

IBM – NALLAIYA THIRAN PROJECT

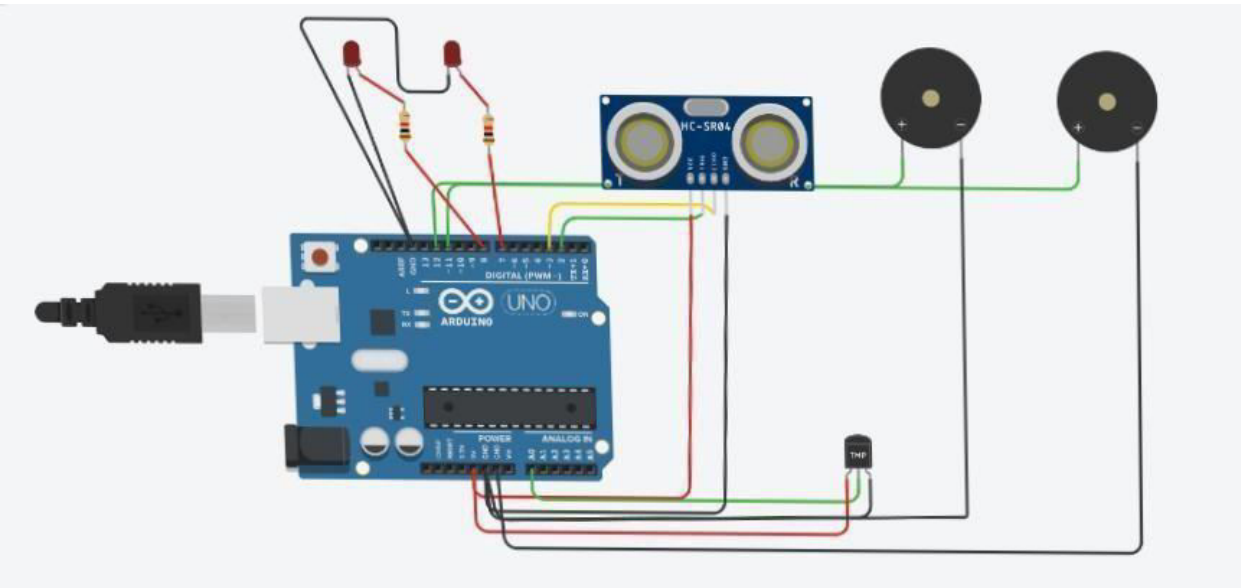
ASSIGNMENT 1

SMART HOME

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CIRCUIT DIAGRAM:



SOURCE 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);
```

}

}

THINKERCAD LINK <https://www.tinkercad.com/things/7W5lIEWa6bg-neat-fulffy-leelo/editel>

OUTPUT:

