

TEAM ID-PNT2022TMID02748

ASSIGNMENT 1

Question: Home Automation

Code:

```
//  
C++  
code  
  
//  
int t=2;  
int e=3;  
  
void setup()  
{  
  Serial.begin(9600);  
  pinMode(t,OUTPUT);  
  pinMode(e,INPUT);  
  pinMode(12,OUTPUT);  
}  
  
void loop()  
{  
  //Ultrasonic sensor  
  digitalWrite(t,LOW);  
  digitalWrite(t,HIGH);  
  delayMicroseconds(10);  
  digitalWrite(t,LOW);  
  float dur=pulseIn(e,HIGH);  
  float dis=(dur*0.0343)/2;  
  Serial.print("Distance is: ");  
  Serial.println(dis);  
  
  //LED ON  
  if(dis>=100)  
  {  
    digitalWrite(8,HIGH);  
    digitalWrite(7,HIGH);  
  }  
  
  //Buzzer For ultrasonic Sensor  
  if(dis>=100)  
  {  
    for(int i=0; i<=30000; i=i+10)
```

```

    {
    tone(12,i);
    delay(1000);
    noTone(12);
    delay(1000);
    }
}

    //Temperate Sensor
    double a= analogRead(A0);
    double t=((a/1024)*5)-0.5)*100;
    Serial.print("Temp Value: ");
    Serial.println(t);
    delay(1000);

    //LED ON
    if(t>=100)
    {
        digitalWrite(8,HIGH);
        digitalWrite(7,HIGH);
    }

    //Buzzer for Temperature Sensor
    if(t>=100)
    {
        for(int i=0; i<=30000; i=i+10)
        {
            tone(12,i);
            delay(1000);
            noTone(12);
            delay(1000);
        }
    }

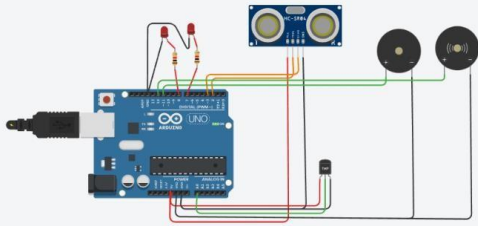
    //LED OFF
    if(t<100)
    {
        digitalWrite(8,LOW);
        digitalWrite(7,LOW);
    }
}

```

Simulator time: 00:00:06

Code Stop Simul

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```
1 // C++ code
2 //
3 int t=2;
4 int e=3;
5
6 void setup()
7 {
8   Serial.begin(9600);
9   pinMode(t,OUTPUT);
10  pinMode(e,INPUT);
11  pinMode(12,OUTPUT);
12 }
13
14 void loop()
15 {
16   //Ultrasonic sensor
17   digitalWrite(t,LOW);
18   digitalWrite(t,HIGH);
19   delayMicroseconds(10);
20   digitalWrite(t,LOW);
21   float dur=pulseIn(e,HIGH);
22   float dis=(dur*0.0343)/2;
23   Serial.print("Distance is: ");
24   Serial.println(dis);
25
26   //LED ON
27   if(dis>=100)
28   {
29     digitalWrite(8,HIGH);
30     digitalWrite(7,HIGH);
31   }
32
33   //Buzzer For ultrasonic Sensor
34   if(dis>=100)
35   {
36     for(int i=0; i<=30000; i=i+10)
37     {
38       tone(12,i);
39       delay(1000);
40     }
41   }
42 }
```

Serial Monitor