

WIRELESS FINGER PRINT BASED STUDENT ATTENDANCE SYSTEM

Abstract:

Our B.tech project aims at introducing biometric capable technology for the use in automating the entire attendance system for the students pursuing courses at an educational institute. The goal can be disintegrated into finger sub-targets; fingerprint capture & transfer, transfer of data through GSM and also transfer of data in a server-client system. For each sub-task, various methods from literature are analyzed. From the study of the entire process, an integrated approach is proposed.

Biometrics based technologies are supported to be very efficient personal identifiers as they can keep track of characteristics believed to be unique to each person. Among these technologies, fingerprint recognition is universally applied. It extracts minutia based features from scanned images of fingerprints made by the different ridges on the fingerprints. The student attendance system is very relevant in an institute like ours since it aims at eliminating all the hassles of roll calling and malpractice and promise a full-proof as well as reliable technique of keeping records of student's attendance. The microcontroller used in this system is LPC2148. The data from fingerprint module is transferred to LPC2148 using MAX232 and data from LPC2148 to PC using another MAX232 and data from PC is transferred to GSM from which we get the attendance percentage.

This project mainly comprised of development of attendance management system and fingerprint identification system. Attendance management is very helpful in saving valuable time of student and teachers, also helps to save paper and it is helpful in generating report at required time. The fingerprints of different students were successfully enrolled and added to the database. The fingerprints were further verified and several dry runs made that confirmed matches and mismatches for different samples.

This project presents a framework i.e, firstly enrolled of stunts by using the fingerprint module and it gives the unique ID's to the students after this every student can enter their attendance, then after the data can upload into the computer and finally the attendance percentage message was sent to the students mobile through GSM.