Tata Meghana

```
#include <Servo.h>
#include <DHT.h>
#define DHT_PIN 10
#define DHTTYPE DHT22
DHT dht(DHT_PIN, DHTTYPE);
int led = 2;
int buz = 3;
int pir1 = 4;
int pir2 = 5;
int pos=0;

Servo myservo;
void setup() {
  pinMode(led, OUTPUT);
  pinMode(buz, OUTPUT);
  pinMode(pir2, INPUT);
  pinMode(pir1, INPUT);
  myservo.attach(6);
  dht.begin();
  Serial.begin(115200);
}

void loop() {
  dht.read(DHT_PIN);
  int x = digitalRead(pir1);

  float t = dht.readTemperature();
  float h = dht.readHumidity();
  Serial.print(F("Temperature: "));
  Serial.println(t);
```

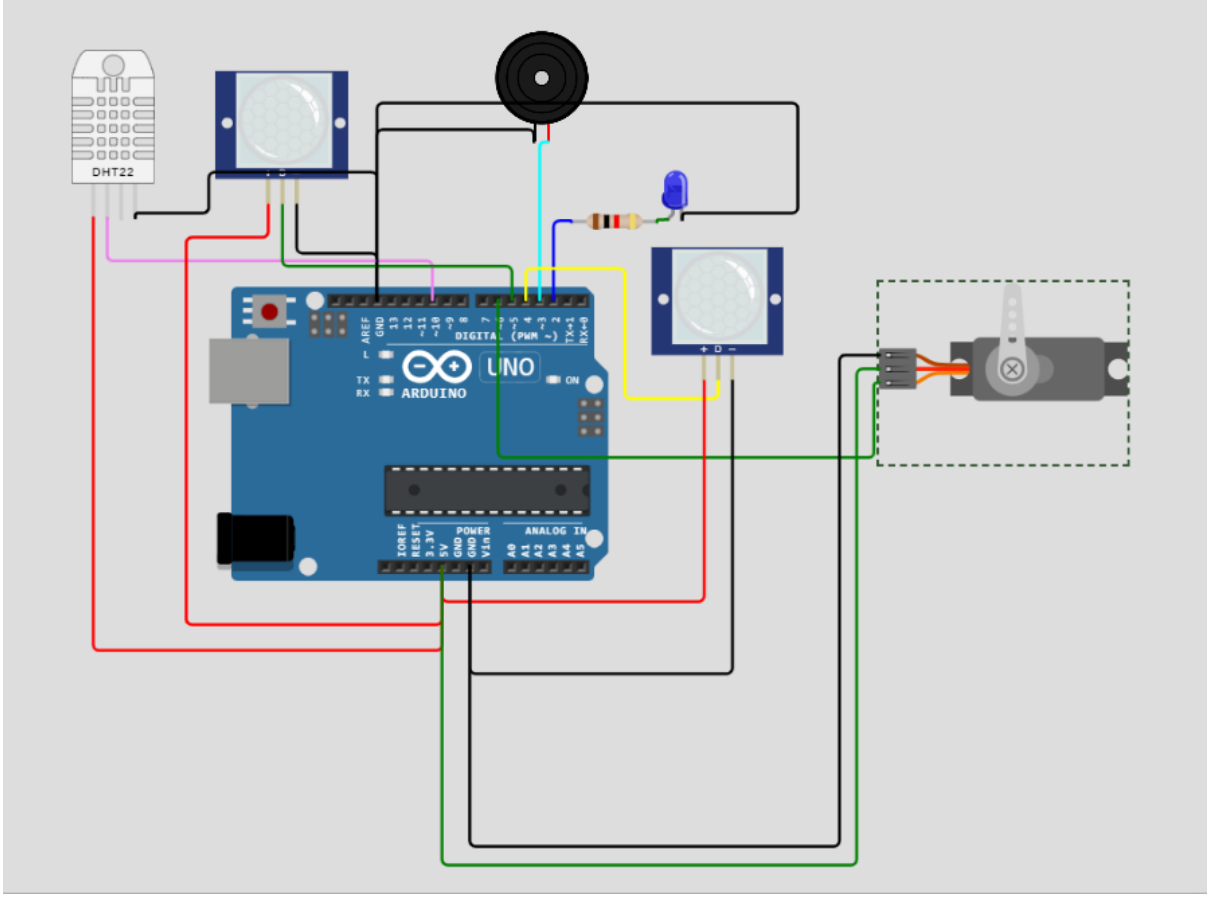
```
delay(2000);
if(isnan(t) || isnan(h)){
  Serial.println(F("failed to read DHT sensor!"));
  return;
}
if (x == 1) //someone are at home
{
  digitalWrite(led, HIGH);
  tone(buz, 31);
  delay(1000);
  Serial.println("people detected in room");
}
else{
  digitalWrite(led, LOW);
  noTone(buz);
}

if(t<23){
  Serial.println("Switch off AC");
}
if(t>28){
  Serial.println("Switch on AC");
}

int y = digitalRead(pir2);
if(y == 1){
  Serial.println("Door open");
  for(pos=90; pos>=0; pos-=1){
    myservo.write(pos);
    delay(10);
  }
```

```
    delay(5000);
    for(pos=0; pos<=90; pos+=1){
      myservo.write(pos);
      delay(10);
    }
    Serial.println("Door closed");
  }

}
```



Link: [Tata Meghana Asgn1 - Wokwi Arduino and ESP32 Simulator]