WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Safety Monitoring System for Covid-19

Y. V. S. Durga Prasad [1], B. V. Pavan Kalyan [2], N. Sravani [3], P. Nikhil Reddy [4].

[1]Associate Professor, Electronics and Communication Engineering, ACE Engineering College, Hyderabad, Telangana, India
[2,3,4]IV B. Tech Student, Department of Electronics and Communication Engineering, ACE Engineering College, Hyderabad, Telangana, India

ABSTRACT:

Major travel hubs like malls, colleges, airports, railway stations and long-distance bus stations are one of the points on which the security measures of public authorities are aimed when infectious diseases such as Corona virus (2019-nCoV, COVID-19, SARSCoV-2) cause global problems. COVID 19 had a huge impact on the community, allowing the number of users to maintain a social distance in a particular room, such as offices, shops, etc., and imposed a new restriction on social entry along with a general temperature check of the social distance at the entrances. Malls, office mandatory. In this project, we stimulate a room where the necessary precautions have been taken, we use a laser diode and a receiver to detect a person's entrance, and if the IR sensor detects

an entrance, it checks the person's temperature, if the temperature is below the set temperature, the person is allowed to enter else the entry is denied. As the person enters, an automated sanitizing machine sprays sanitizer on the persons hands. Only a pre-determined number of people are allowed in the room.

In this project, you can set/view the allowed temperature, the number of people allowed in the room and the number of people actively attending the room.

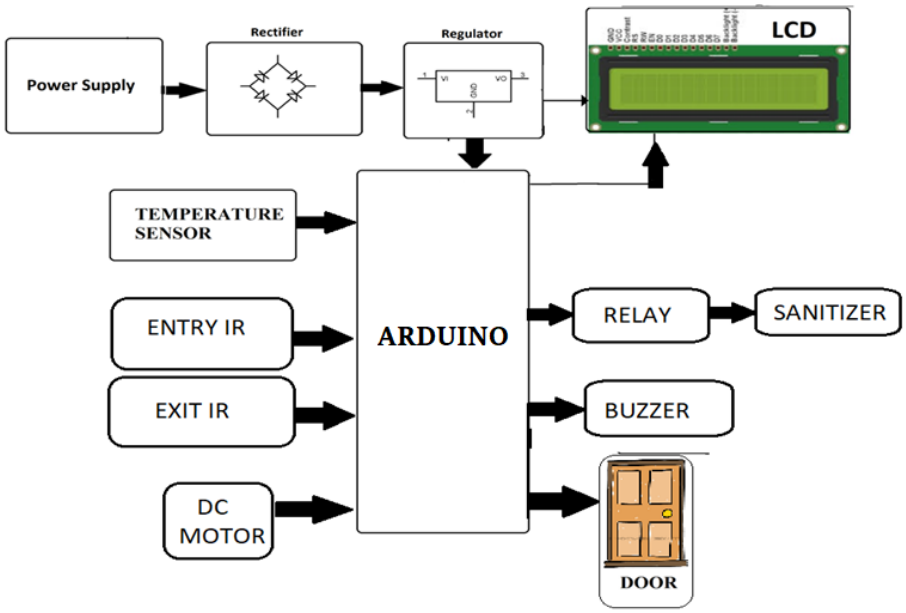
Keywords: Arduino, COVID-19,temperature sensor, IR sensor.

INTRODUCTION :

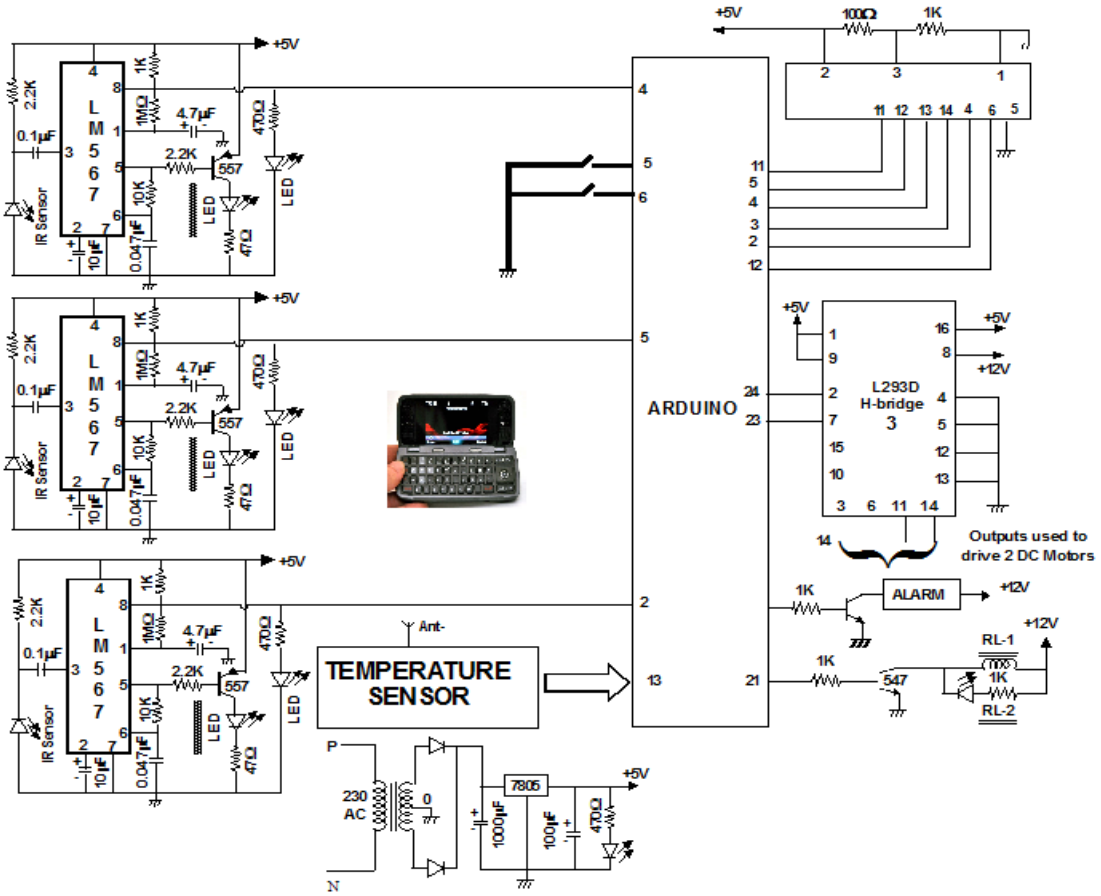
Safety Monitoring System for COVID-19 is the technology used to determine the entry of a person into the room based on Temperature check and automatically sanitizing the persons hands without any manual sanitizing. This system also uses counting facility of active persons working in the room and displaying the temperature and persons count on a LCD and now it is becoming increasingly popular to reduce the spread of COVID-19 i.e Corona virus.

Health Safety using Safety monitoring system for Covid-19: -

Now a days, Health safety is a primary concern because of Covid-19(Corona virus). One has to be thankful for the upcoming technologies, like Contactless Health check, which enables the doctors and security persons to closely monitor and track the patient's temperature and health conditions. The Automatic Sanitizing machine is a new invention which can sanitize the persons hands whenever the hand is placed under the machine without physical contact with the machine. This project also involves social distancing as we set the predetermined room capacity to allow the number of persons to enter the room. This safety system uses IR sensors to detect the person entrance, Temperature sensor to detect the temperature of person, Another IR sensor for Automated Sanitizing and a Driver IC to drive the Dc Motor. Due to Contactless Monitoring facility, this idea is becoming increasingly popular among owners of shopping malls, Colleges etc.



SCHEMATIC DIAGRAM :

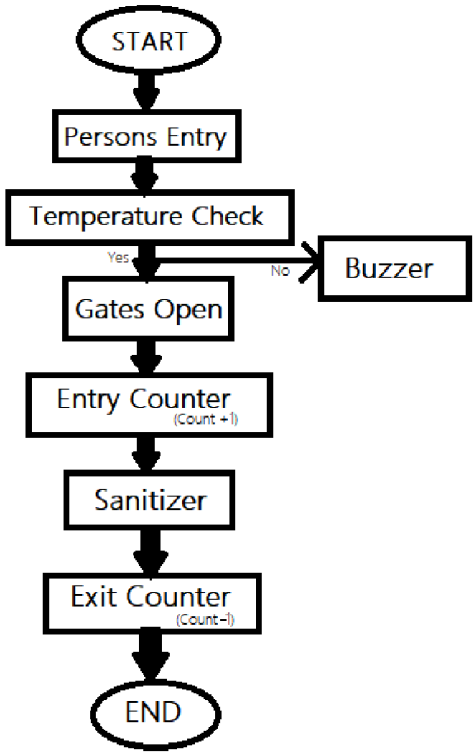


HARDWARE / SOFTWARE REQUIREMENTS:

- Arduino Uno

- Temperature Sensor
- DC Motor
- LCD Display
- Infra-red Sensors
- Relay
- Sanitization kit
- Power Supply
- Buzzer
- Arduino Software

FLOWCHART :



APPLICATIONS:

- Colleges: Used near the entrance gates as well as individual room entrance.
- Offices: Can be used as entry level security as well as inside the office.
- Public places such as shopping malls, temples, public gatherings etc.

CONCLUSION:

The Safety Monitoring System for covid-19 is successfully designed, implemented, build and tested.

ACKNOWLEDGEMENTS :-

We would like to express our gratitude to **Y.V.S.DURGA PRASAD** Associate Professor, Internal Guide, for his immense support and guidance. Also, we are thankful to our project coordinators **Mr.B.Giri Raju** and we are grateful to **Dr.P.Satish Kumar**, Head Of The Department (ECE), ACE Engineering College, for his constant support and invaluable time for us.

REFERENCES :

- Wu Z, McGoogan JM. Characteristics of and Important Lessons from the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases from the Chinese Center for Disease Control and Prevention. JAMA. 2020 Feb 24; [PubMed]. In Press
- Bartik, A.W.; Bertrand, M.; Cullen, Z.; Glaeser, E.L.; Luca, M.; Stanton, C. The Impact of COVID-19 on small business outcomes and expectations. Proc. Natl. Acad. Sci. USA 2020, 117, 17656–17666, doi:10.1073/pnas.2006991117
- Safe work Australia. Available online: https://www.safeworkaustralia.gov.au/sites/default/files/2020- 06/COVID-19_Workplace-Checklist_12June2020.pdf (accessed on 16 October 2020).
- COVID-SAFE: An IoT-Based System for Automated Health Monitoring and Surveillance in Post-Pandemic Life SEYED SHAHIM VEDAEI 1 , AMIR FOTOVVAT 1 , MOHAMMAD REZA MOHEBBIAN 1 , GAZI M. E. RAHMAN 1 , (Graduate Student Member, IEEE), KHAN A. WAHID 1 , (Senior Member, IEEE), PAUL BABYN 2 , HAMID REZA MARATEB 3 , MARJAN MANSOURIAN 4 , AND RAMIN SAMI
- Kumar, K.; Kumar, N.; Shah, R. Role of IoT to avoid spreading of COVID-19. Int. J. Intell. Netw. 2020, 1, 32– 35, doi:10.1016/j.ijin.2020.05.002.
- A Hefty Price Tag for Small Businesses Complying with NSW Health COVID-19 Restrictions. ABC News: Mridula Amin, 17 August 2020.