THE UNIVERSITY OF FAISALABAD

IOT Based Face Recognition Door Lock System

INTRODUCTION

In recent years, it is important to own a reliable security system that can secure our assets as well as to protect our privacy. The traditional security system needs an individual to use a key, identification (ID) card or password to access an area such as home and workplace. However, the present security system has many weaknesses wherever it is simply cast and taken. Most doors are controlled by persons with the employment of keys, security cards, countersign or pattern to open the door.

The aim of this project is to assist users for improvement of the door security of sensitive locations by using face detection and recognition. The proposed system mainly consists of subsystems namely image capture, face detection and recognition, and automatic door access management.

PROBLEM STATEMENT

A home security system means to protect your home and keep safe valuables, and to keep your family safe from potential break-ins by burglars and thief.

In many countries, there is a home related burglary that takes place every 13 seconds, 4 burglaries a minute, 240 an hour and nearly 6,000 a day! some of the statistics are 88% of all burglaries are residential in nature, 77% of all crimes are property crimes, 38% of all robberies are committed with guns, identity theft is the fastest growing crime.

OBJECTIVES

The objectives of this project are as follows:

- Face recognition
- IoT based privacy
- Digital Image Processing
- Solenoid valve operation
- Security/Counter Terrorism.

METHODOLOGY

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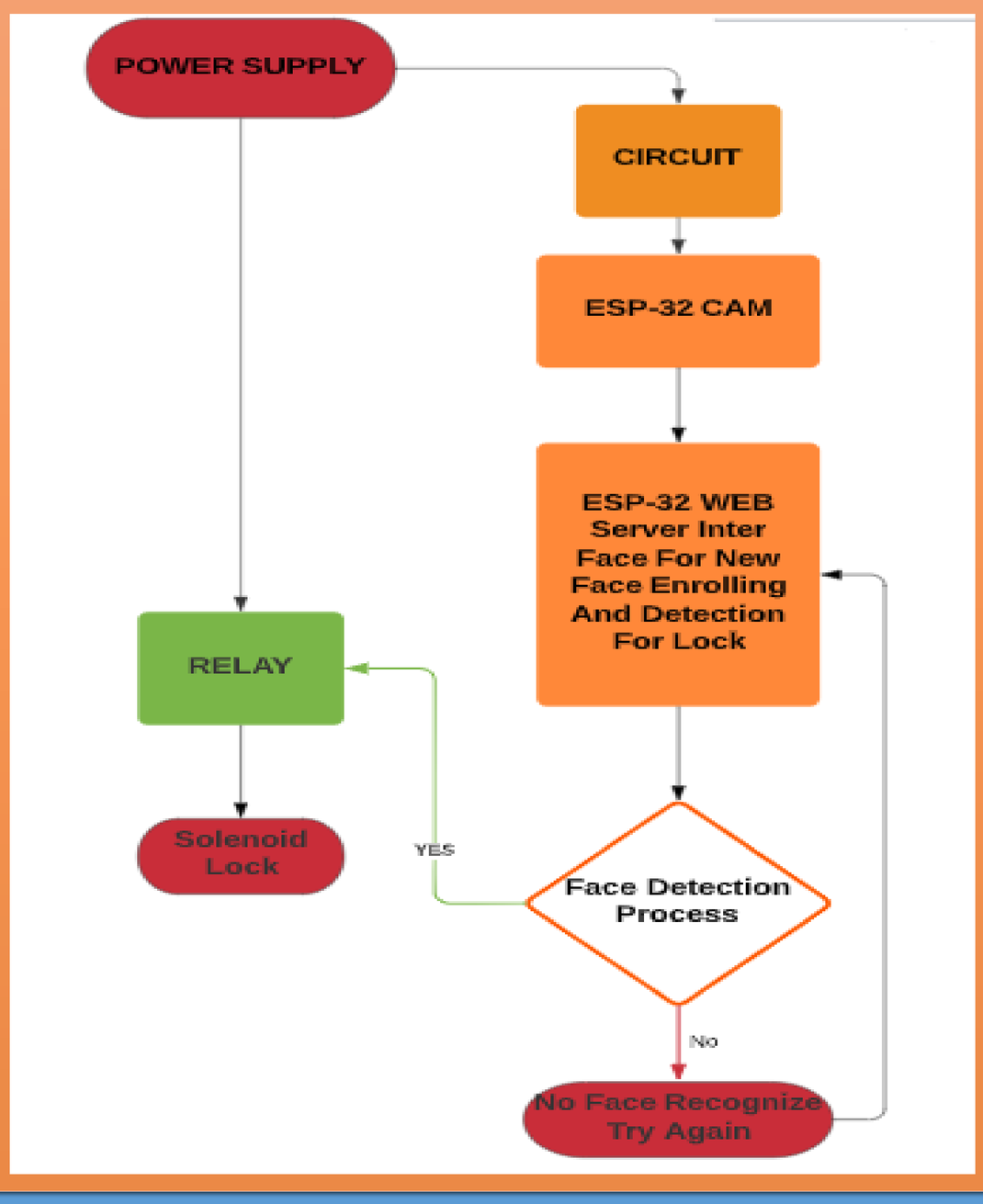
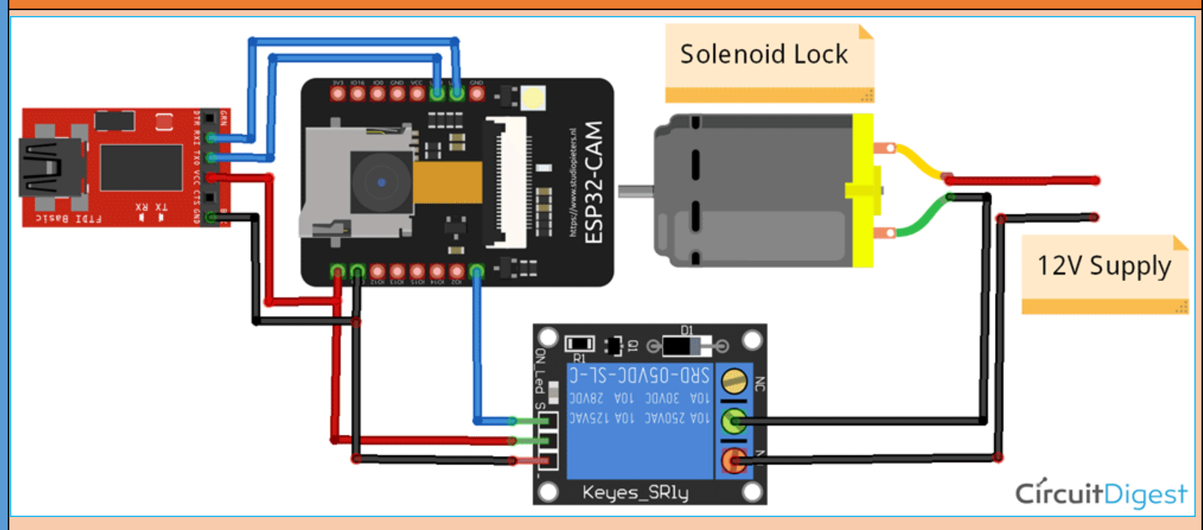
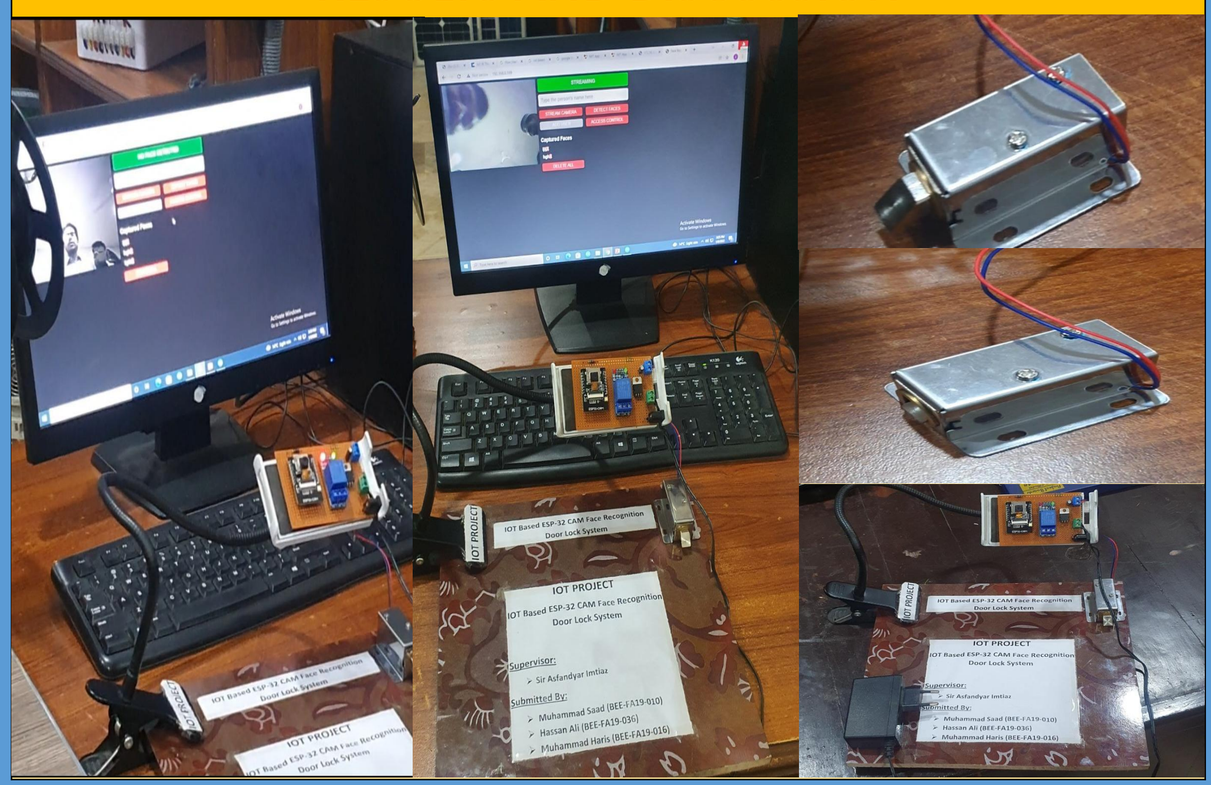


CIRCUIT DIAGRAM/ SCHEMATICS



RESULTS AND DISCUSSION



FUTURE WORK

- Banking using ATM: The software is quickly verify a customer ’s image.
- To know about the entry time and attendance verification of an employee.
- In Government services like passport verification, law enforcement investigation and etc.
- Document authentication and many more.

CONCLUSIONS

In this proposed door access system by using face recognition, the images are stored in a data base. This system is used to gain door lock access for Residential and Commercial Purposes. Here, a highly secured door locking system is implemented. The result of our project is that recognition of stored images in the data base after recognizing the face the door lock will get open.

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