

ABSTRACT

Lillyanti Feni Posumah (5215131537), Prototype Flats Based On Finger Print And RFID In Order To Prevent Conversion Of Flats In Jatinegara. Thesis. Jakarta, Education Program Electronics Engineering Education, Departement of Electrical Engineering, Faculty of Engineering Universitas Negeri Jakarta, 2017. Adviser Drs. Jusuf Bintoro, M.T. and Drs. Pitoyo Yuliatmojo, M.T.

This research aims to design and create a prototype flats based on finger print and RFID in order to prevent conversion of flats in jatinegara. The Research was conducted at the Faculty of Engineering, Instrumentation Laboratory, State University of Jakarta and Jatinegara Flats in August 2016-January 2017.

This research uses Engineering methods which includes systems design, hardware design, software design, hardware and software testing, and analytical testing. The research consists of three major subsystems, there are input, process and output. Input subsystem consists of RFID as a store of citizen flats ID. Finger print as a store of fingerprint citizens of flats. 2 pieces Limit switches are used to terminate the dc motor when moving. 2 pieces Push button used to close and open the doors of flats and one push button to open and close the gate flats. The Subsystem process is the Arduino Mega 2560 that will mutually transmit data with Qt Creator as an interface and MySQL as the database. And the output subsystem are LCD to display the ID residents of flats and display the bedroom door when it's opened. Buzzer will be used as an indicator when the bedroom door flats are open and close. Servo motors are used for open and close the room door flats. DC motors to open and close the lid of the gate flats. LED is used as an indicator when opening and closing the gate of flats.

Based on the overall results of the research that has been done, it is known that a prototype surveillance apartment dwellers finger print and RFID-based in order to prevent conversion flats in Jatinegara are able to open the gates of flats by tap the RFID card to RFID card. The number of RFID cards that can be used to open the gates of flats numbered 11 RFID card. 8 RFID card is used for residents of flats and 3 RFID card to admin. Flats residents can get into the room flats using fingerprints attached to a finger print. The number of citizens registered their fingerprints on a finger print are 8 residents of flats with 8 fingerprints. This research can help Jakarta Government in obtaining the data conformity with the rules that have been created to prevent the conversion of flats in Jatinegara.

Keywords: Supervision Residents, flats, fingerprint, RFID, preventing conversion of flats