Fingerprint attendance system

ABSTRACT

Attendance systems are commonly used systems to mark the presence in offices and schools. From manually marking the attendance in attendance registers to using high-tech applications and biometric systems, these systems have improved significantly, By using fingerprint sensors , the system will become more secure for the users.

INTRODUCTION

In this fingerprint attendance system circuit, we used the Fingerprint Sensor module to authenticate a true person or employee by taking their finger input in the system. Here we are using 4 push buttons to enroll, Delete, UP/Down. ENROLL and DEL keys have triple features. ENROLL key is used for enrollment of a new person into the system. So when the user wants to enroll a new finger then he/she needs to press the ENROLL key then the LCD asks for the ID, where the user wants to store the fingerprint image. Now if at this time the user does not want to proceed further then he/she can press the ENROLL key again to go back. This time ENROLL key behave as Back key, i.e. ENROLL key has both enrollment and back function. Besides, the enroll key is also used to download attendance data over the serial monitor. Similarly, the DEL/OK key also has the same double function as when the user enrolls a new finger, then he/she needs to select the finger ID by using another two keys namely UP and DOWN. Now the user needs to press the DEL/OK key (this time this key behaves like OK) to proceed with the selected ID. And Del key is used for reset or delete data from EEPROM

Components

Micro controller :-

FingerPrint module :-

1. Fingerprint sensor module captures finger's print image and then converts it into the equivalent template and saves them into its memory as per selected ID
2. Here we have added a Yellow LED which indicates that fingerprint module is ready to take an image of the finger. A buzzer is also used for various indications.

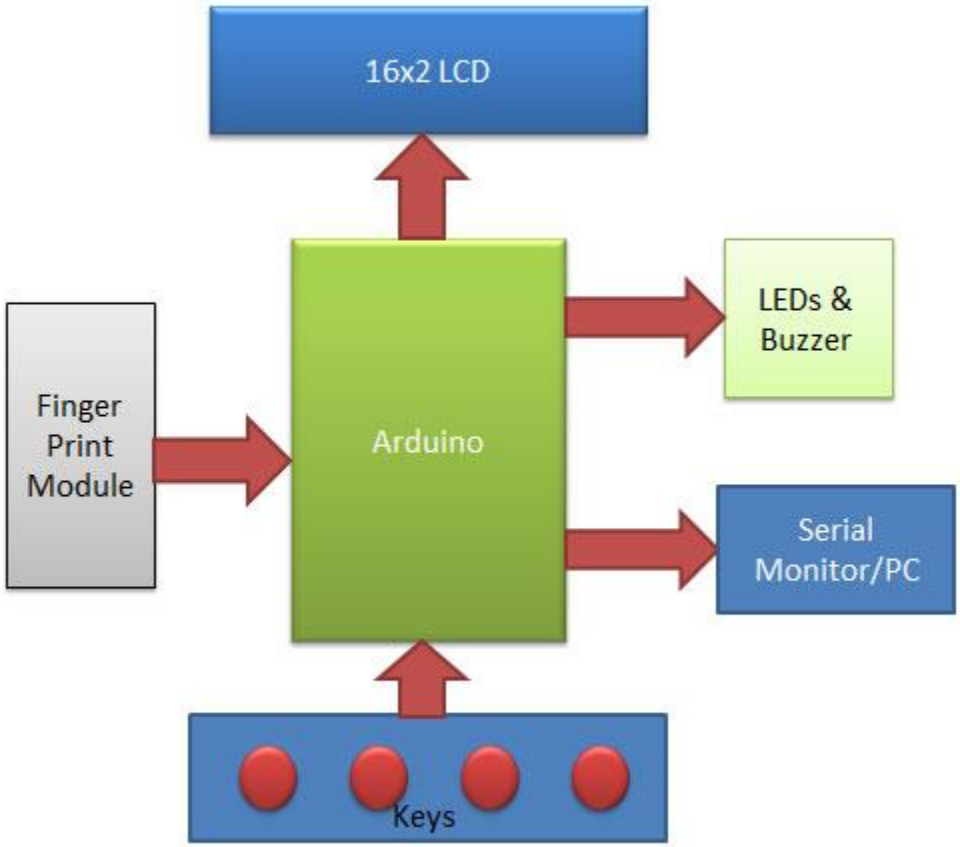
16x2 LCD :-

1. Lcd 16x2 is used to display information about system status whether it is ready to read the finger
2. it also display menu to add/remove fingerprint from system
3. It will also show the data when key is pressed,basically it will display user interface
4. When finger is pressed it will display about attendance registered and employee code or name of employee

Push Button :-

1. These will be input buttons
2. Input from button will decide what function is to be performed
3. Push button or capacitive touch will be used

Block Diagram



FUTURE SCOPE

1. This System can be connected to internet to store logs on server
2. System can also be remotely configured from admin office
3. Can notify presence and absence of person or late mark on application of normal text.
4. Can display working hours and remaining hours to complete.