

**SRI SHANMUGHA COLLEGE OF ENGINEERING AND TECHNOLOGY**

**Topic:Assignment-1 on home automation with sensors and light**

**IBM NALAIYATHIRAN**

```
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);  
  
delay(1000);
```

```
    //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);
```

```
}
```

```
}
```

OUTPUT:-

