

CHELSEA SHALIN S

Assignment 1

<https://wokwi.com/projects/363177047951239169>

Code:

```
#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");  
}  
  
}
```

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```
1 #include <Servo.h>
2 #include <DHT.h>
3 #define DHT_PIN 10
4 #define DHTTYPE DHT22
5 DHT dht(DHT_PIN, DHTTYPE);
6 int led = 2;
7 int buz = 3;
8 int pir1 = 4;
9 int pir2 = 5;
10 int pos=0;
11
12 Servo myservo;
13 void setup() {
14   pinMode(led, OUTPUT);
15   pinMode(buz, OUTPUT);
16   pinMode(pir2, INPUT);
17   pinMode(pir1, INPUT);
18   myservo.attach(6);
19   dht.begin();
20   Serial.begin(115200);
21 }
22
23 void loop() {
24   dht.read(DHT_PIN);
25   int x = digitalRead(pir1);
26
27   float t = dht.readTemperature();
28   float h = dht.readHumidity();
29   Serial.print(F("Temperature: "));
30   Serial.println(t);
31   delay(2000);
32   if(!isnan(t) || !isnan(h)){
33     Serial.println(F("Failed to read DHT sensor!"));
34   }
35 }
```

Simulation

00:53.420 101%

Temperature: 44.30
Switch on AC
Temperature: 44.30
Switch on AC
Temperature: 44.30
Switch on AC
Temperature: 44.30

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