BIOMETRIC ATTENDANCE SYSTEM

ABSTRACT

The human body has the privilege of having features that are unique and exclusive to each individual. This exclusivity and unique characteristic has led to the field of biometrics and its application in ensuring security in various fields. Biometrics has gained popularity and has proved itself to be a reliable mode of ensuring privacy, maintaining security and identifying individuals. It has wide acceptance throughout the globe and now is being used at places like airports, hospitals, schools, colleges, corporate offices etc. Thus, this project "Biometric Attendance" deals with giving intelligence to the existing traditional system.

Biometrics is the study of identifying a person by his/her physical traits that are inherent and unique to only the person concerned. Biometric measurement and assessment include fingerprint verification, iris recognition, palm geometry, face recognition etc. The above mentioned techniques work with different levels of functionality and accuracy.

Accuracy and reliability are the two most important parameters when it comes to biometric applications. Fingerprint verification is one of the oldest known biometric techniques known but still is the most widely used because of its simplicity and good levels of accuracy. It's a well known fact that every human being is born with a different pattern on the fingers and this feature is exploited to identify and differentiate between two different persons.

INTRODUCTION

The application in an educational institute is worth noting because of the benefits it brings along with it. The fingerprint recognition and verification technique can easily replace an attendance sheet and save time wasted on calling out roll numbers in the class. A fingerprint detecting device needs to be placed in each classroom and students would be made to swipe their finger over the sensor so as to mark their presence in the class. The database would contain all the fingerprints beforehand. So, the moment a finger would be swiped, a check would be carried out with the existing database and the corresponding student would get a present mark on his attendance record maintained.

In other words we can say the fingerprint module is interfaced to the micro controller unit, which keeps track of the Identification. The scanner scans the fingerprint of the student and compares with the database, if it is authenticate, it will give authenticated signal to microcontroller which will display the authentication on LCD and sends an authentication number to the microcontroller.

If any unauthorized student tries to give attendance, the controller automatically alerts by blowing the buzzer. This can be implementing in real time.

BLOCK DIAGRAM:

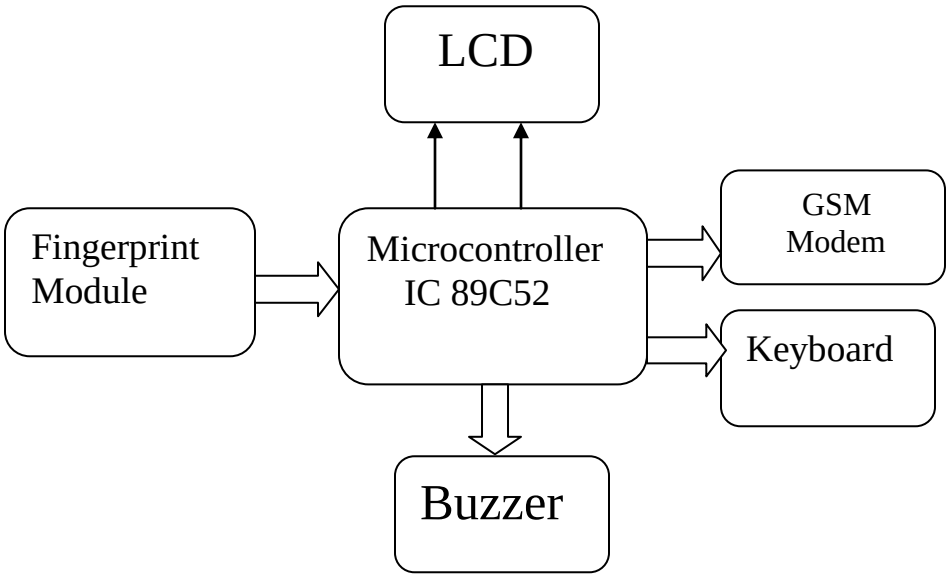

Fig. Shows the Block Diagram of Fingerprint Attendance System. In this Microcontroller IC 89C52 is used with Fingerprint Module, Keyboard, LCD and Buzzer. The fingerprint module is interfaced to the micro controller unit, which keeps track of the Identification. The scanner scans the fingerprint of the student and compares with the database, if it is authenticate, it will give authenticated signal to microcontroller which will display the authentication on LCD and sends an authentication number to the microcontroller.

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If student find absent by the system it send absent message to the parents through gsm modem.