

Home security and biometric locking system

Abstract

Over the last few years a new area of engineering science has been established whose products are likely to create a large market in the near future. It has been called 'biometrics. The pioneers of this new domain intend to construct devices which would allow identification of a person on the basis of his/her 'biological' characteristics. Nature has made human beings with different characteristics which may vary from one person to another. This property is made use of biometric technology to distinctly identify each person. Biometric system is essentially a pattern recognition system which recognizes a user by determining the authenticity of a specific psychological or behavioral characteristic possessed by the user. Several important issues must be considered in designing a practical biometric system. First, a user must be enrolled in the system so that his biometric template can be captured. This template is securely stored in a central database issued to user. This template is retrieved when an individual needs to be identified. Depending on the context, a biometric system can operate either in verification (authentication) or an identification mode.

A fingerprint is an impression of the friction ridges found on the inner surface of a finger or a thumb. The comparison of fingerprints, especially latent fingerprints (palm prints, footprints), can be the single most difficult task in all the fingerprint science. No matter how skillful an individual may be in all the related areas, it is the additional ability to accurately compare latent prints against known prints that allows the examiner to be called a fingerprint expert. Finger print comparison is one of the tough tasks, mainly comparing latent finger prints like palm, foot prints will be most difficult part in finger print science.

The main aim of this project is develop a security lock system based on fingerprint scanning. In this project we are using microcontroller for opening and closing lock based on finger print which is stored in microcontroller itself so that only authorized person will access the security lock.

BLOCK DIAGRAM



