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DESIGNING OF FINGER PRINT RECOGNITION BASED ACCESS CONTROL FOR ELECTRONIC MEDICAL RECORD SYSTEMS

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ABSTRACT

Medical information" implies all information related with treatment of the patient, and is, by its nature, the most sensitive and important information in terms of the privacy of the individual. Recently, laws, policies, and technological standards are rapidly developing to safely protect the medical information of the individual. This project proposes a model that applies fingerprint recognition technology to the medical information system, to guarantee a reliable electronic medical record system. The proposed model provides an identification function, by applying fingerprint recognition to the access of doctors, nurses, and other medical staff. The EMR authentication system based on the proposed fingerprint recognition technology enables the user to eliminate the inconvenience of private key management, and provides security authentication that is most suitable for private networks, as external communication is not required. If any doctor/ staff want to open the records of the particular patient he has to give his authentication in the form of finger. If he/she is authorized to access the patient details, it will be opened form the database. If it is implemented then no need to carry medical records in the form of files.

INTRODUCTION

Biometrics are defined as the automated recognition of individuals based on their biological or behavioral characteristics. Common forms of biometrics used for logical and physical access control include a fingerprint, face, speaker (voice), hand geometry, keystroke, and handwriting recognition. The unique characteristics of the human being used to identify the person or to verify identity. Biometric authentication is typically included in the latest, check or authenticate a user identity claim, based on one-on-one comparisons

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are presented biometric credential (s) registered biometric. Because biometrics is designed to verify the claimed identity of the user and securely tie a person act or event, they can be used to strongly authenticate the user workstation, network or application to replace or increase the standard password. Why the company to implement a technology that seems excessive for a simple user login? In most cases, the use of biometric verification requires increased security, improved convenience, or a lower cost than traditional security measures [1]. Other technologies, such as authentication of passwords, smart cards, keys or certificates that rely on the authorized person know or have. For each of these technologies, all that is really known in the event of authentication is that the correct information was provided by the system, not the person entering or holding the information. Biometric identification, by contrast, involves inherent characteristic of an individual, users can not forget, lose, burn, share, or to guess their identity. This closely links the identity of the individual. And because it is convenient biometric authentication identity does not need to carry around and could not remember, users may be more inclined to use the authentication mechanism, as it was intended without trying it .

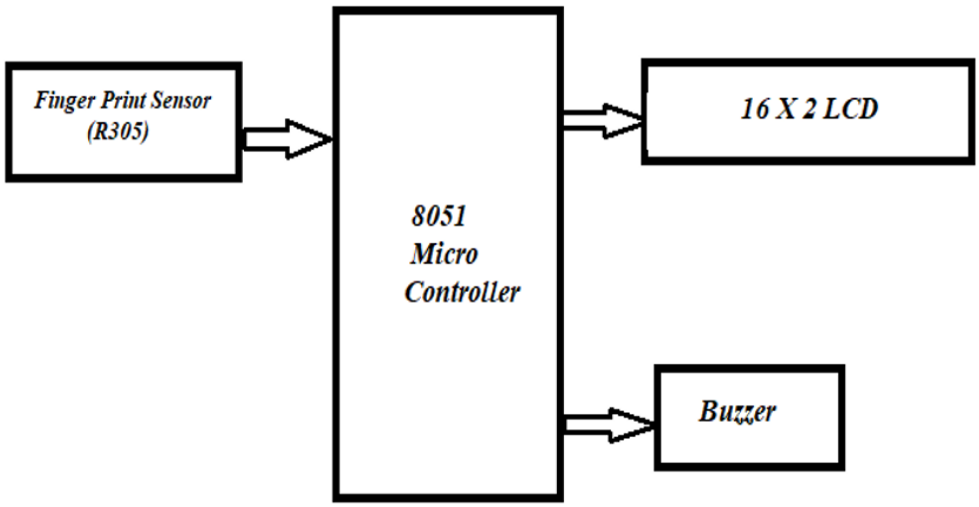

FIG 1 BLOCK DIAGRAM

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comparison operation. When two biometric samples in comparison, they are determined to have a level of similarity, which is the probability that samples from the same person. This comparison results in a corresponding score, which compares with the specified criteria for determining the threshold score is high enough to be considered successful match [1].

PROPOSED SYSTEM

The result of the project is if any doctor/ staff want to open the records of the particular patient he has to give his authentication in the form of finger. If he/she is authorized to access the patient details, it will be opened form the database and displayed on the LCD This helps us to easily get the medical records of person.When the finger print of the patient is matched with the database, then the patient's medical detailsAnd any previous health issues are displayed on LCD, while if details are not present in the database, the buzzer will ring and "NOT MATCHED" is displayed on the LCD.If this project is implemented then we no need to carry medical records in the form of files. The figure below shows the final hardware implementation of our project.

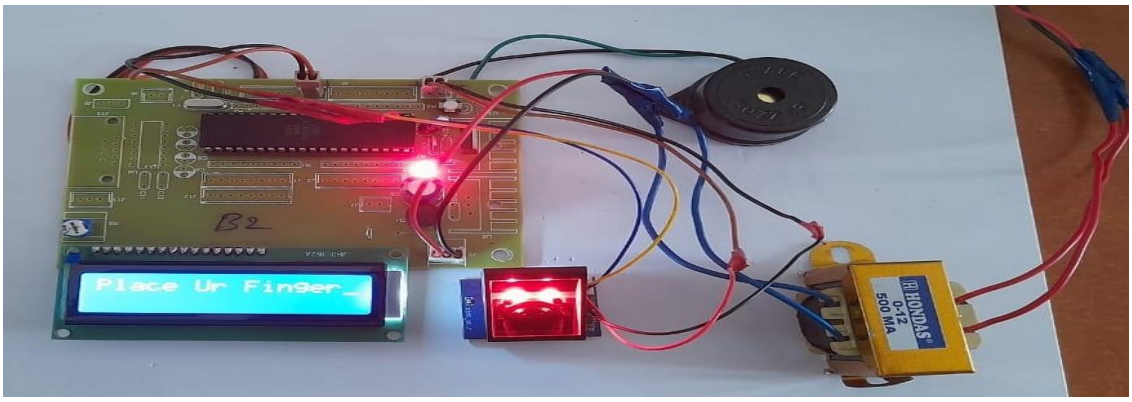

Fig 2 Kit image

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CONCLUSION

Overall, this project provides a novel approach to safely protect the medical information of the individual. 8052 Micro controller is the heart of the project and an important part of system which is used to handle the processing and working. In this proposed system we used fingerprint module to check the authentication of an individual at input side and the output side we used LCD to get the details of a person and buzzer which is an audio signaling device.Hence, we conclude that by using this project consumes low power so we need not require high power to operate this. And by using our project

We can provide biometric security,Get controlled access over secure areas or systems, Can identify amnesia victims and unknown deceased (such as victims of major disasters, if their fingerprints are in system), Easy to conduct background checks of the patients, if necessary,Patient database maintained individually so that we can avoid the manmade error,Can be used for emergency medical situations, like when a patient is unconscious and.Finally, there will be no need to carry medical records in the form of files

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