



THE SECURITY SMART RFID CARD DOOR LOCK

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ABSTRACT

RFID door lock tag is build to investigate the security level of the door lock device compare to the door lock that use a key to lock and unlock it. Radio frequency identification, RFID is technology that is used in many fields including locks. The unlimited access to the reader and the transponder has resulted in severe security weaknesses and made it possible to apply different attacks. How secure a certain solution is depends on how expensive it is to buy the equipment that can break the system and reveal the secret key and how secure a lock should be depends on the value of what it is protecting. This project will use a PIC as a programmable for the circuit to functioning. MPLAB IDE v8.92 software and programming coding is used in order to run the program. The PIC will control the relay whether to unlock or remain lock the door with magnetic lock. When RFID tag is place near to RFID reader, the reader can read RFID tag, further send the tag ID to the PIC microcontroller. After PIC microcontroller process the data, the tag ID will display on LCD in decimal number and only particular RFID tag can pass the door lock.

Keywords: Door lock, RFID tag, MPLAB IDE v8.92, PIC microcontroller.

LIST OF FIGURES AND TABLES

<i>Figure 1:</i>	Flow Chart of project development and progress.	Page 7
<i>Figure 2:</i>	Voltage regulator circuit.	Page 11
<i>Figure 3:</i>	Main Schematic Diagram.	Page 14
<i>Figure 4:</i>	Interface LCD (2x16 Character) with PIC16F876A.	Page 15
<i>Figure 5:</i>	Power Supply for the circuit.	Page 16
<i>Figure 6:</i>	Push Button as input for PIC microcontroller.	Page 17
<i>Figure 7:</i>	ICSP for programming PIC microcontroller.	Page 18
<i>Figure 8:</i>	Circuit Of Relay.	Page 18
<i>Figure 9:</i>	LED as output for PIC microcontroller.	Page 19
<i>Figure 10:</i>	RFID Reader (Wiegand Format).	Page 20
<i>Figure 11:</i>	Software Simulation Result.	Page 22
<i>Figure 12:</i>	The Testing Of Input Voltage.	Page 26
<i>Figure 13:</i>	The Testing Of Output Voltage.	Page 27
<i>Figure 14:</i>	The Voltage Reading Of PIC16F876A.	Page 28
<i>Figure 15:</i>	The Reading of Relay Circuit.	Page 29
<i>Figure 16 :</i>	PIC burned because of overload voltage.	Page 30

Table 3.1	Connection pin and function of each pin.
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LIST OF ABBREVIATIONS

RFID	Radio Frequency Identification
NFC	Near-Field Communication