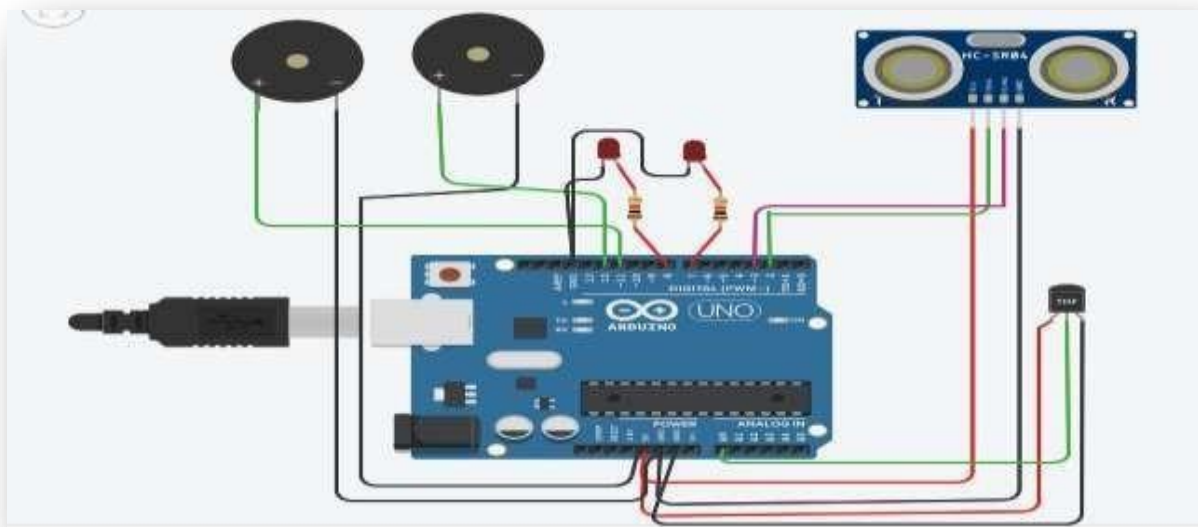


IBM-Nallaiya Thiran Project Assignment 1-Smart Home

-Sharmila.V
-960219106120

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:

