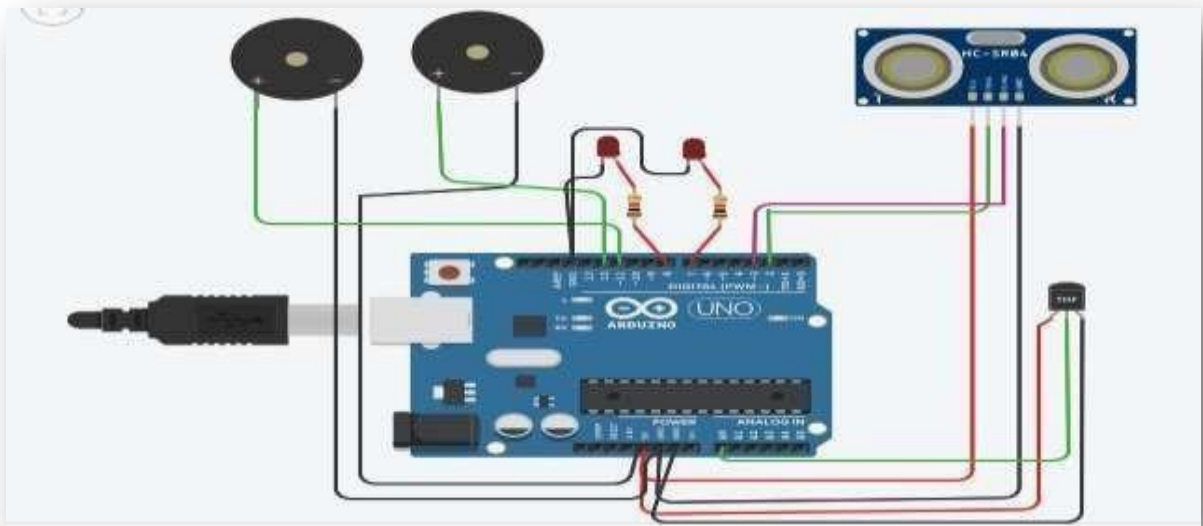


## IBM-Nallaiya Thiran Project Assignment 1-Smart Home

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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>=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:**

