Slide show for better experience

Introduction

In this Project our aim is to Leverage biometric into a boring attendance system. As it will be more convenient and flexible.

The security or Authentication provided by biometric cannot be found anywhere.

As it is a Biometric system it saves a lot of time and there is no mental cost.

Problem and Reason to choose this Project

- Before the use of biometric attendance there was lots of paperwork which must be maintained, and it use to consume a lot of time to maintain those paperwork.
- Eliminate duplicate data entry and errors in time and attendance entries.

- And this problems are the reasons why we choose this topic as the project.
- Biometric Technology uses human physical and biometric characteristics (Which are unique for every individual) to ensure identification accuracy, prevent errors, and eliminate proxy attendance even from identical twins.

Why we are selecting this project ?

- Biometric attendance systems are automated and provide a convenient way to quickly record student check-in and check-out times.
- Biometric technology uses human physical and biometric characteristics (which are unique for every individual) to ensure identification accuracy, prevent errors, and eliminate proxy attendance even from identical twins.
- Biometric technology also protects students from identity theft because it uses sophisticated encryption to secure and protect user identity privacy.

Survey Of Technology

There are two ways to take attendance:

- **Manual Attendance system (MAS)**
- **Automatic Attendance system (AAS)**

In MAS attendance is taken manually by the class representative In register which is maintained to keep records of students, but taking attendance in this manner increases the possibilities of recording wrong attendance.

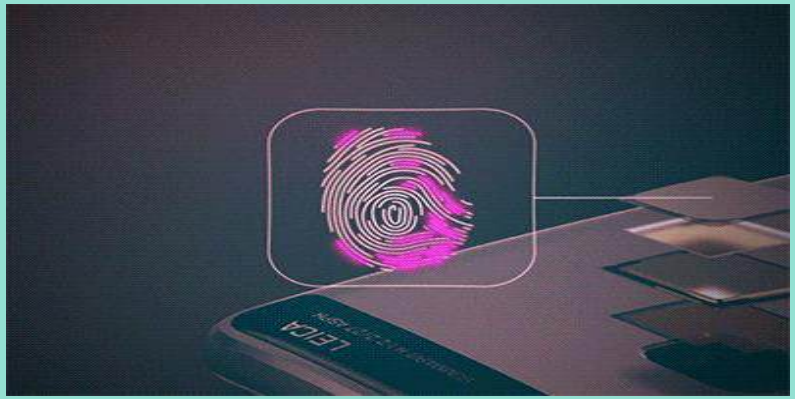
But on the other hand in AAS, Biometric attendance system is used, biometric means biological measurements or physical characteristic that can be used to keep accurate attendance records of each student.

Today there is a need to have the most secured system where your information cannot be implicated or duplicated.

Biometric will allow people to accomplish same goals with least amount of mental cost.

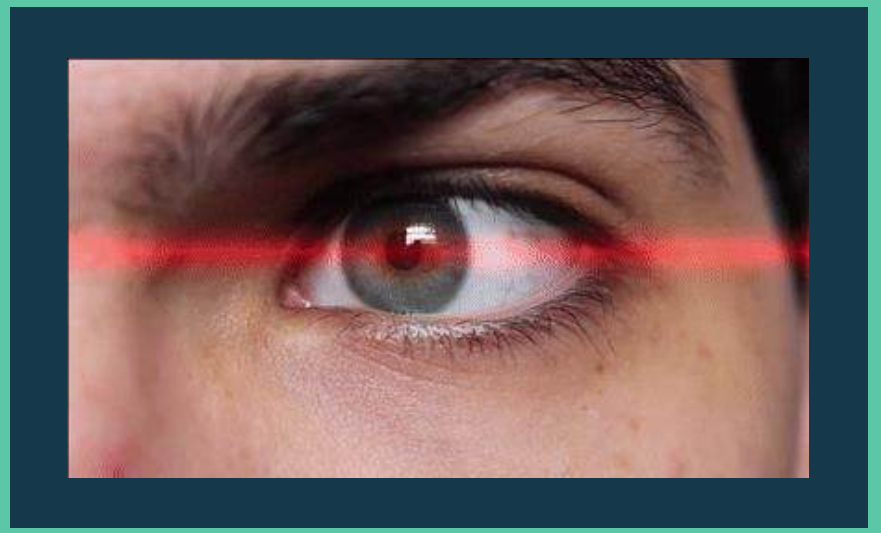
Till date there are three biometric ways to take attendance

1. **Fingerprint Recognition.**
2. **Retina Recognition.**
3. **Face Recognition.**



Fingerprint Recognition

Fingerprint recognition is the procedure of comparing known and unknown fingerprints to prove that the fingerprint is from the same person or not. It converts the data given by the user related to the fingerprint into binary form into computer code.



Retina Recognition

Retina scan is also comparing of know retina and unknown, known is nothing but the one which is stored in the system.
In retina scan a low energy infrared light traces a light on the retina and converts the input into computer code.

Face Recognition

In face recognition it converts analog information into a set of digital information based on the person's facial features.

Even this system compares the unknown data with known stored data.

About Required Hardware and Software

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About the Require Hardware

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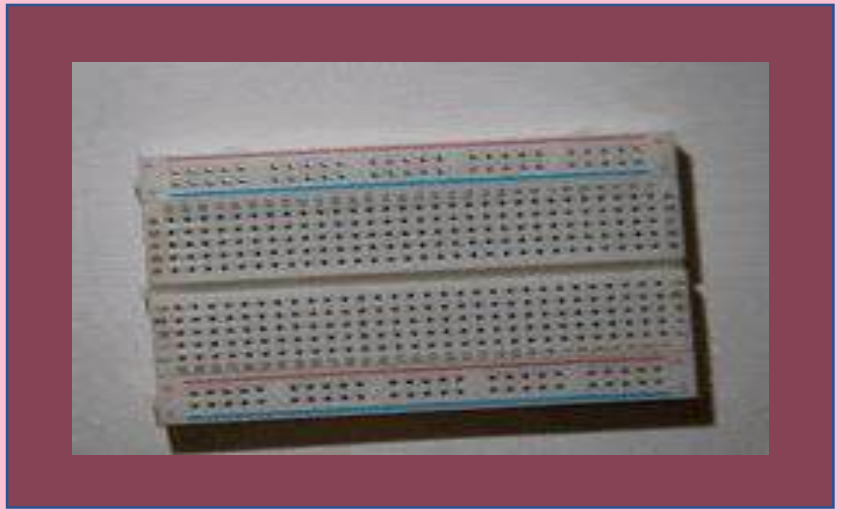
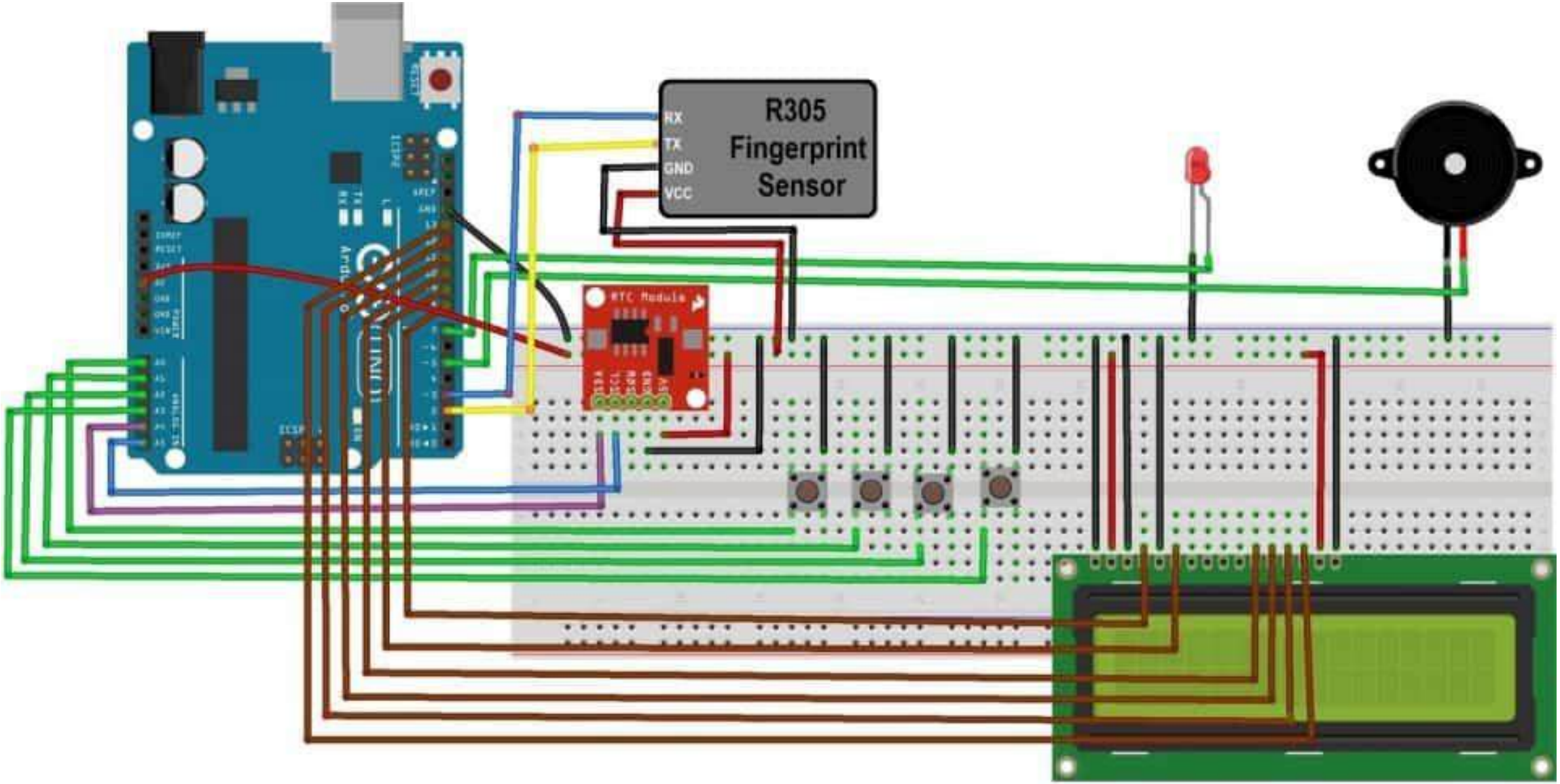


Breadboard

A breadboard is used to build and test circuits quickly before finalizing any circuit design.

Software

CIRCUIT DIAGRAM



TESTING APPROACH

UNIT TESTING IN PyEval

PyEval a python library is used for unit testing.

Visual studio code allows easy unit testing.

Which allows user to test specify parts of code at a time.

- Software Integrate testing using Selenium in Visual Studio code in python
- Selenium it is a popular software testing tool that is open-source and supports most browsers and operating systems.

ADVANTAGES

- No proxy of attendance
- Accurate attendance
- Conveniences
- Save time
- Realtime tracking
- Security and protects privacy

LIMITATION OF OUR SYSTEM

Expensive on the Pocket

Data breaches

Tracking and data

Modification

Manual attendance

Real clock in and out time

CONCLUSION

Since biometric attendance systems are automated and do not require any technical knowledge, **students can check-in or out quickly and easily**

Biometric systems will allow people to get more secure system in which the data can not be implicated or duplicated

THANK YOU

PROJECT BY

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