

TEAM ID-PNT2022TMID24861

## 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);
}
}

```

