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