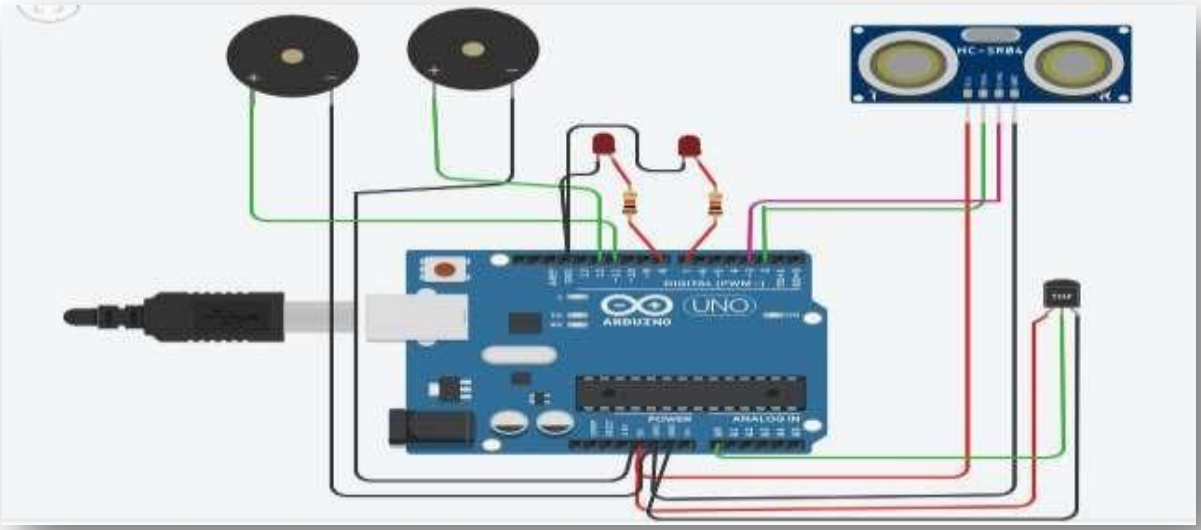
Assignment 1-Smart Home

- NETHAJI-PNTTMID41127

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/eeim3ZXwWP6-smart-home/editel

OUTPUT:

Serial Monitor

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


Send Clear