**FINGER AUTHENTICATION BASED DOOR SECURITY**

**AIM:**

The main aim of this project is to provide a security system to access the door, by taking finger prints as authorized identity.

**PURPOSE:**

The purpose of the project is to provide a secured and reliable environment by providing a unique identity to every user using the FINGER PRINT identification technology.

**Block Diagram:**

**MICRO CONTROLLER**

**(AT89S52)**

**POWER SUPPLY**

**MAX 232**

**LCD DISPLAY**

**DOOR SYSTEM**

**FINGER PRINT MODULE**

**KEYPAD**

**Description:**

According to this project, fingerprint of the concerned person is taken and the image is processed and stored. When there is a need to recognize the finger print, then the fingerprint of the person to be tested is took and is processed and is compared with pre-stored fingerprint.

If the fingerprint of the person under test is proved to be the same then the information is sent to the microcontroller using Serial Communication. Now the microcontroller gets the information and the result is indicated using some indicator and the information is displayed in the LCD. When the Finger print is matched the person will get access to control the devices. In other words the authentication is provided by the Fingerprint. This project employs a microcontroller as a heart of our project to which a LCD is interfaced. This LCD is used to print the instantaneous information

**TECHNOLOGY:**

In present days, computer becomes a main part of human beings for storing information. This information is up to some extent is a secured one. For example the details of employees and students etc... The authority person may only change the details. For this protection we are going to provide a PASSWORD for the PCs. This is secure up to some extent only because there may be a chance of revealing the password or some times the authorized person may forgot the password. So we have to provide security for PCs with a unique and simple to remember identification. One of such identification is the FINGER PRINT.

Fingerprint Scanner is a device for computer Security featuring superior performance, accuracy, durability based on unique NITGEN Fingerprint Biometric Technology. Fingerprint Scanner can be plugged into a computer separately with your mouse. Fingerprint Scanner is very safe and convenient device for security.

**SOFTWARE USED:**

1. Embedded C
2. Keil IDE
3. ISP

**HARDWARE USED:**

1. MICRO CONTROLLER(AT89S52)
2. LCD
3. POWER SUPPLY
4. FINGER PRINT MODULE
5. MAX 232
6. DOOR SYSTEM
7. KEYPAD

**RESULT:**

This project finds its place in places where there is a need to recognize the finger print of a person.