FINGERPRINT BASED EXAM HALL AUTHENTICATION SYSTEM

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ABSTRACT: *Recognition of person on the basis of biometric future is an emerging phenomenon in our society. It Might involve validating personal identity and also other identity. In examination process we can use the biometric authentication for reducing impersonation. It is a security process that we release on the unique biological characteristics of an individual to verify that whether he/she valid for this examination hall. Therefore in this project development of finger print based exam authentication is implemented.*

KEYWORDS:-Microcontroller, Crystal oscillator, fingerprint Sensor, Authentication.

I. INTRODUCTION

Recognition of person on the premise of biometric function is an rising phenomenon in our society. Traditional structures to confirm someone's identification are based totally on knowledge (mystery code) or possession (ID card), may be codes can be forgotten or overheard and ID cards can be lost or stolen giving impostors the opportunity to byskip the identification test.

The use of features inseparable form of person's body significantly decreases the opportunity of fraud. Furthermore, biometric can gives person comfort in lots of situations, because it replaces cards, keys and codes. Fingerprint based authentication is one of the useful sort of biometric approach and also it is considered one of the maximum realistic capabilities. Biometric is a generation that uniquely identifies a person based on his physiological or behavioral traits. In the exam authentication has continually been a major challenge verification of the proper candidate is not a clean task and additionally consumes a lot of time and method. This motive to the layout of fingerprint based exam hall authentication system.

II. PROPOSED WORK

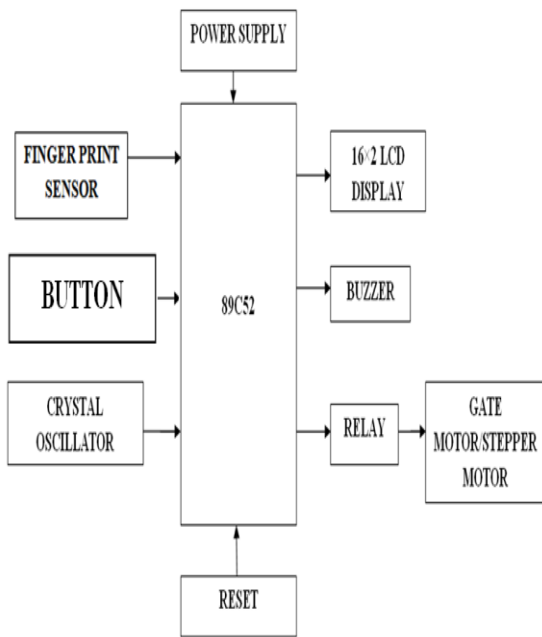The figure (1) suggests the block diagram of the proposed system

Figure (1):- Block diagram

In our proposed system we are using 89C52 microcontroller to attach the all of the components. Finger print sensor is used as the input devices. Which is used to acquire the biometric data of the candidate. In proposed system we have designed the 2 operations that's used for registrations and verifications of the candidate.

The 2 modes of operations are

A. Registrations mode
B. Verifications mode

Registrations mode:-

In registration mode applicants get registered through gathering the biometric information of the applicants with the finger print sensor that's linked to microcontroller. The applicants were given registered with unique person id. The information of the applicant is saved in the microcontroller.

Verifications mode:-

In verification mode when the candidate locates finger on the fingerprint module/sensor the captured information is compared with the already registered information if both the captured data and registered data are matched then the microcontroller ship the message to the display i.e., authorized and unique person id. and gate will open. If the information captured and the stored information aren't matched then microcontroller ship message to display i.e., unauthorized and gate will not open.

Here in our proposed system we delivered a panic button system that's used when the candidate fingers are damaged. This button is locked through operator by checking the identity of the candidate operator will permits the candidate in to exam hall by pressing the panic button.

Microcontroller:-

The figure (2) indicates block diagram of the microcontroller. It is having different blocks such as

✓ ALU (arithmetic logic unit)
✓ RAM
✓ Program counter
✓ ROM
✓ Registers
✓ Stack pointer
✓ Clock circuit
✓ Timer/counter
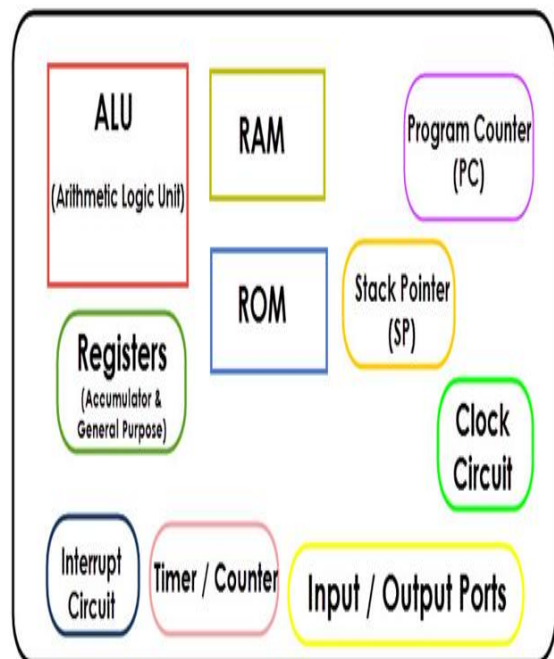✓ Interrupt circuit
✓ Input/output ports

Figure (2):- Block diagram of microcontroller.

Fingerprint module:-

The figure (3) indicates the fingerprint module that's used as the main input device for the proposed system. This is attached to the microcontroller.

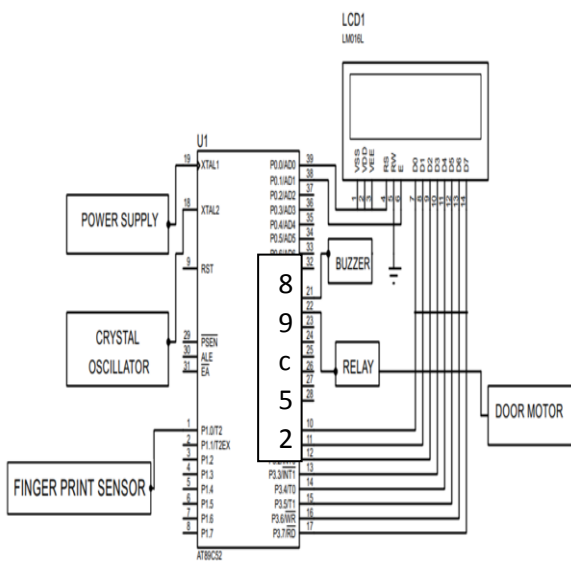Figure (3):- fingerprint module.

III. RESULTS

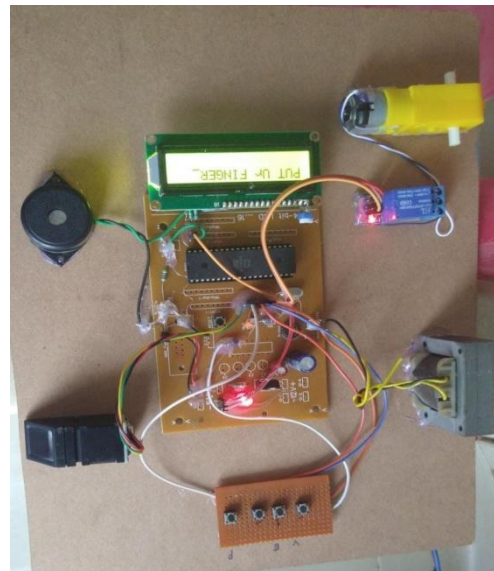**Figure (4):- Circuit diagram of proposed system.**
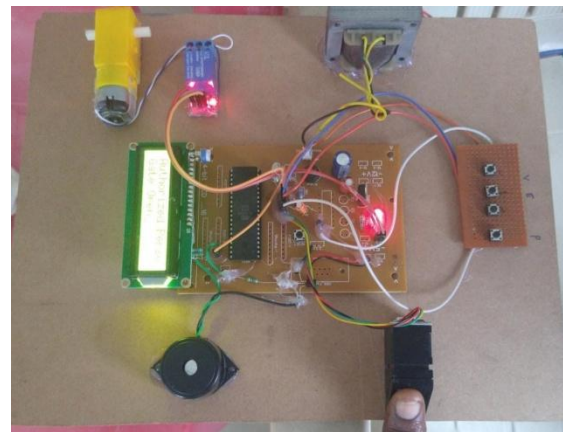

Figure (5):- Registrations mode.

Figure (6):- verification mode.

Condition	Result
When authorized	Gate open
When unauthorized	Gate does not open

IV. CONCLUSION

The applied minutiae extraction is far more accurate and quicker than our preceding function -extraction. In our proposed system accurately verify the fingerprint is valid user or not.

This system permits only authorized candidates in to exam hall and forestalls unauthorized applicants.

V. REFERENCES

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