Smart Card at front door. The smart card is one of the ways to open the door lock instead of using a key, which is known as manually method. The smart card has to be designed which is compatible to the smart home concept.