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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MOODBIDRI-574225, KARNATAKA

2022 – 2023

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CERTIFICATE

This is to certify that **Sansitha Rajesh (4AL21CS130)**, 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

9 Marks out of 10 and deposited in the departmental library.

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This is to certify that **Shetty Balija Deepthi(4AL21CS137)**, 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 9 Marks out of 10 and deposited in the departmental library.

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This is to certify that **Soumya (4AL21CS153)**, 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 9 Marks out of 10 and deposited in the departmental library.

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This is to certify that **Spandana Shetty (4AL21CS154)**, 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 **Vehana Naik(4AL21CS173)**, 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 9 Marks out of 10 and deposited in the departmental library.

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This is to certify that **Mandira Rajiv(4AL21CS189)**, 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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FINGERPRINT DOOR LOCK

1.1 AIM

The goal of this project is to research and analyse a suitable collection of components for developing a smart door lock using Arduino that provides excellent security and quick access.
The following are the specific project goals:

- Familiarity with a smart door locking system based on a microcontroller.
- Using Arduino to create a simple and smart door locking system.

1.2 INTRODUCTION

The Fingerprint Door Lock System project we implemented a Fingerprint-Based Security System Using Arduino & Fingerprint Sensor. As thefts are increasing day by day security is becoming a major concern nowadays. So, a digital fingerprint lock can secure our home or locker easily. It will open your door only when the right fingerprint is entered. Only authorized people are allowed access to the restricted sections due to a fingerprint-based door lock mechanism. The Arduino is responsible for the entire project's operation.
A particular procedure or set of procedures demonstrating the issue is massive revision of teaching methodology. In a report or article, the methodology section allows the reader to critically evaluate a study's overall validity and reliability. So, this methodology chapter explains what we did and how we did it.

1.3 Circuit and Working Principle

The circuit shown in Fig. 1 operates using a 12V power supply. An Arduino microcontroller (MCU) requires only 5V but the solenoid electric lock requires 12V. As Arduino Uno has an inbuilt 5V voltage regulator, a common 12V supply can be used for the whole system.