Department of Computer engineering and application

IOT BASED SMART GATE

FINAL REPORT

Institute of Engineering & Technology

Submitted to:-   **Submitted by:-**

Mr.Amir Khan   **Sparsh Agrawal(Sec A)**

(Assistant professor)   **Manav Singh(Sec E)**

Department of Computer engineering and application

INDEX

INTRODUCTION:-

The aim is to make a gate to protect people from corona at gates because where ever we go every one checks our temperature first. At that time some people touches each other by mistakenly. By this gate they can maintain distance from each other. In this gate we have mlx90614 sensor for checking temperature, ultrasonic sensor for distance mapping, servo motor for open the gate automatically and we have a device in which we have a data for that person who passes the gate.

EXISTING SYSTEM:-

At that time we have a machine like this but in this gate we have a servo motor which open gate automatically with in certain temperature.

OBJECTIVE OF THE PROJECT:-

The main objective is to protect our family members and other people from corona virus.

FUNCTIONALITY PROVIDED:-

• It can check the whole body.

• It shows the details of that person who passes from this gate like body temperature, pulse, thermal vision of the body.

• It shows the detail of that person.

METHODOLOGY:-

When any person passes through this gate it will identify the person body temperature if temperature is within a certain range then servo motor open the gate .

LAYOUT:-

mlx 90614 sensor

Actor

ultrasonic sensor

arduino uno

device
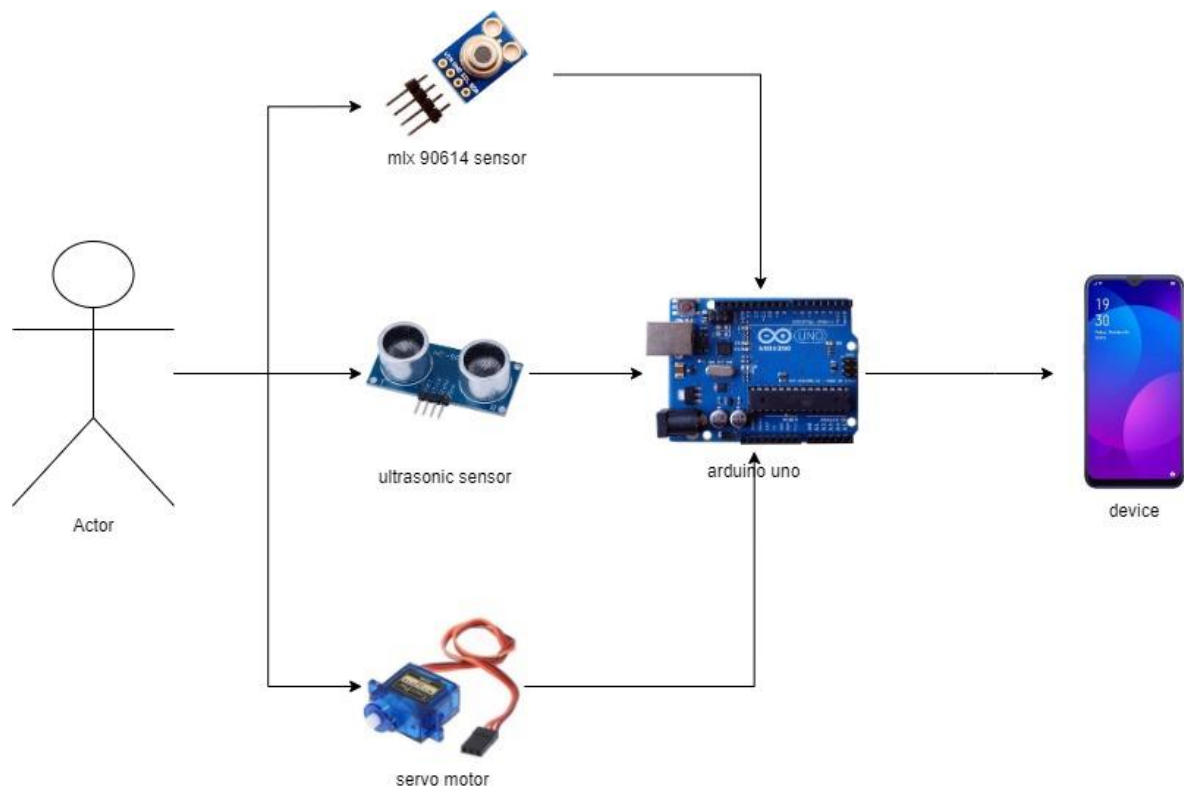
servo motor

SOFTWARE REQUIRMENTS:-

- Windows 7 or Higher

- Any operating systems

- Any android mobile phone

HARDWARE REQUIRMENTS:-

- Servo motor

- MLX 90614 sensor

- Arduino uno

- Ultra sonic sensor Etc.

Future Scope:-

- We can use it in many places like hotels, restaurants, malls, banks. Etc.

- It can save many people from corona.

- It reduces labour

CODE:

```
#include <Wire.h>
#include <Servo.h>
#include <Adafruit_MLX90614.h>
#define trigPin 7
#define echoPin 6
Adafruit_MLX90614 mlx = Adafruit_MLX90614();
Servo servo;
int sound = 250;
void setup() {
  Serial.begin(9600);
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  mlx.begin();
  servo.attach(8);
}
```

```
void loop() {
 long duration, distance;
  Serial.print(mlx.readObjectTempC());
  Serial.println("*C");
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
              digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);
  distance = (duration/2) / 29.1;
  if (distance < 5) {
  Serial.println("the distance is less than 5");
  servo.write(90);
  }
  else {
```

```
servo.write(0);
 }
 Serial.print(distance);
 Serial.println(" cm");
 delay(1500);
}
```

WORKING MODEL
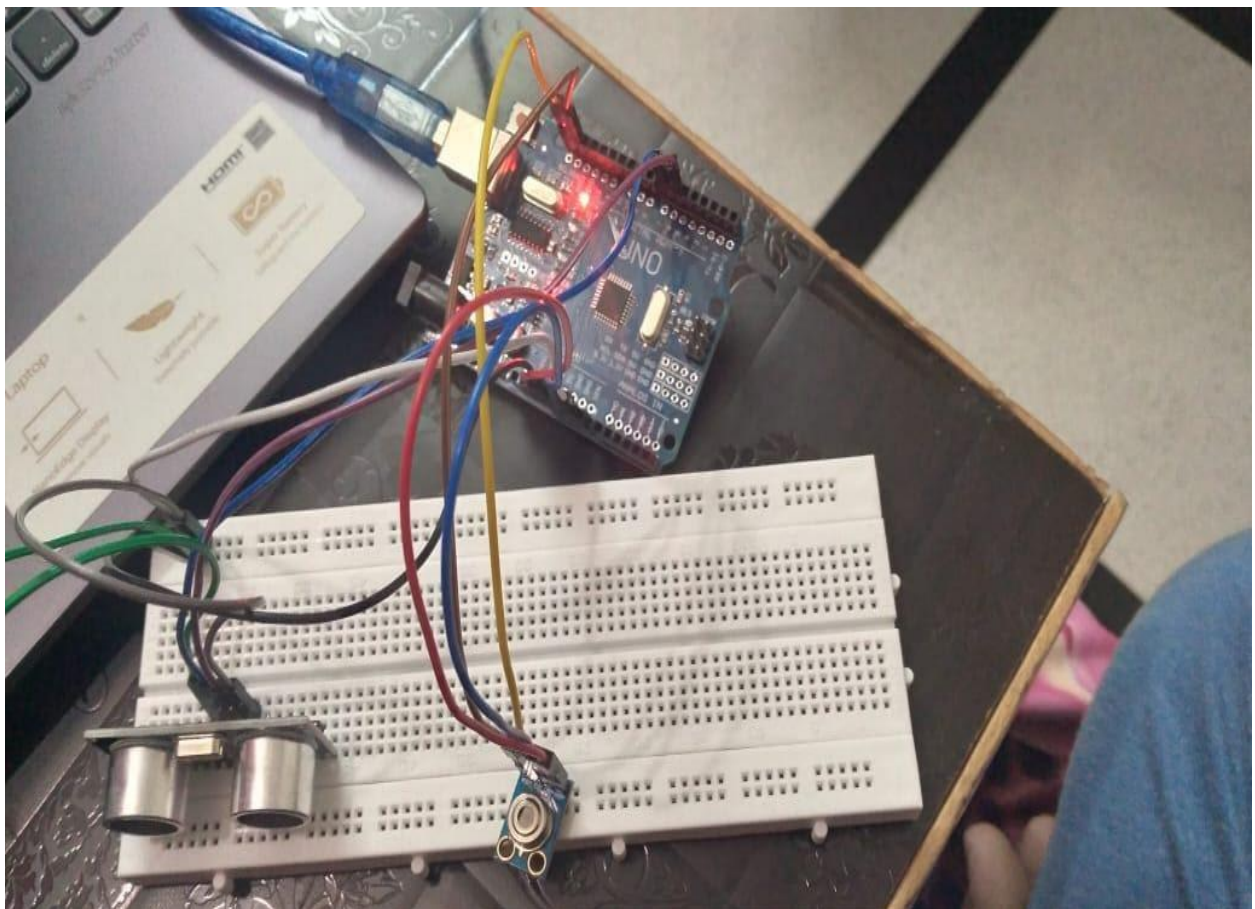
CONCULSION:-

At the end of this project, we will get a fully functional smart gate.

WEBSITE REFERENCE:-

www.google.com