

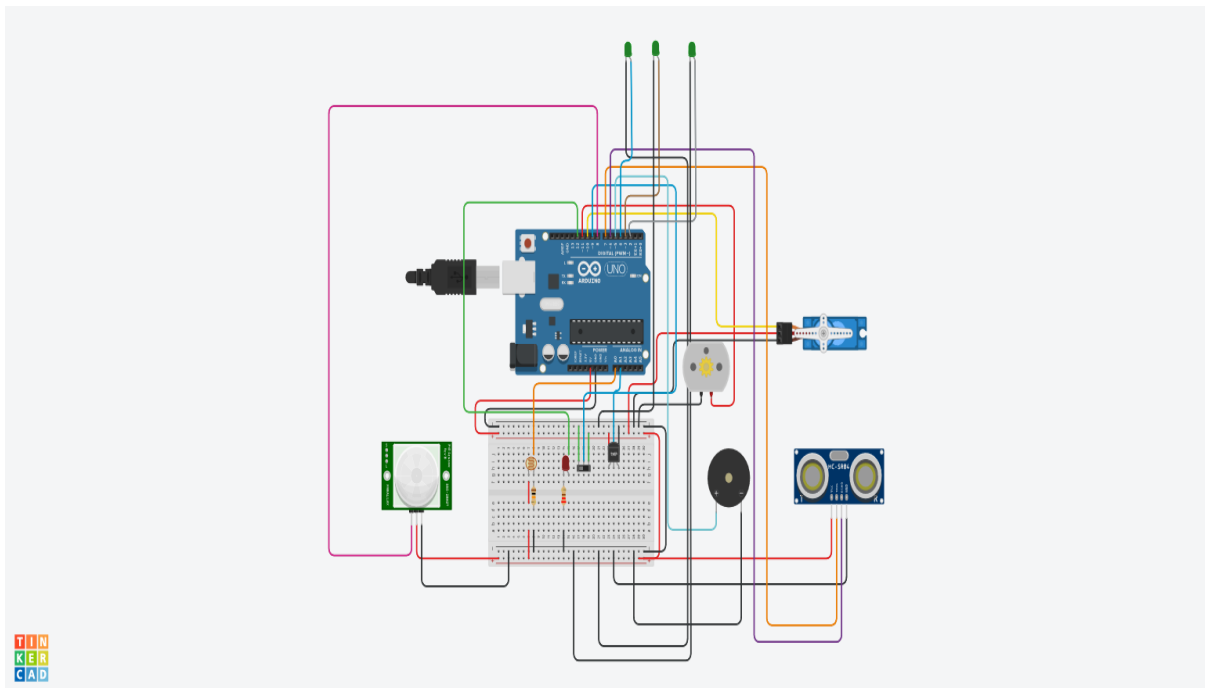
# Nalaiya Thiran (IBM)

## ASSIGNMENT – 1

Make a Smart Home in Tinker cad, using 2+ sensors, Led, Buzzer in single code and circuit.

Smart Home Automation Tinker cad link:

[https://www.tinkercad.com/things/8YxEEIo0U7U-epic-wolt/editel?sharecode=JF0FR96XAQGh\\_7L50L00wq3eILL\\_zenWZHu\\_g-Jz8cO8](https://www.tinkercad.com/things/8YxEEIo0U7U-epic-wolt/editel?sharecode=JF0FR96XAQGh_7L50L00wq3eILL_zenWZHu_g-Jz8cO8)



## Program Code:

```
#include <Servo.h>

const int PIR_Sensor = 8;

Servo doorservo;

int ldr = A0;

int led = 12;

int tmp = A1;

int motor = 11;

int d;

int const trigPin = 7;

int const echoPin = 6;

int const buzzPin = 5;

void setup()
{
    pinMode(ldr,INPUT);
    pinMode(led,OUTPUT);
    pinMode(tmp,INPUT);
    pinMode(motor,OUTPUT);
    doorservo.attach(10);
    pinMode(trigPin, OUTPUT);
    pinMode(echoPin, INPUT);
    pinMode(buzzPin, OUTPUT);
    pinMode(2, OUTPUT);
    pinMode(3, OUTPUT);
    pinMode(4, OUTPUT);
    pinMode(9,INPUT);
}
```

```

void loop()
{
  int ldrs = analogRead(ldr);
  if(ldrs <= 300)
  {
    digitalWrite(led,HIGH);
    digitalWrite(2,HIGH);
    digitalWrite(3,HIGH);
    digitalWrite(4,HIGH);
  }
  else
  {
    digitalWrite(led,LOW);
    digitalWrite(2,LOW);
    digitalWrite(3,LOW);
    digitalWrite(4,LOW);
  }
  int reading = analogRead(tmp);
  float voltage = reading * 5.0;
  voltage /= 1024.0;
  float temperatureC = (voltage - 0.5) * 100 ;
  if(temperatureC >= 30)
  {
    digitalWrite(motor,HIGH);
  }
  else
  {

```

```

    digitalWrite(motor,LOW);
}
d = digitalRead(9);
if(d== 1){
    doorservo.write(100);
}
else{
    doorservo.write(0);
}
int duration, distance;

    digitalWrite(trigPin, HIGH);
    delay(1);
    digitalWrite(trigPin, LOW);
    duration = pulseIn(echoPin, HIGH);
    distance = (duration/2) / 29.1;
if (distance <= 50 && distance >= 0) {
    digitalWrite(buzzPin, HIGH);
} else {
    digitalWrite(buzzPin, LOW);
}
delay(60);
if (digitalRead(PIR_Sensor)==HIGH)
    {digitalWrite(buzzPin, HIGH);}
else {digitalWrite(buzzPin, LOW);}
}

```