PRACTICE SCHOOL I

BITS PILANI

FINAL SEMINAR PRESENTATION

adani

Power

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI

ज्ञानं परमं बलम्

BITS Pilani

Pilani | Dubai | Goa | Hyderabad

ATTENDANCE MARKING SYSTEM AND TEMPERATURE MEASUREMENT OF THE EMPLOYEES OF ADANI POWER

STUDENTS WORKING ON THE PROJECT :-

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(2018B5A80923P)

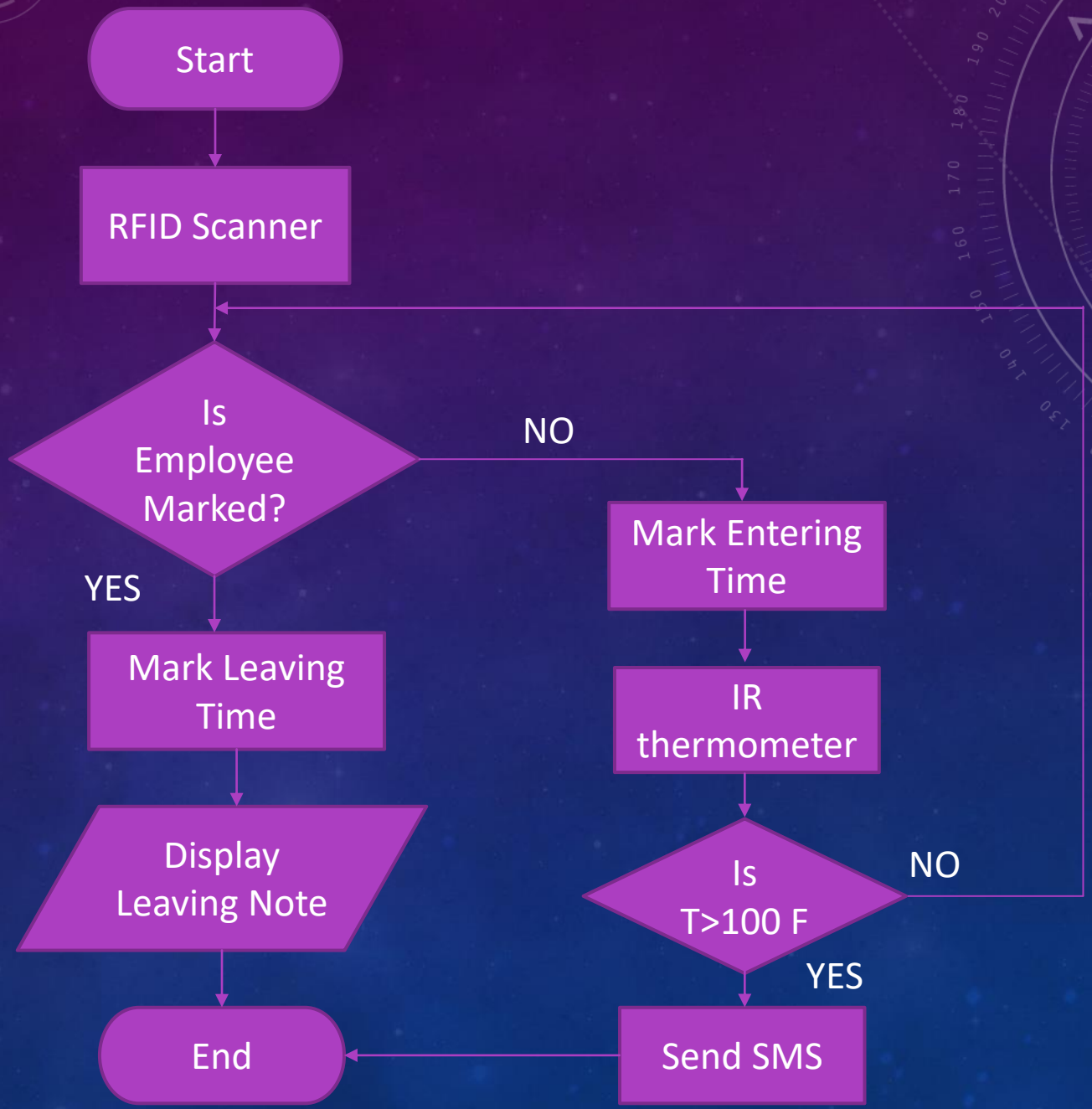
AMARTYA PANDEY
(2018B2A80689P)

ABOUT OUR DEVICE:

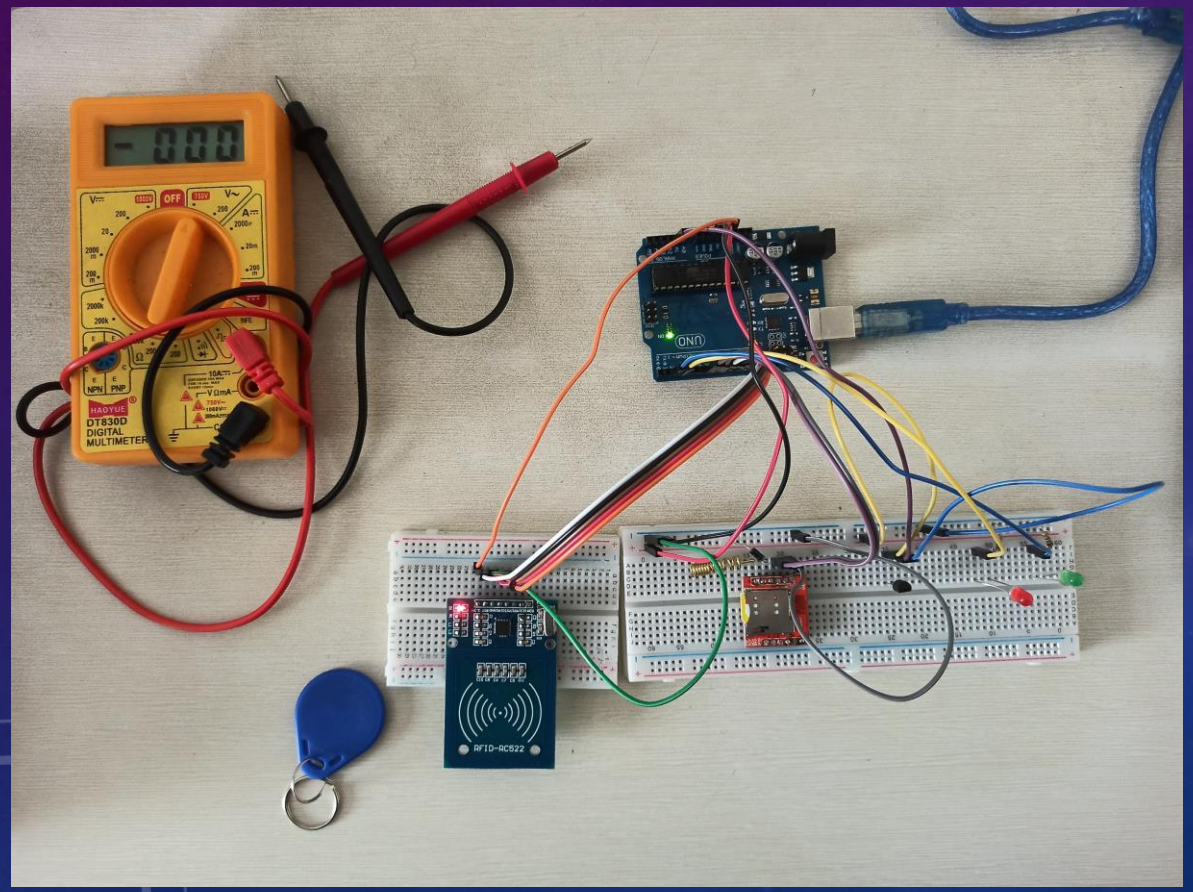
- With this project we are trying to bring a cost-effective system which can help the organizations to monitor health of their employees and protect them from getting infected at the same time. This will enable the employees to work in a minimized risk environment so that they will be able to concentrate on their work and utilize their full potential.
- This device will try to make safe disease-free working environment for the employees, and they will be able to concentrate on their work with worrying about getting infected.

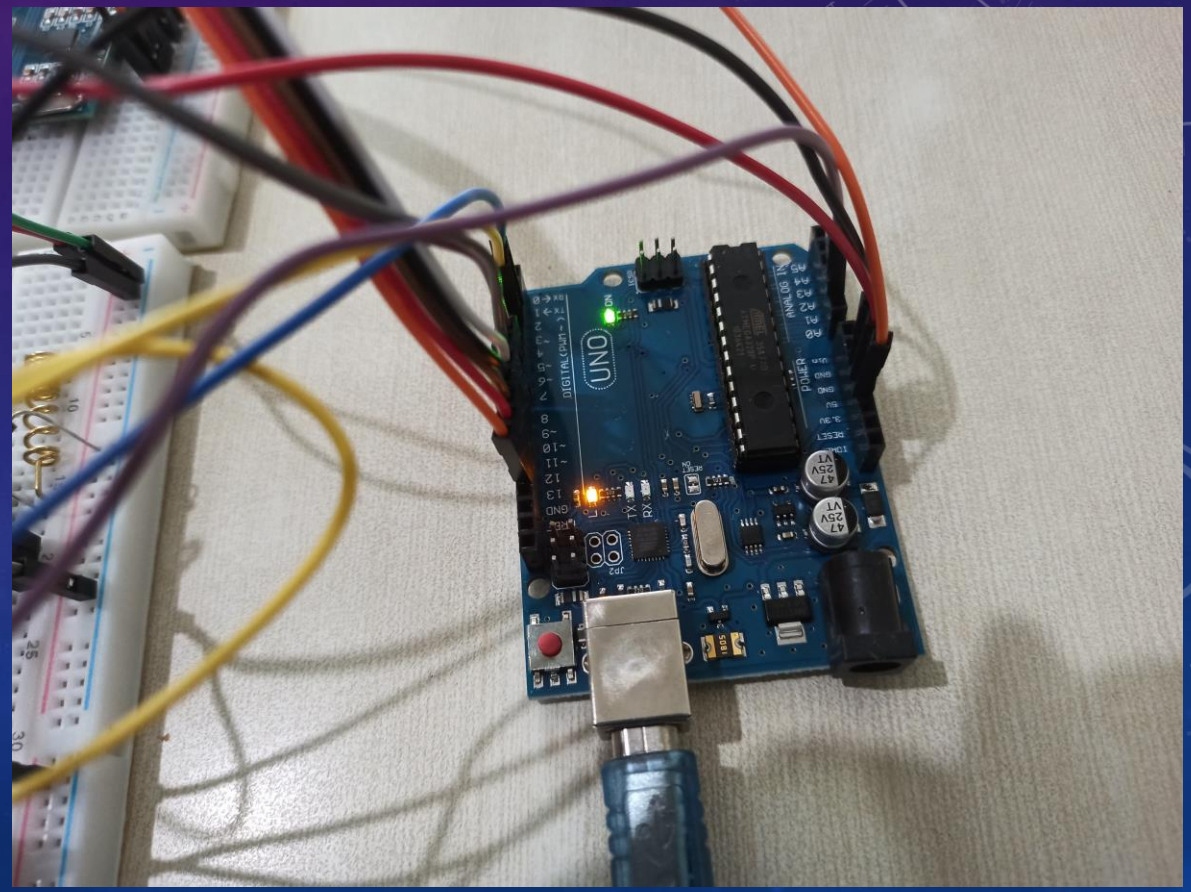
WITH THIS DEVICE WE ARE TRYING TO MAKE WORK A SAFER PLACE FOR INDUSTRIES THAT DO NOT HAVE THE PRIVILEGE OF WORK-FROM-HOME SYSTEM.

WORKING:

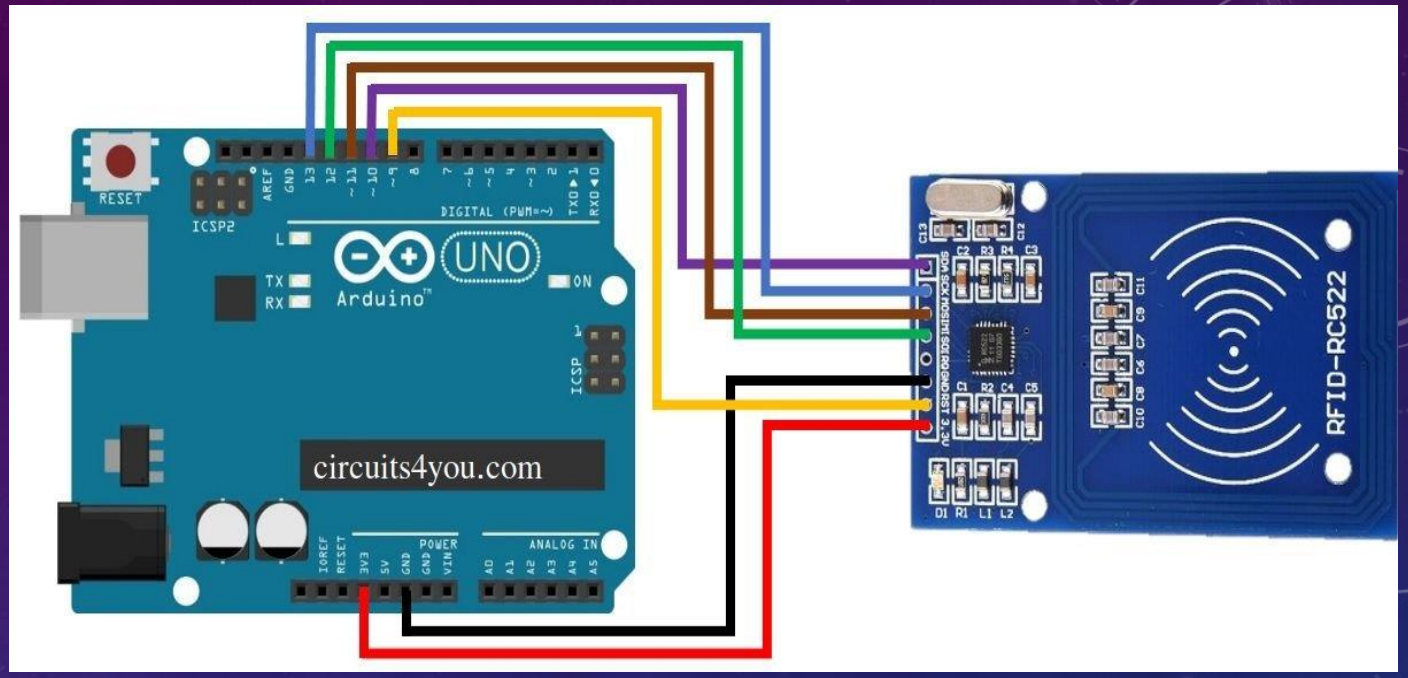

Start
RFID Scanner
Is Employee Marked?
NO
YES
Mark Entering Time
Mark Leaving Time
IR thermometer
Display Leaving Note
Is T>100 F
NO
YES
End
Send SMS

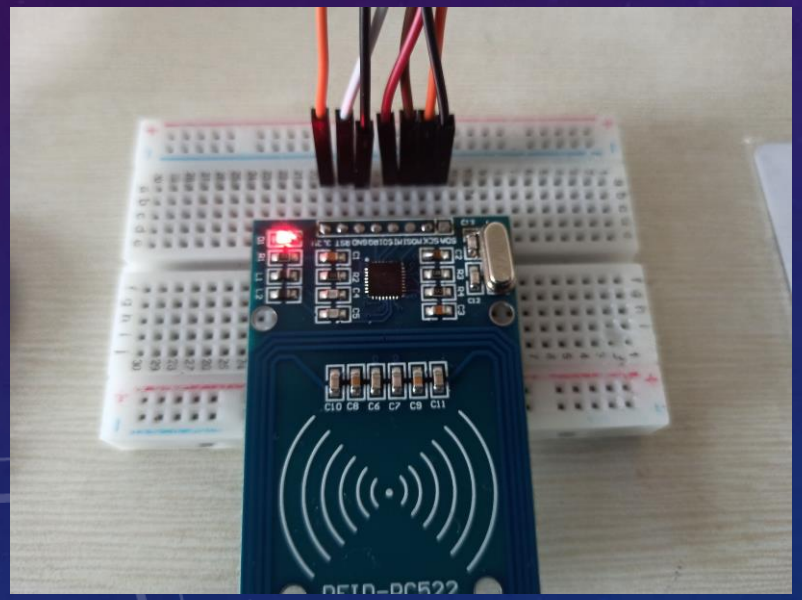
CIRCUIT DIAGRAMS

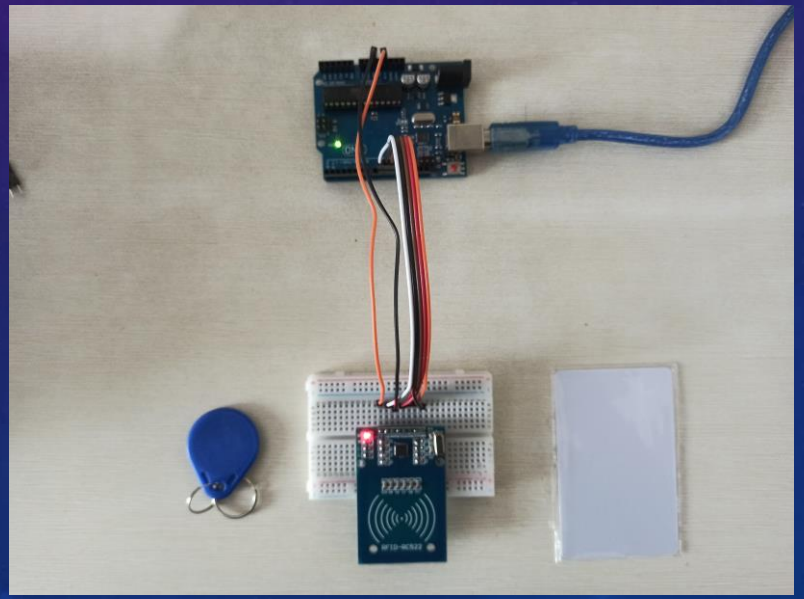


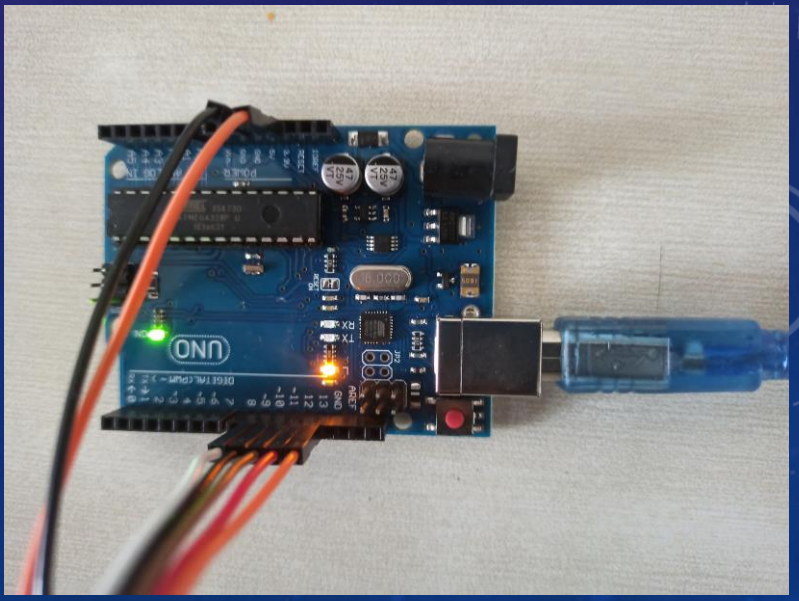


MFRC-522RFID MODULE

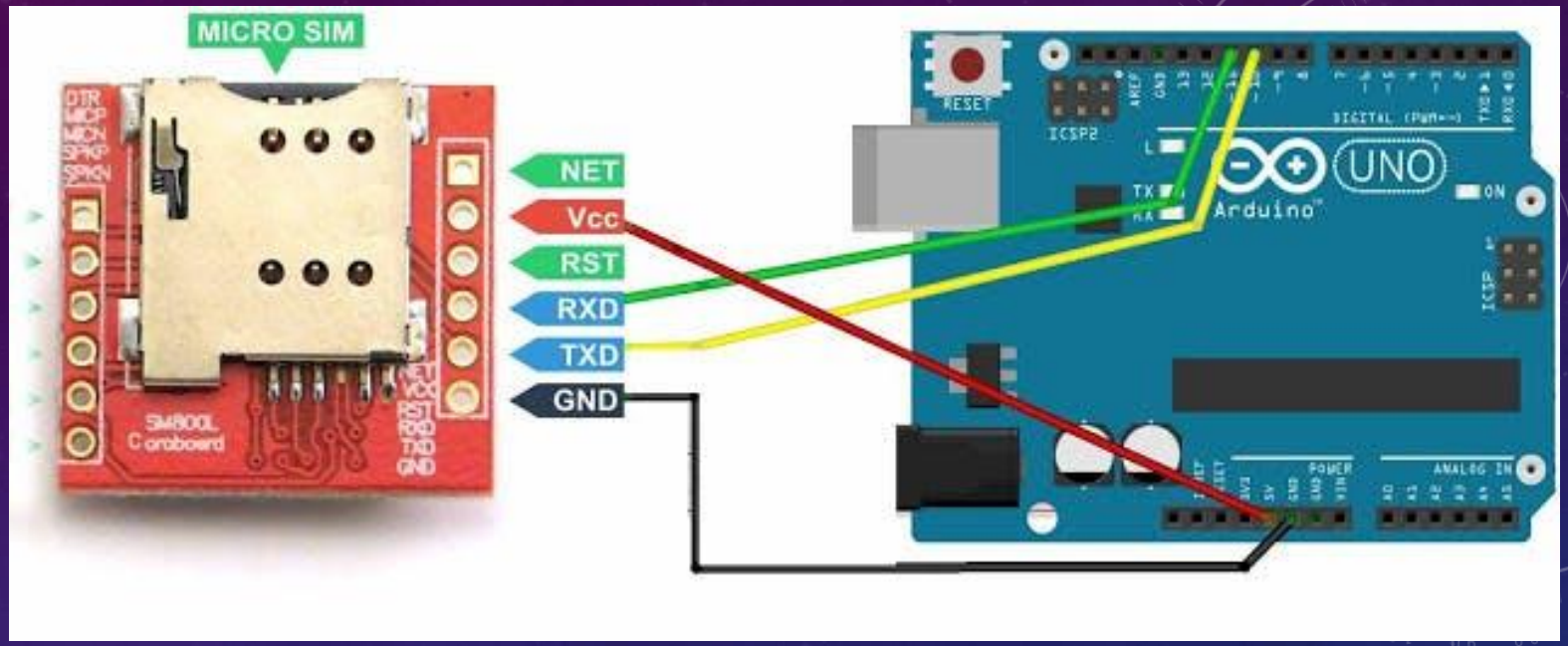


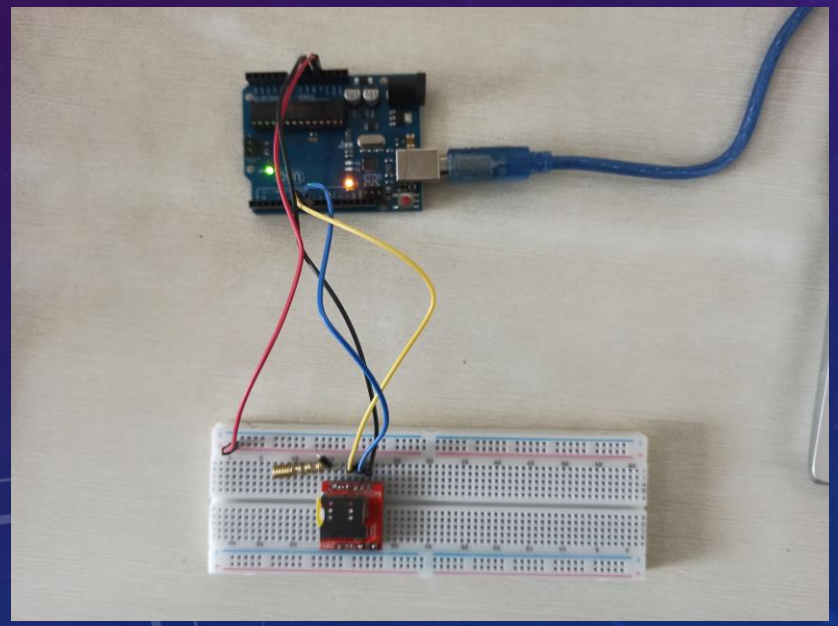


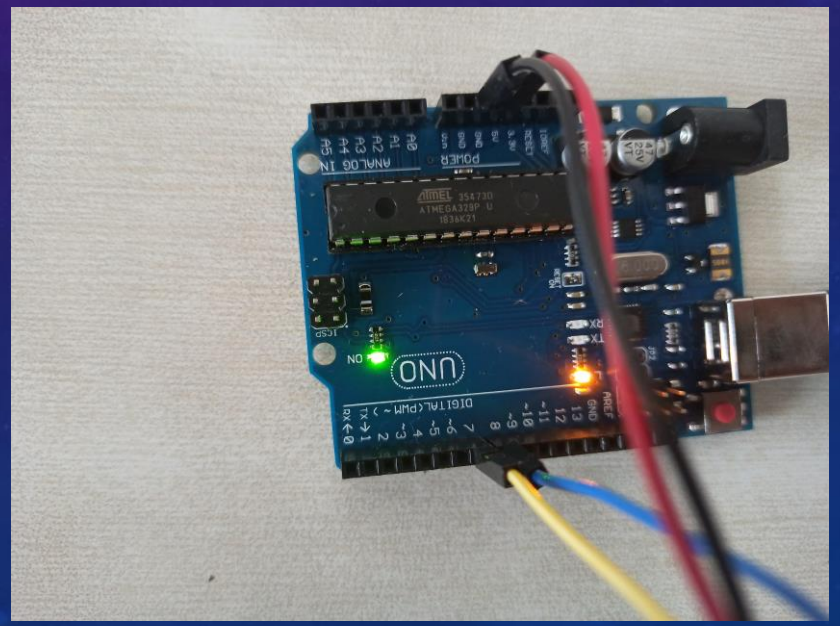


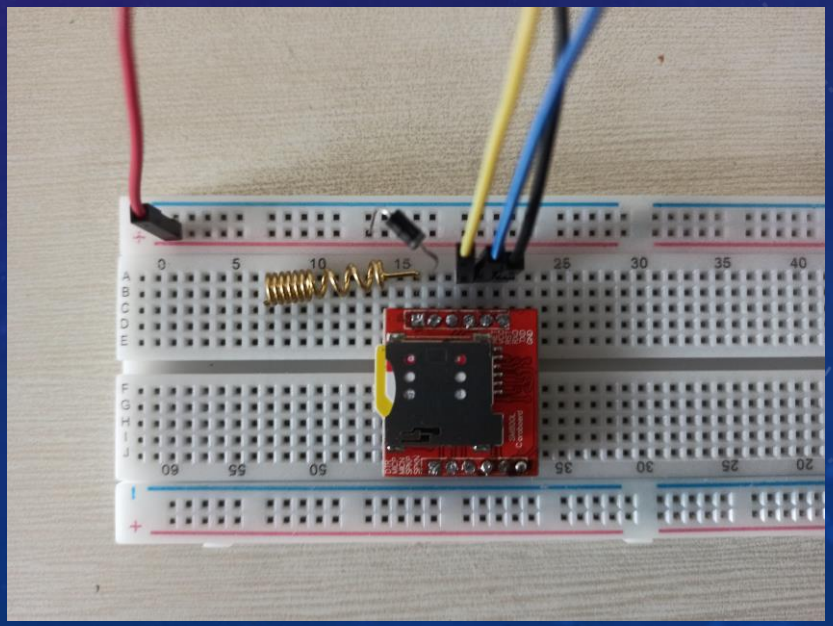


SIM800L GSM MODULE

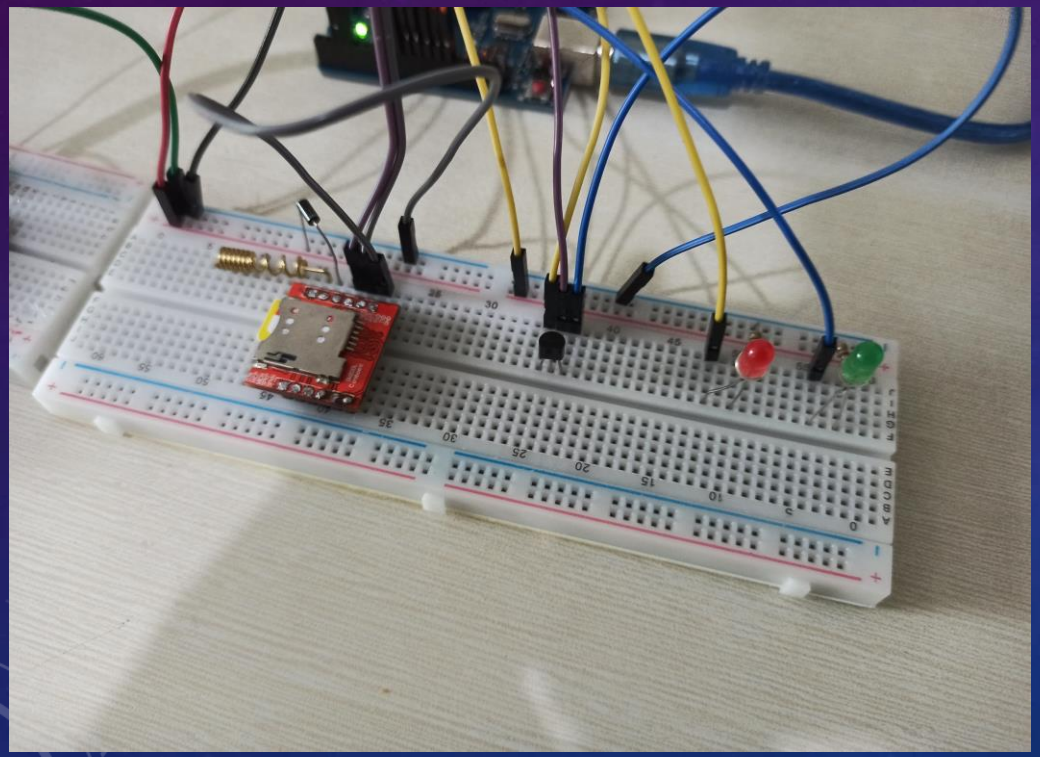


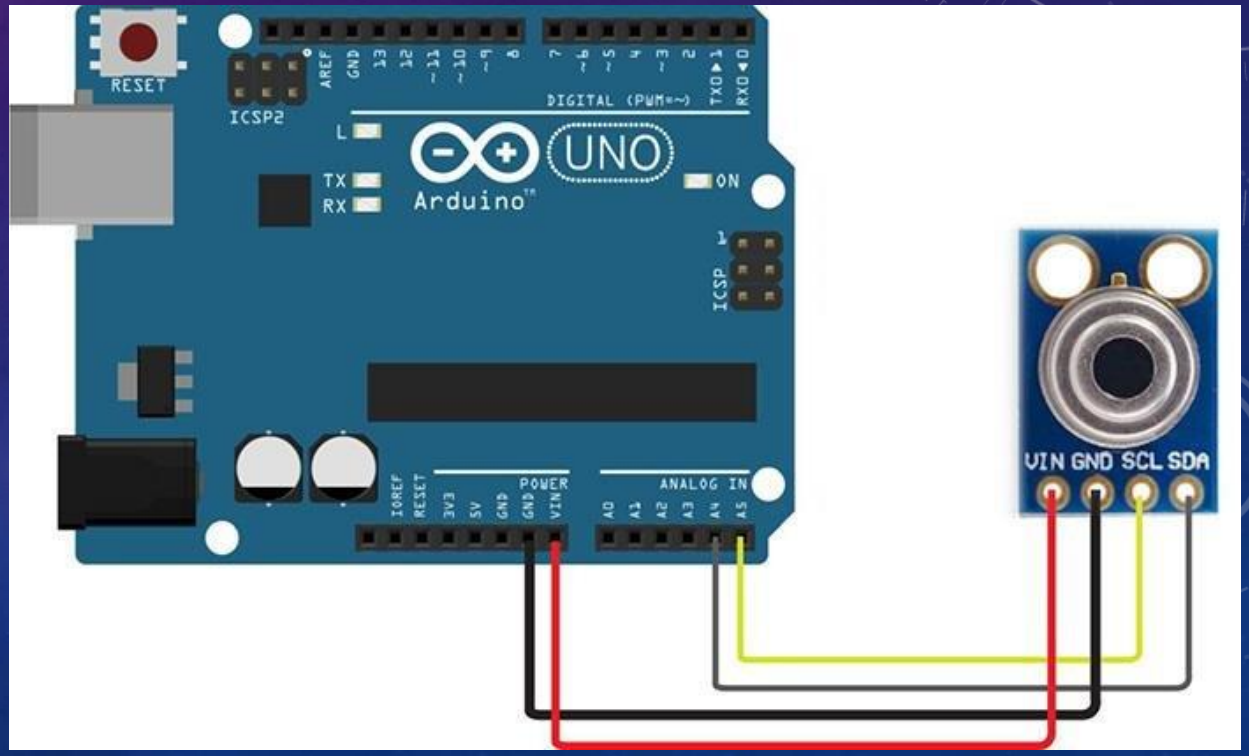




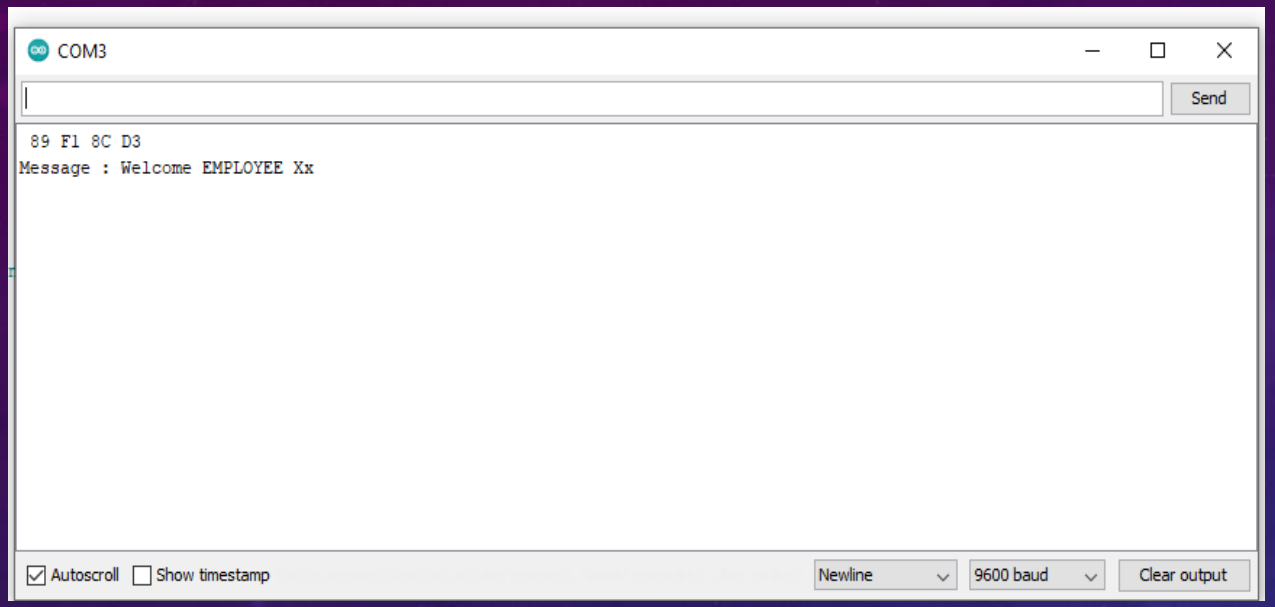


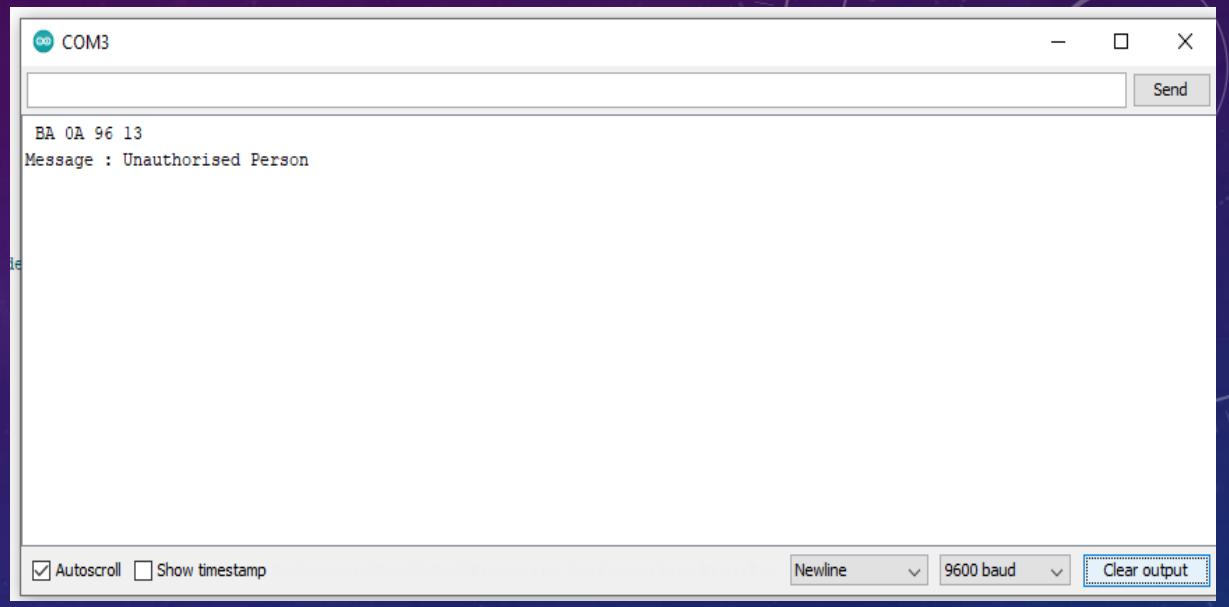
MLX90614 INFRARED TEMPERATURE SENSOR

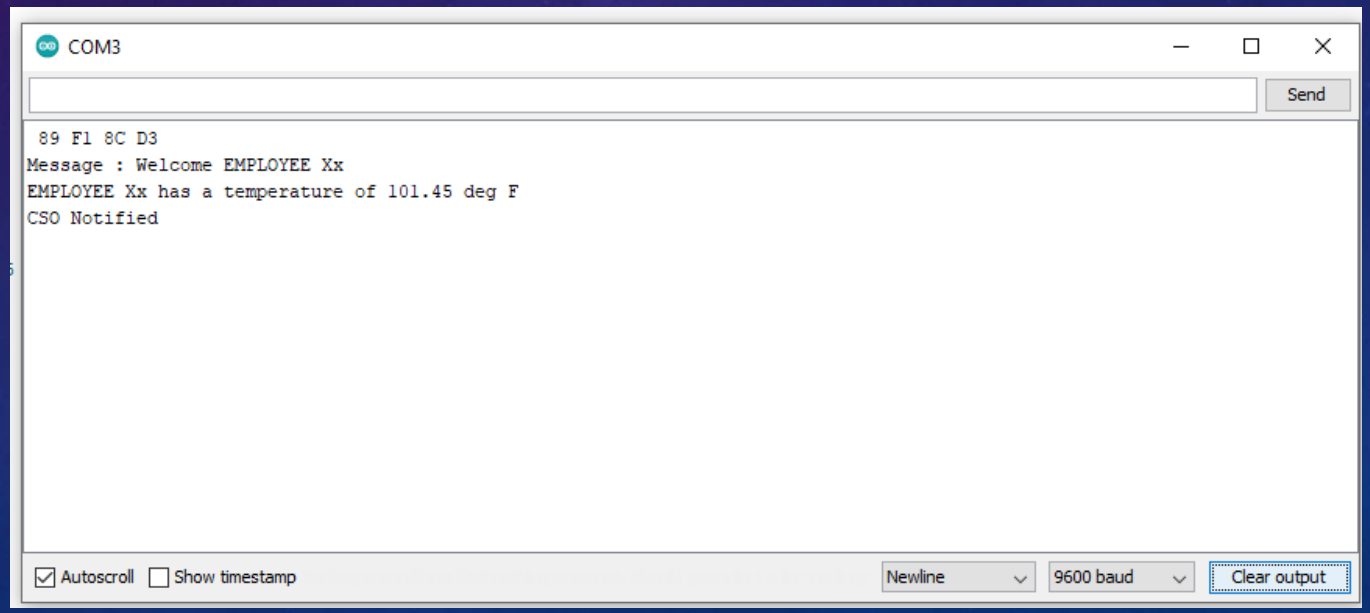




SERIAL MONITOR

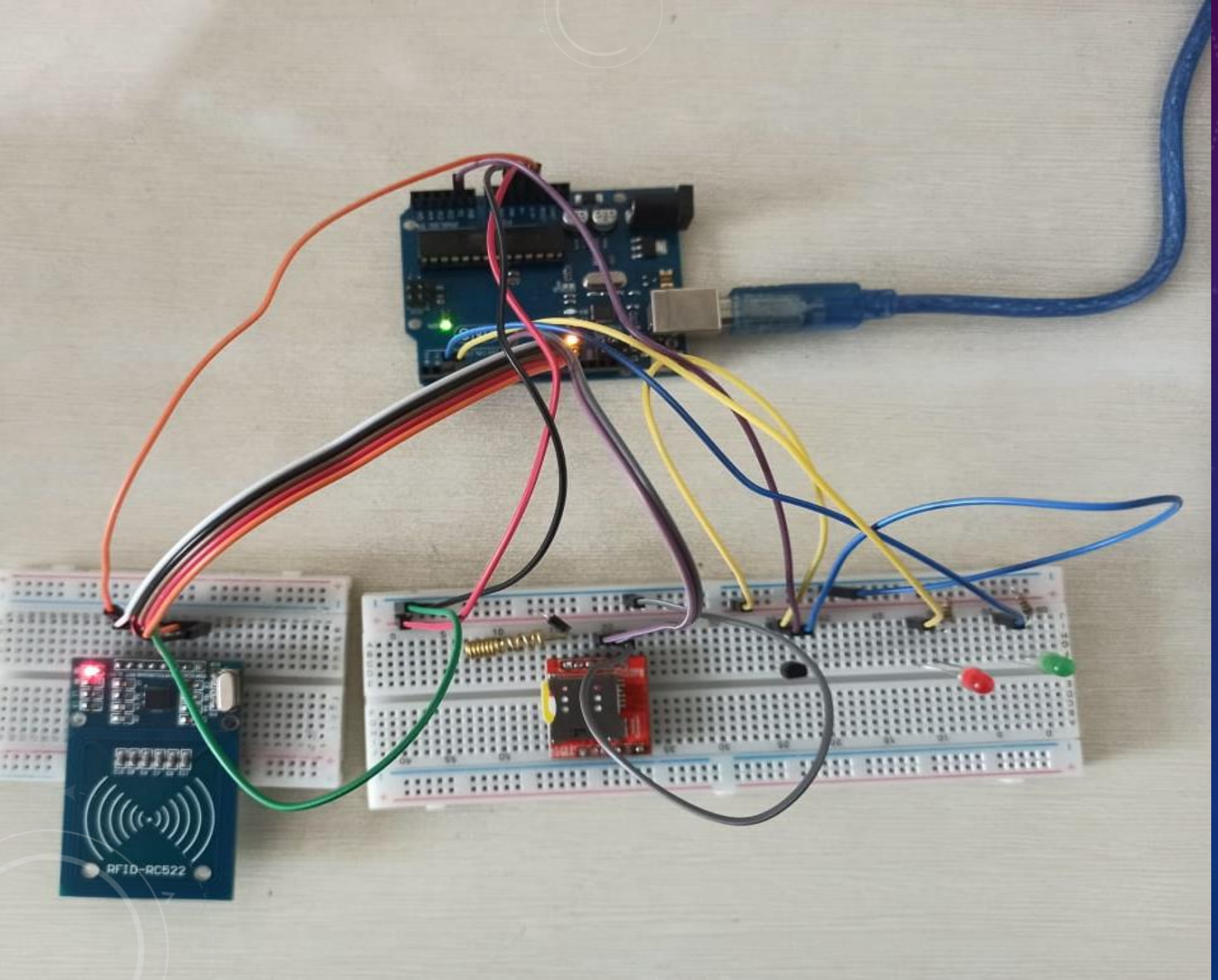






FEATURES:

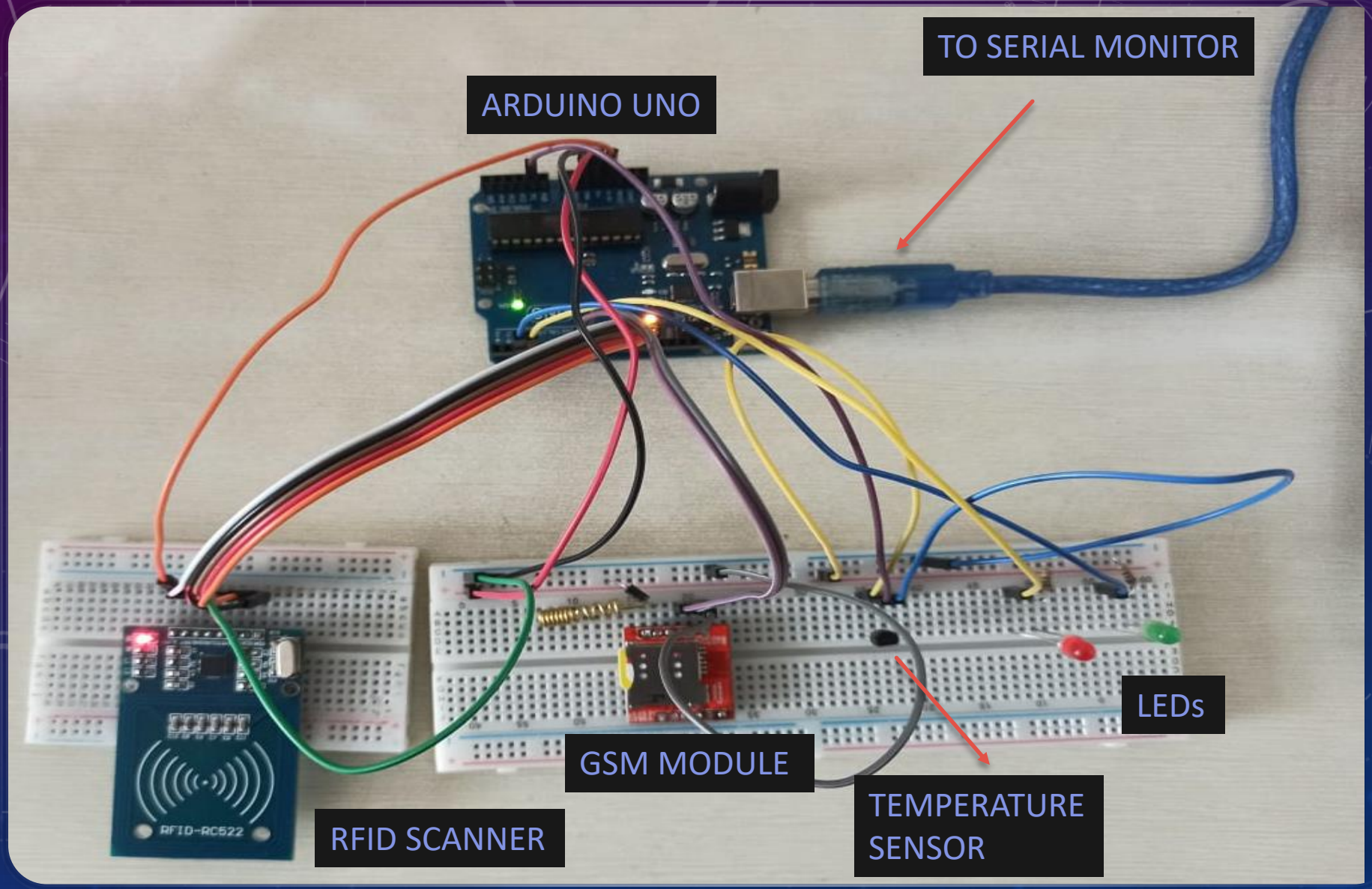
- No contact
- Highly accurate infrared scanner which monitors body temperature.
- Quick, organized, and automated screening process.
- Easy-to-install system can be mounted near most entrances.
- Provides various notification options so organizations can decide how to respond to positive detections.
- High temperature notifications help to mitigate infection spread and instil confidence in your workforce and customers.



DEVICE IN ACTION

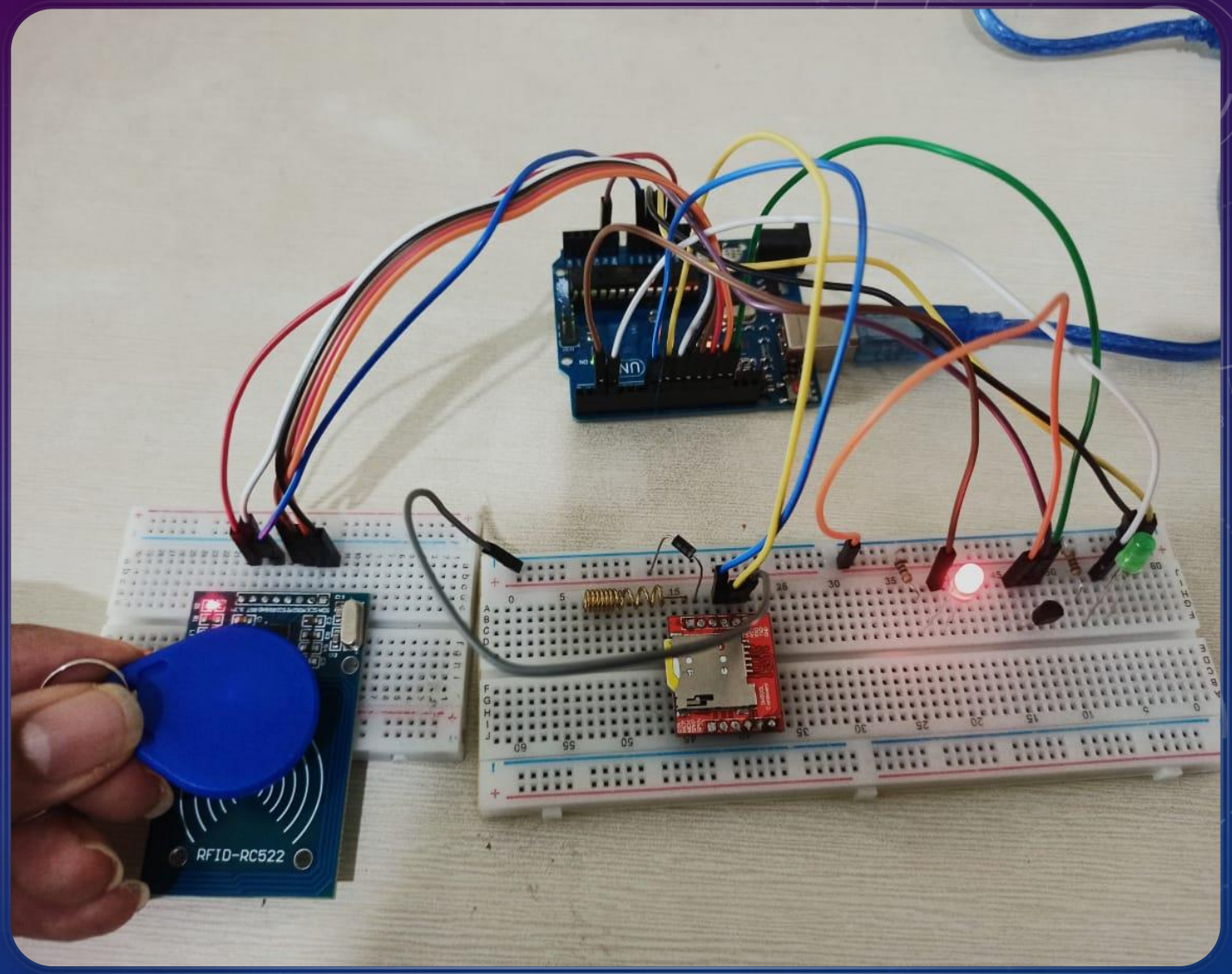
DEVICE IN ACTION:

DEVICE SETUP



DEVICE IN ACTION:

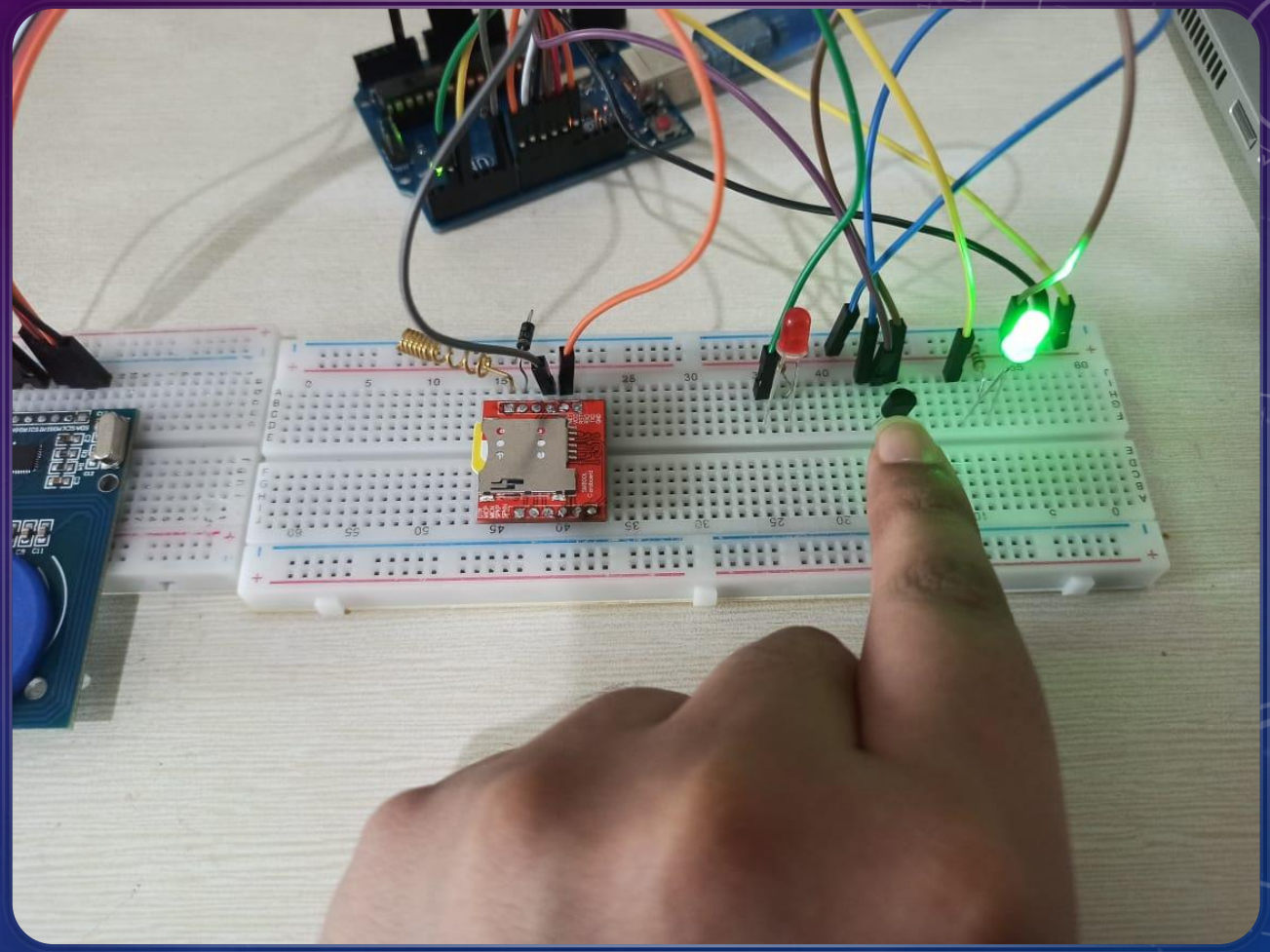
RED LED GLOWING WHEN THE RFID TAG IS NOT REGISTERED:
UNAUTHORIZED ACCESS



DEVICE IN ACTION:

GREEN LED FEEDBACK WHEN THE TEMPERATURE IS SUCCESSFULLY SCANNED:

ACCESS GRANTED



DEVICE IN ACTION:

NOTIFICATION RECEIVED BY THE RECIPIENT : CHIEF SECURITY OFFICER (CSO)

AREAS OF APPLICATION:

Can be used in following places:

- **Schools and Colleges -** Every student is issued a card which is used for scanning and capturing attendance before he/she enters the school premises.
- **Offices and other workplaces-** Every employee is issued a card which is used for scanning and capturing attendance before he/she enters the office premises.

AREAS OF APPLICATION:

- **Public Libraries**: The library card could be integrated with an RFID tag to have record of temperature, entry and exit time of a user. This can aid a lot in contact tracing of infected people.

- **Hotels and lodges:** Visitors are issued a card upon check-in which they keep during the stay and must scan it every time they return to the hotel. The same card can also be used as the key to his room, making it a Smart Key-Card. He must surrender the key-card upon check-out.

FURTHER INNOVATIONS AND EXTENSIONS:

- **Automated door**: It can be integrated with several types of motors digital relay ON/OFF via Modbus and serial port.

- **Buzzers and Audible announcements:** It can be integrated with buzzers or announcement systems which can sound in case a person is detected with high body temperature.

- **Facial recognition:** It can easily be integrated with AI based facial recognition systems and send temperature data as a cloud API to existing security systems.

FURTHER INNOVATIONS AND EXTENSIONS:

- **Mask detectors:** A mask detector could be added to ensure that only the employees wearing masks are granted entry. It would work on a simple facial recognition program to detect just the masks and not faces.

- **Smartwatch and other wearables:** Instead of temperature scanning at the entry gate, the employees could be issued a wearable device which has to be worn at office hours. This will help in continuously monitoring the employee's health status.

THANKS TO:

- Mr. Rajeev Kumar Mistry
- Mr. Aravind Kamath
- Mr. Pradeep Kumar R.
- Prof. Arun Jalan
- Prof. P. Srinivasan
- Prof. Jabez Christopher

THANK YOU

REFERENCES-

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- ARDUINO.CC
- SPARKFUN
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- AMAZON.IN