ABSTRACT

One of the tools that commonly used to place some of stuffs is a locker.

Lockers are often encountered as a private facility in the school, college,

changing rooms, workplaces, etc. In general, the lockers are equipped with a

conventional lock such as a spin lock. However, as the development of technology

many types of locker key have been created as an alternative to replace the

conventional key that is commonly used in the hope of user friendly, and can be

made easily and cheaply.

On this final project is designed and realized the application of barcodes

on locker key based on microcontroller. It works with keypad that used to input

the door code, and a barcode as an identifier code. The code that entered via

keypad will be read and matched with the barcode that is read by optocoupler and

LDR sensor. The barcode includes amount of black line that is read by the sensor

optocoupler and color code that is read by the sensor LDR. Data processing

system on this tool based on microcontroller with LCD for display and servo

motors as the key driver of the locker key.

The result of this final project design is a realization of locker key by

applying a barcode that swiped on the sensor. Then the system will automatically

rotate the servo motor to close or open the key on the door of locker that match

with code information on the card that is used by the user.

Keywords: locker, barcode, optocoupler sensor, LDR sensor, microcontroller

iv