VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

An ASSIGNMENT REPORT ON

FINGERPRINT DOOR LOCK SYSTEM USING ARDUINO

Submitted as subject assignment work,

for the subject

MICROCONTROLLER AND EMBEDDED SYSTEM (21CS43)

By

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2022 – 2023

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CERTIFICATE

This is to certify that **Meghana V (4AL21CS070),** has successfully demonstrated the

Fingerprint door lock system using Arduino as the assignment work for the subject

"Microcontroller and Embedded System (21CS43)" and submitted a report during

the academic year 2022–23 odd Semester. It is certified that all corrections/suggestions

indicated in the presentation session have been incorporated into the report & scored

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This is to certify that **Mydam Niharika(4AL21CS079),** has successfully demonstrated the **Fingerprint door lock system using Arduino** as the assignment work for the subject **"Microcontroller and Embedded System (21CS43)"** and submitted a report during the academic year 2022–23 odd Semester. It is certified that all corrections/suggestions indicated in the presentation session have been incorporated into the report & scored _____09_____ Marks out of 10 and deposited in the departmental library.
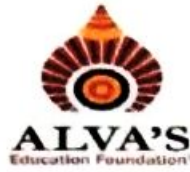
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This is to certify that **Najmul Huda (4AL21CS080)**, has successfully demonstrated the **Fingerprint door lock system using Arduino** as the assignment work for the subject **"Microcontroller and Embedded System (21CS43)"** and submitted a report during the academic year 2022–23 odd Semester. It is certified that all corrections/suggestions indicated in the presentation session have been incorporated into the report & scored _____09_____ Marks out of 10 and deposited in the departmental library.

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This is to certify that **Radhika (4AL21CS108),** has successfully demonstrated the

Fingerprint door lock system using Arduino as the assignment work for the subject

"Microcontroller and Embedded System (21CS43)" and submitted a report during the

academic year 2022–23 odd Semester. It is certified that all corrections/suggestions

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This is to certify that **Radhika B N(4AL21CS109)**, has successfully demonstrated the **Fingerprint door lock system using Arduino** as the assignment work for the subject **"Microcontroller and Embedded System (21CS43)"** and submitted a report during the academic year 2022–23 odd Semester. It is certified that all corrections/suggestions indicated in the presentation session have been incorporated into the report & scored _____09_____ Marks out of 10 and deposited in the departmental library.

FINGERPRINT DOOR LOCK

1.1 AIM

The Fingerprint Door Lock System project aimed to design, develop, and implement a secure and convenient door access control solution using biometric fingerprint recognition technology. The system provides enhanced security compared to traditional key-based locks and offers ease of use for authorized personnel.

1.2 INTRODUCTION

The Fingerprint Door Lock System project seeks to modernize conventional door access methods by harnessing the power of biometric fingerprint recognition. Traditional lock-and-key systems are susceptible to security breaches due to lost or stolen keys, prompting the need for advanced access control solutions. This project is motivated by the uniqueness and reliability of fingerprints as a secure means of identification. By integrating fingerprint recognition with a motorized locking mechanism, the project aims to provide a robust yet user-friendly solution for secure door access.

The project's scope encompasses the development of a comprehensive system that seamlessly incorporates a fingerprint scanner, secure communication protocol, user-friendly interface, and motorized lock. This system holds potential significance in enhancing security protocols for both residential and commercial environments. Furthermore, its innovative approach showcases the project's commitment to addressing security concerns while embracing the convenience of biometric technology.
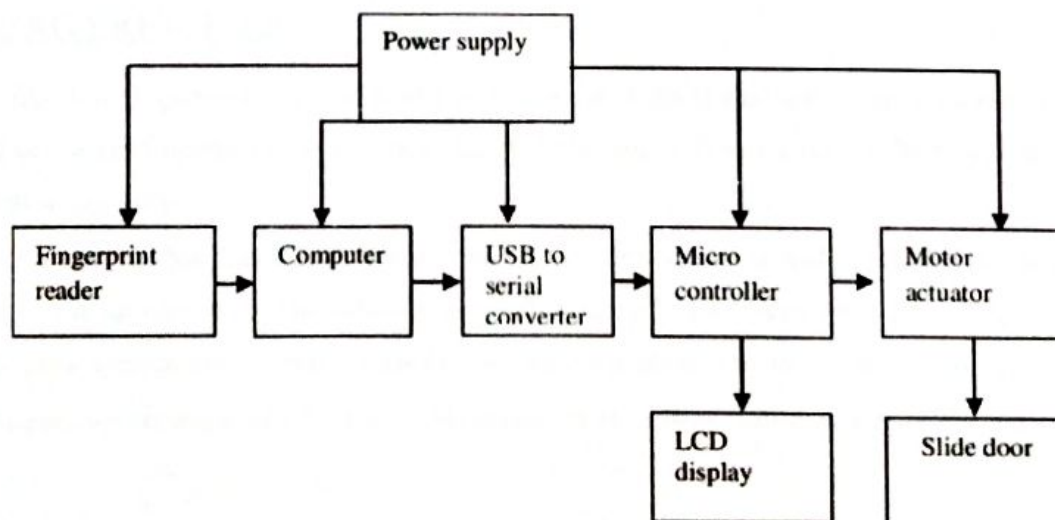

Fig 1.1 Block diagram of biometric security lock system