

ABSTRACT

In a world of increasingly advanced technology it takes a variety of tools that make it easy for the user and can utilize sophistication to replace the previous tool is still considered ancient or modern less. For security system also needed a tool that is sophisticated and modern, one tool so security door using a password. With the tool so safety door with this password, the user can feel more comfort when out of the house as opening the door itself only users who can open the door and know the password. But after this tool has been around and used the relative price a little more expensive than a normal door lock. So in this study were made design safety devices using a microcontroller, which has a value economic relatively lower.

The purpose of this tool is for indoor security system. This system is used so that the security of the room awake. The tool is divided into two parts, the hardware and software. The hardware consists of a keypad, sismin ATmega 328P as microcontroller controlling input and output circuits, output circuit using the LCD display. While the software created using the software program arduino. Data from key-based keypad buttons, enter the ATMEGA microcontroller which already contains program 328P. Commands are entered on the keypad will be displayed on the LCD. For LCD will appear a text that is a result of the program within the microcontroller output ATmega 328P and the servo motor will rotate to fit the output of the microcontroller program ATmega 328P to adjust the length of the servo motor will spin. The work of the door lock system using passwords have shown results as the design of a program. From these data it can be said that this system can work well.

The final stage in the manufacture of these doors is a safety device testing of the tool is that it can be concluded that the tools can work with a power supply without a battery charger for 14 hours and each key has a delay of 5 seconds after the key is open and will be automatically locked after 5 seconds.

Keyword : Mikrocontroller, LCD , ATmega 328P , Password