ASSIGNMENT
INDUSTRY – SPECIFIC INTELLIGENT FIRE MANAGEMENT SYSTEM
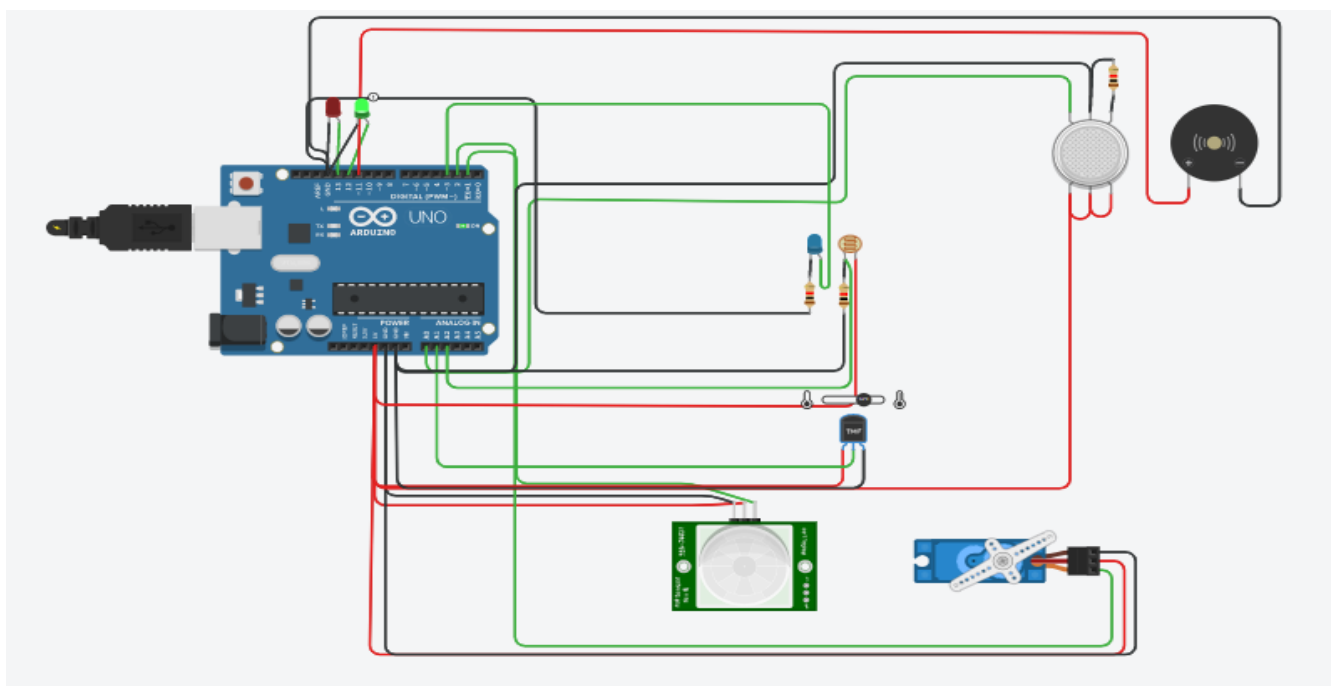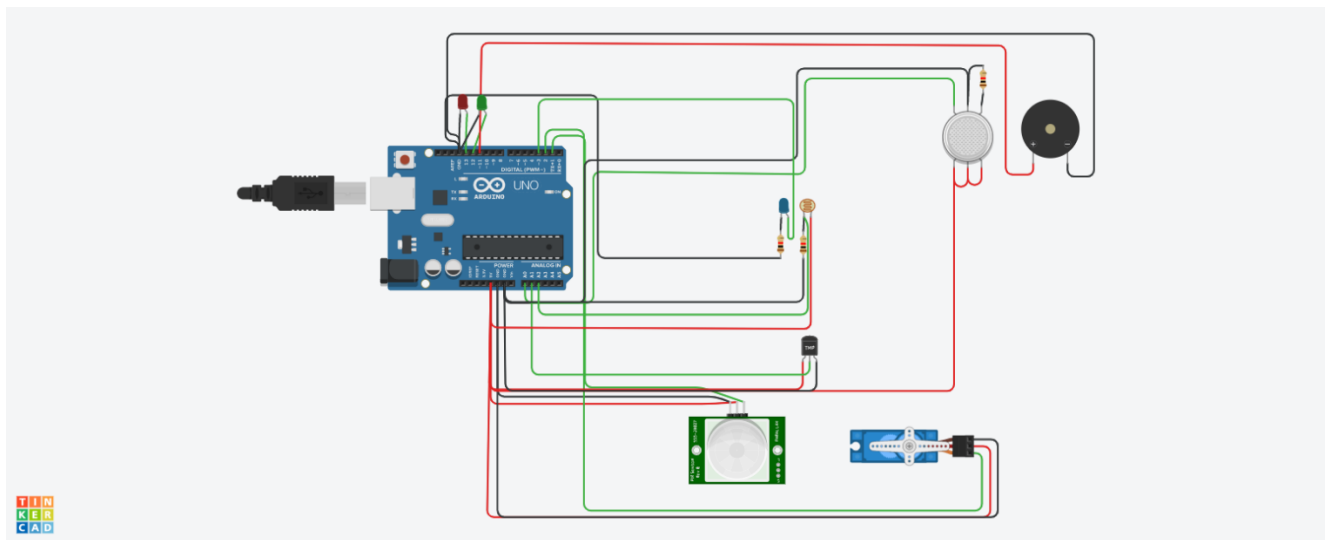
TEAM MEMBERS
19C011 – BHAGYALAKSHMI T
19C036 – HARSINI A M
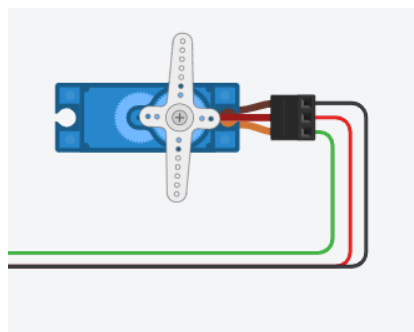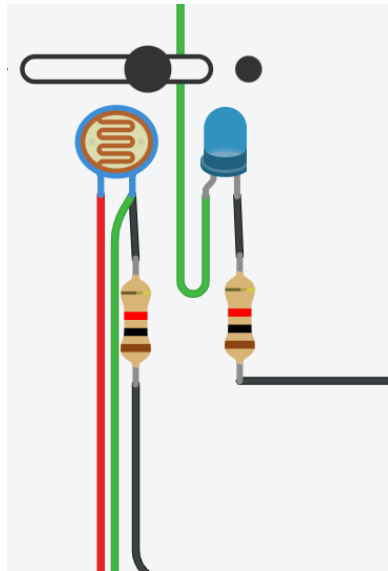19C047 – LAKSHMI SREE S
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SIMULATION OF SMART HOME AUTOMATION IN TINKERCAD:

WORKING SCREENSHOTS:

SERIAL MONITOR

```
Smoke sensor's value is :266
Raw reading - 153
The temperature reading of the room in Celcius is :24
The values of sensor are :
425
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Raw reading - 153
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The temperature reading of the room in Celcius is :24
The values of sensor are :
425
Smoke sensor's value is :266
Raw reading - 153
The temperature reading of the room in Celcius is :2
```

CODE:

```
//HOME AUTOMATION
/*
USE OF PIR SENSOR:
If motion is detected, servo motor(Indication door) would be opened)

USE OF SMOKE SENSOR:
If smoke value detected by sensor is greater than 200, buzzer would ring

USE OF TEMPERATURE SENSOR:
If temperature value read by sensor is greater than 40 degree celcius, buzzer would ring


USE OF Photoresistor:
Based on the light intensity read from sensor we can change the brigtness of the Blue LED
*/
#include<Servo.h>
int pos1;
Servo s;
int smokethres = 150;
int temp = 0;
int threshold = 550;
int sensor_value = 0;
int led = 0;

void setup()
{
 Serial.begin(9600);
 pinMode(1,INPUT);
 pinMode(A0,INPUT);
 pinMode(A1, INPUT);
 pinMode(A2, INPUT);
 pinMode(12,OUTPUT);
 pinMode(13,OUTPUT);
 pinMode(11,OUTPUT);
 pinMode(3,OUTPUT);
 s.attach(2);

}

void loop(){
 if(digitalRead(1)== HIGH)
 {
  digitalWrite(12,HIGH);
```

```
   digitalWrite(13,LOW);
   for(pos1 = 0; pos1 <= 90; pos1 += 1)
      {
        s.write(pos1);
        delay(15);
      }
       delay(1000);

      for(pos1 = 90; pos1>=0; pos1 -=1)
      {
       s.write(pos1);
       delay(15);
      }
}
else if(digitalRead(1)== LOW)
{
  digitalWrite(13,HIGH);
  digitalWrite(12,LOW);
}

int sensorvalue = analogRead(A0);
Serial.print("Smoke sensor's value is :");
Serial.println(sensorvalue);


if(sensorvalue < 200)
{
  digitalWrite(11,LOW);

}
else if(sensorvalue > 200)
{
  digitalWrite(11,HIGH);
}

temp = analogRead(A1);
Serial.print("Raw reading - ");
Serial.println(temp);
temp = -40 + 0.488155 * (analogRead(A1) - 20);
Serial.print("The temperature reading of the room in Celcius is :");
Serial.println(temp);


if(temp < 40)
{
```

```
   digitalWrite(11,LOW);

 }
 else if(temp > 40)
 {
  digitalWrite(11,HIGH);
 }

 //Photoresistor to LED mapping
 sensor_value = analogRead(A2);
 Serial.println("The values of sensor are :");
 Serial.println(sensor_value);

 led = map(sensor_value,0,1023,0,255);
         delay(100);
 if(sensor_value < threshold)
 {
  analogWrite(3,led);

 }
 else if(sensor_value > threshold)
 {
  analogWrite(3,LOW);

 }
}
```