

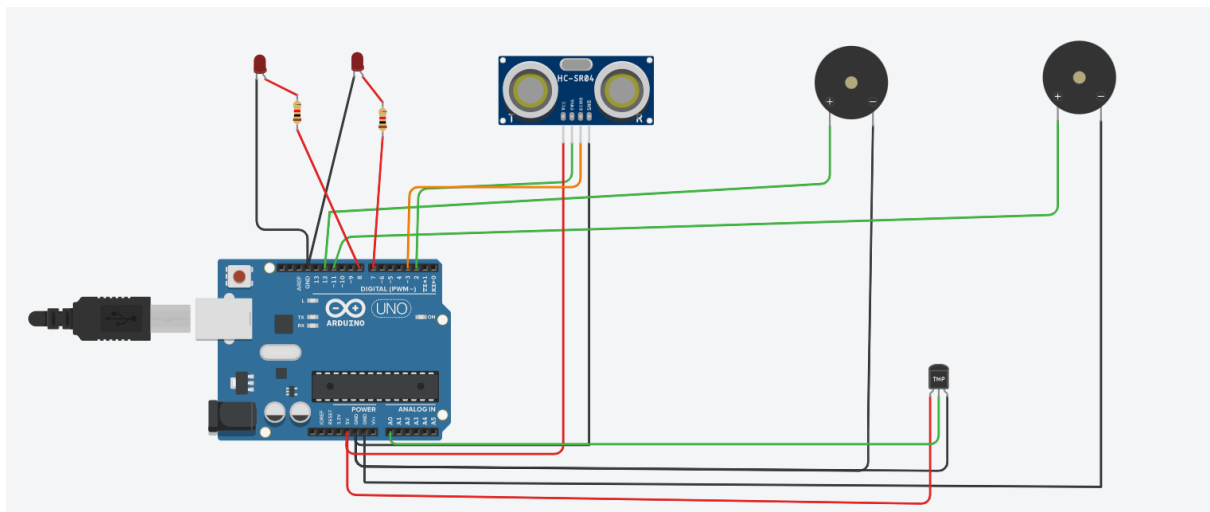
IBM-Nallaiya Thiran Project

Assignment 1-Smart Home

-Subithra S P

-960219106135

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>=60)//(in terms of
centimeter) {
digitalWrite(8,HIGH);
digitalWrite(7,HIGH);
}

//Buzzer For ultrasonic
Sensor if(dis>=60)
{

```

```
for(int i=0; i<=5; i=i+1)
{
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>=20)//(in terms of
celsius) {
digitalWrite(8,HIGH);
digitalWrite(7,HIGH);

}
```

```
//Buzzer for Temperature
Sensor if(t>=20)
{
```

```
for(int i=0; i<=5; i=i+1)
{
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}
//LED OFF
if(t<20)
{
digitalWrite(8,LOW);
digitalWrite(7,LOW);
}
}
```

TINKERCAD LINK:

<https://www.tinkercad.com/things/az10JSIAW3K-smart-sensor/editel>

OUTPUT:

```
Distance is: 112.88  
Temp Value: 24.71  
Distance is: 112.88  
Temp Value: 24.71  
Distance is: 112.86  
Temp Value: 24.71  
Distance is: 112.88  
Temp Value: 24.71  
Distance is: 112.88  
Temp Value: 24.71  
Distance is: 112.88  
Temp Value: 24.71  
Distance is: 112.88  
Temp Value: 24.71  
Distance is: 112.86  
Temp Value: 24.71  
Distance is: 112.88  
Temp Value: 24.71  
Distance is: 112.88  
Temp Value: 24.71  
Distance is: 112.88  
Temp Value: 24.71
```

