

# SMART ENTRANCES FOR SMART CITIES ( in the wake of COVID19)



# MPCA LAB MINI PROJECT

## SECTION F

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# THE PROBLEM

## STATEMENT

Smart City transformation can no longer be seen as a luxury as we emerge from the immediate crisis of COVID-19.

By making use of Arduino, we can relate autonomously to the real world events and offer us with services with or without direct human interference. In this project we use are developing a smart City prototype in the wake of covid-19

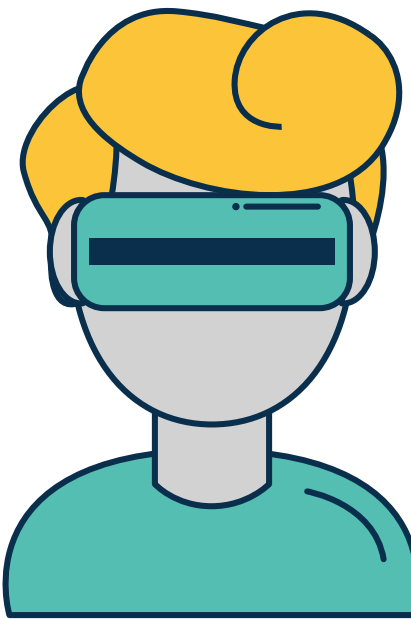


# INTRODUCTION

## STATEMENT

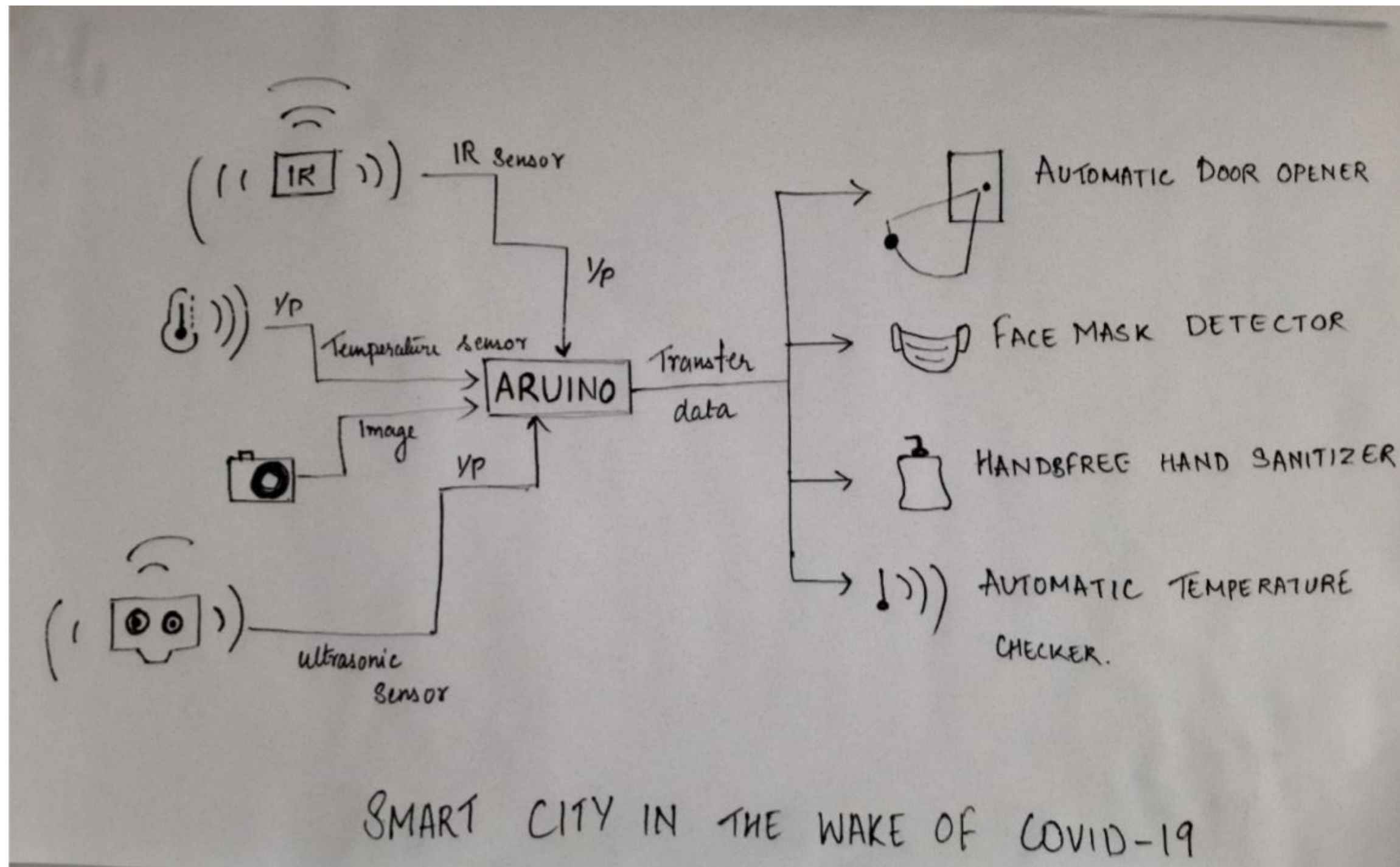
The technology has become a daily necessity to utmost of the effective participants in which we interact and communicate among ourselves by switching data and information sensed about the environment and atmosphere. By making use of Arduino, we can relate autonomously to the real world events and offer us with services with or without direct human interference.

There is still a recurring need to curb the spread of the covid-19 spread. In every office, in every classroom, i.e almost at every entrance, checking of masks, temperature (human body) is a must nowadays. Social-distancing in gathering of people. So why not automate these small things and get things done faster and more safely?



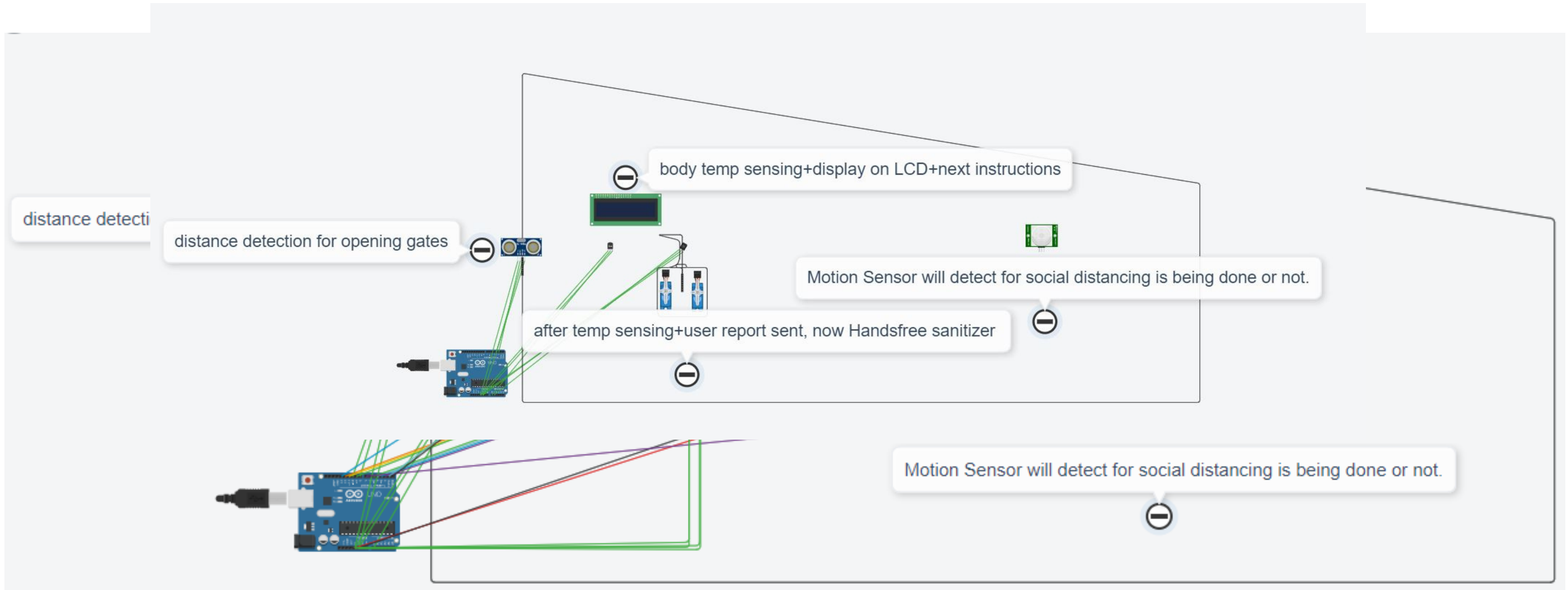
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Initially



# BLOCK DIAGRAM

finally

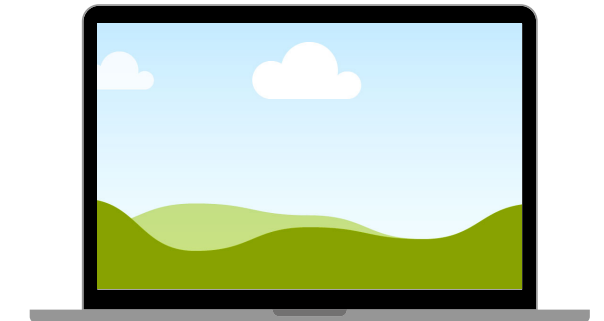
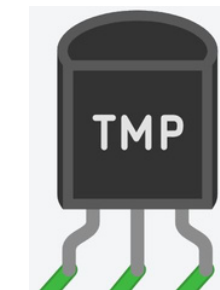




# REQUIRED COMPONENTS

11 components

- |                            |    |
|----------------------------|----|
| 1.Arduino                  | x1 |
| 2.Ultrasonic Sensor        | x2 |
| 3.Temperature Sensor       | x1 |
| 4.Liquid Crystal Display   | x1 |
| 5.Servo Motor              | x1 |
| 6.BreadBoard               | x1 |
| 7.Motion Sensor            | x1 |
| 8.Potentiometer            | x1 |
| 9.Piezo Buzzer             | x1 |
| 10.Laptop- as power source |    |
| 11.Jumper Wires            |    |



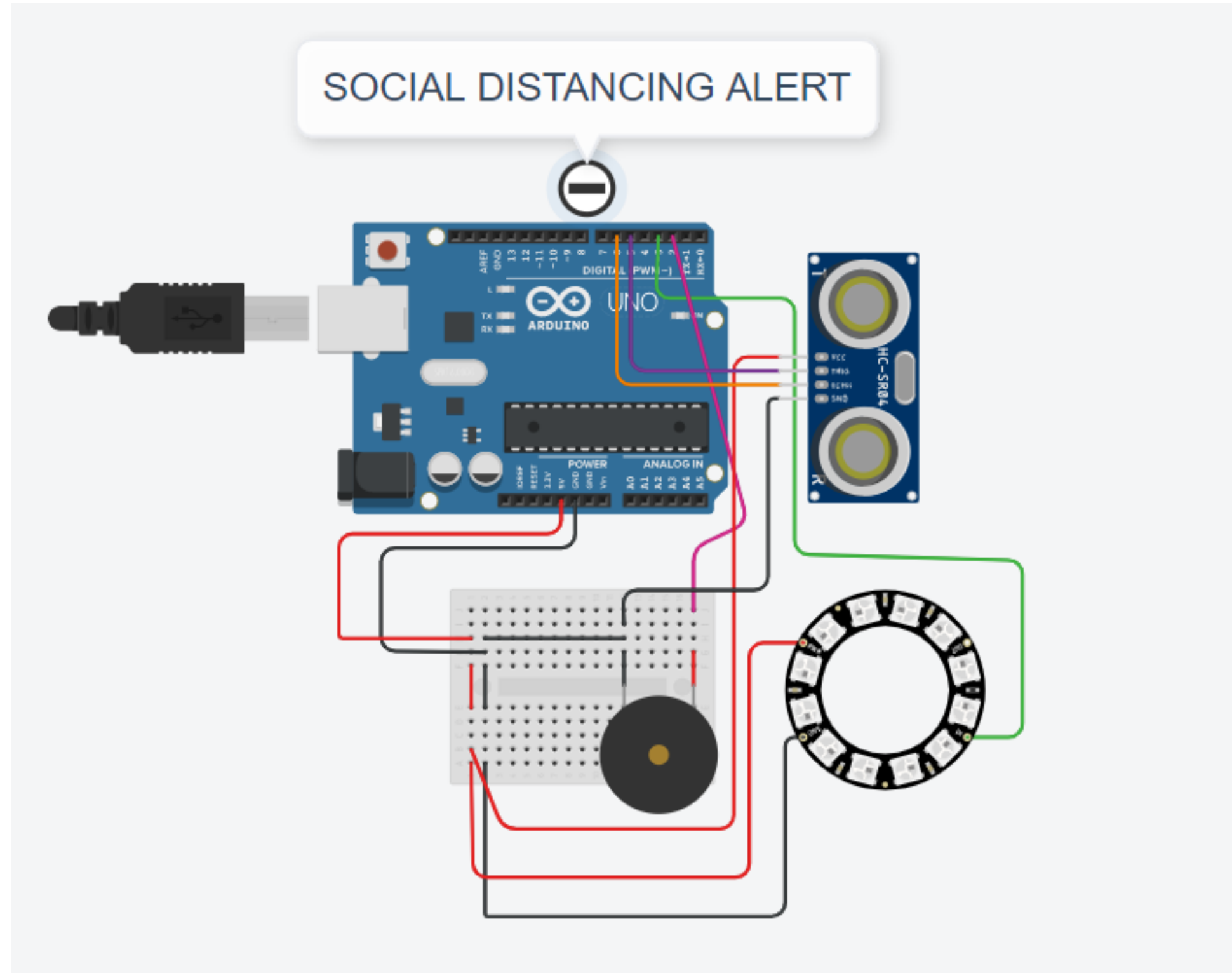
# PROJECT DESCRIPTION

## something about project

Our project focuses on scanning the person for covid-19 symptoms at any entrance of college or classroom. It firstly uses the ultrasonic sensor to detect whether someone's is present at the designated door step, then through the camera sensor, checks if he/she has a mask on or not. Then their body temperature checked, a report made and sent to the mobile phone via network. Hands-free hand sanitizer uses a distance measuring sensor (ultrasonic sensor) , Arduino and servo motor to ensure maximum safety for all the people entering the building.



# BLOCK DIAGRAM





# APPLICATIONS

## something about project

Our project focuses on scanning the person for covid-19 symptoms at any entrance of college or classroom. It firstly uses the ultrasonic sensor to detect whether someone's is present at the designated door step, then through the camera sensor, checks if he/she has a mask on or not. Then their body temperature checked, a report made and sent to the mobile phone via network. Hands-free hand sanitizer uses a distance measuring sensor (ultrasonic sensor) , Arduino and servo motor to ensure maximum safety for all the people entering the building.



# REFERENCES



<http://tutorialspoint.com/>



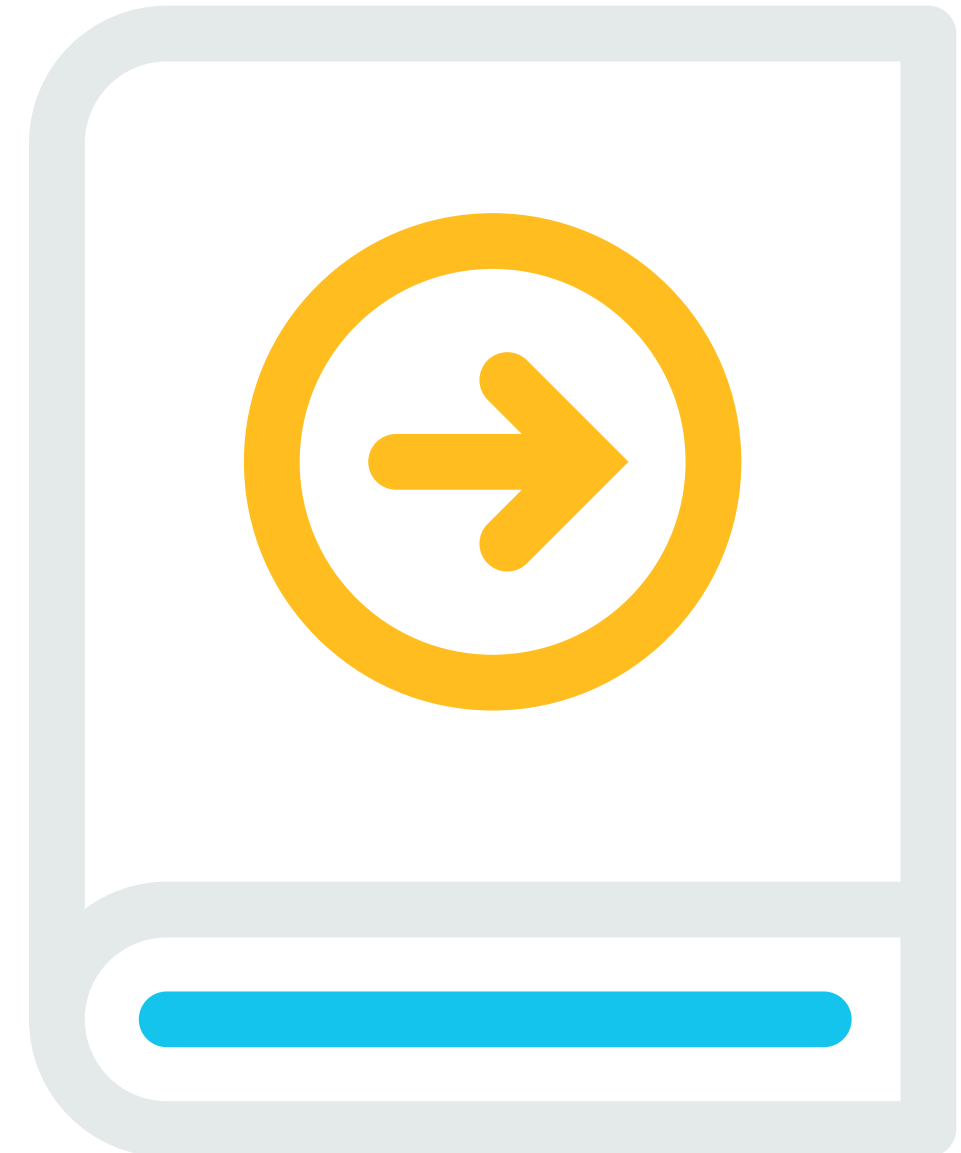
<http://arduino.cc/>



[https://www.researchgate.net/publication/342044985\\_COVID-19\\_Pandemic\\_A\\_Review\\_of\\_Smart\\_Cities\\_Initiatives\\_to\\_Face\\_New\\_Outbreaks](https://www.researchgate.net/publication/342044985_COVID-19_Pandemic_A_Review_of_Smart_Cities_Initiatives_to_Face_New_Outbreaks)



<https://link.springer.com/article/10.1007/s42413-020-00068-5>

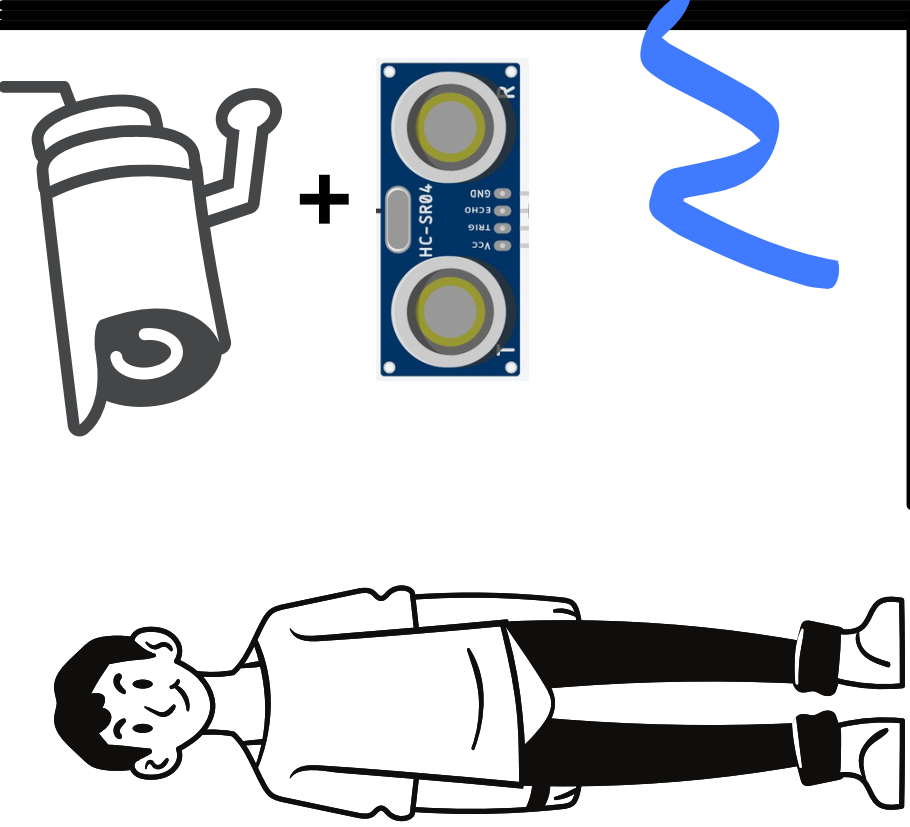


# THANK YOU



## FUTURE ASPECTS

Temperature report can be sent to User  
through SMS by joining a python script

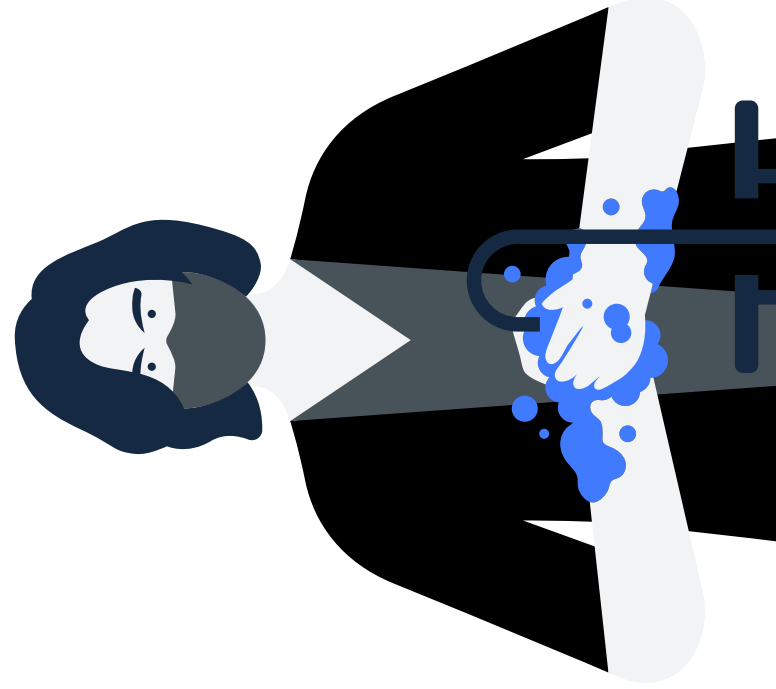
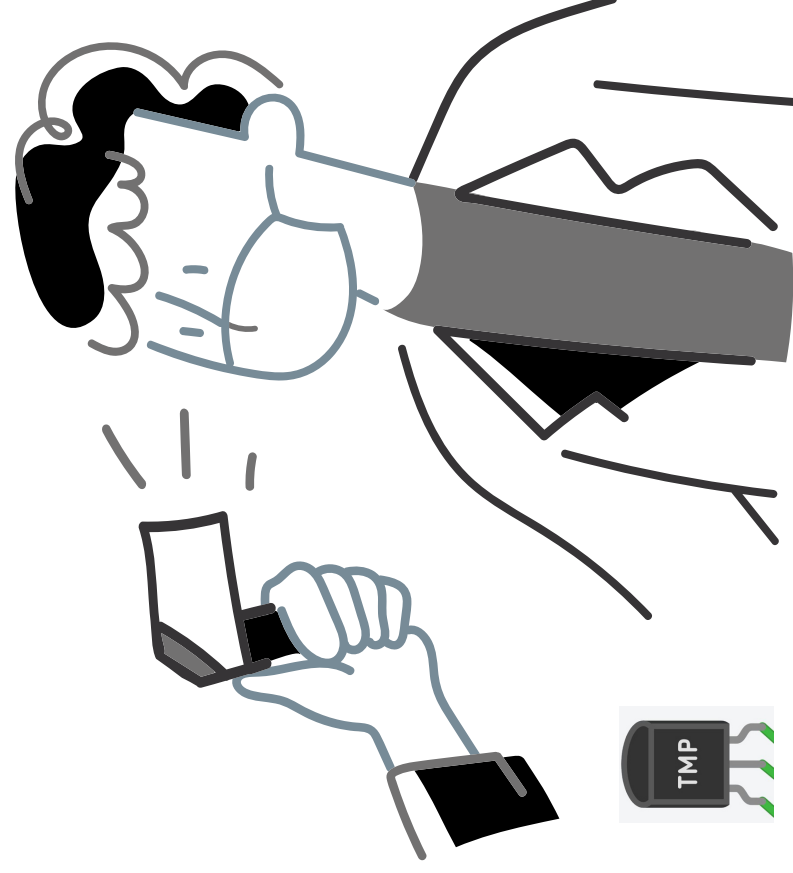


## Face Mask Scan

No mask=No entry  
gate opens after  
having mask

## Body Temp. taken

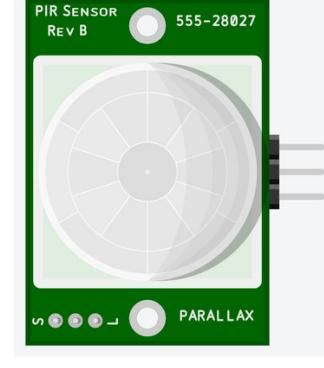
Temperature noted  
and sent to user.



## Automatic Hand Sanitizer

## Motion Sensor for social distancing

using  
PIR sensor





# ∞+ ARDUINO

