ASSIGNMENT 1

SMART HOME IN TINKERCAD

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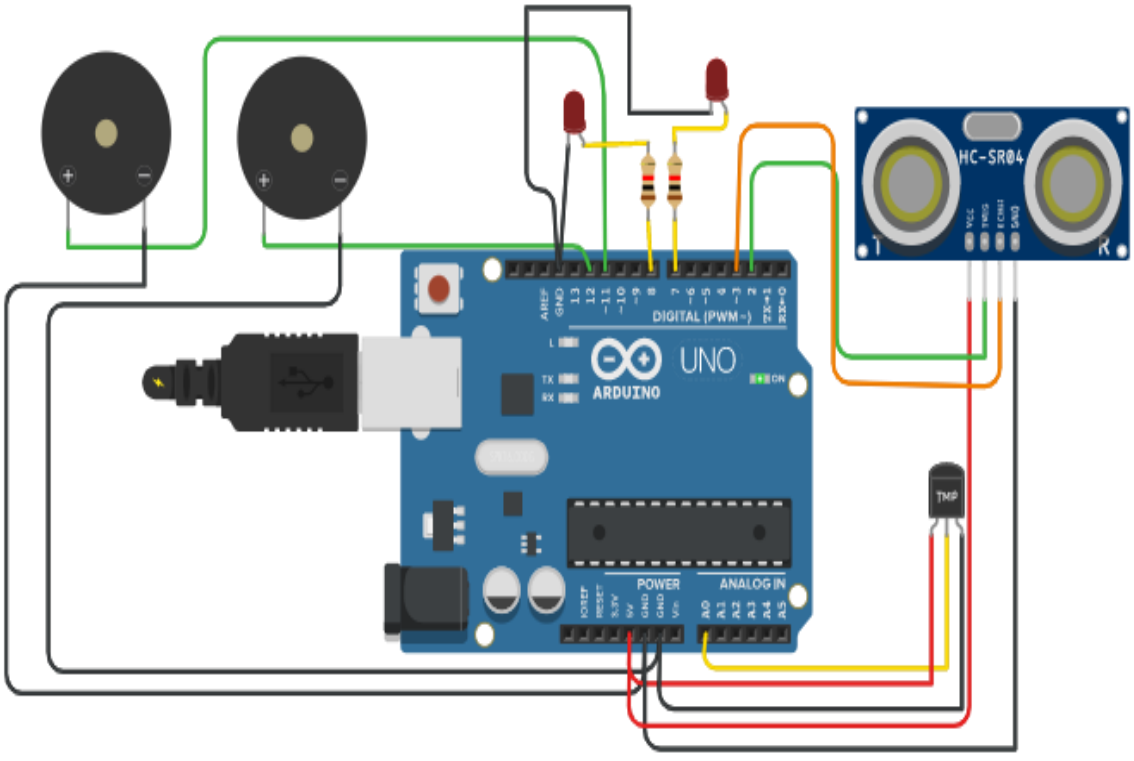
CIRCUIT DIAGRAM:



SOURCE CODE:

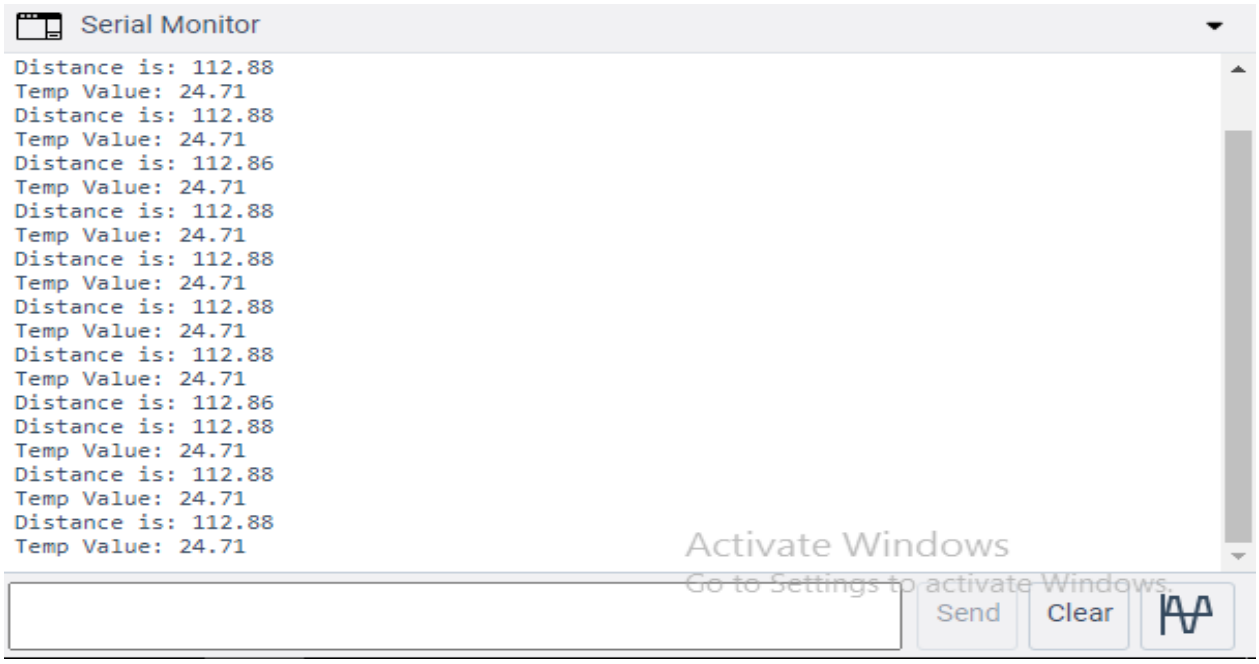
```
// C++ code
//
int trig=2;
int echo=3;

void setup()
{
  Serial.begin(9600);
  pinMode(trig,OUTPUT);
  pinMode(echo,INPUT);
  pinMode(12,OUTPUT);
}

void loop()
{
  //ultrasonic sensor
  digitalWrite(trig,LOW);
  digitalWrite(trig,HIGH);
  delayMicroseconds(10);
  digitalWrite(trig,LOW);
  float dur=pulseIn(echo,HIGH);
  float dis=(dur*0.0343)/2;
  Serial.print("Distance is: ");
```

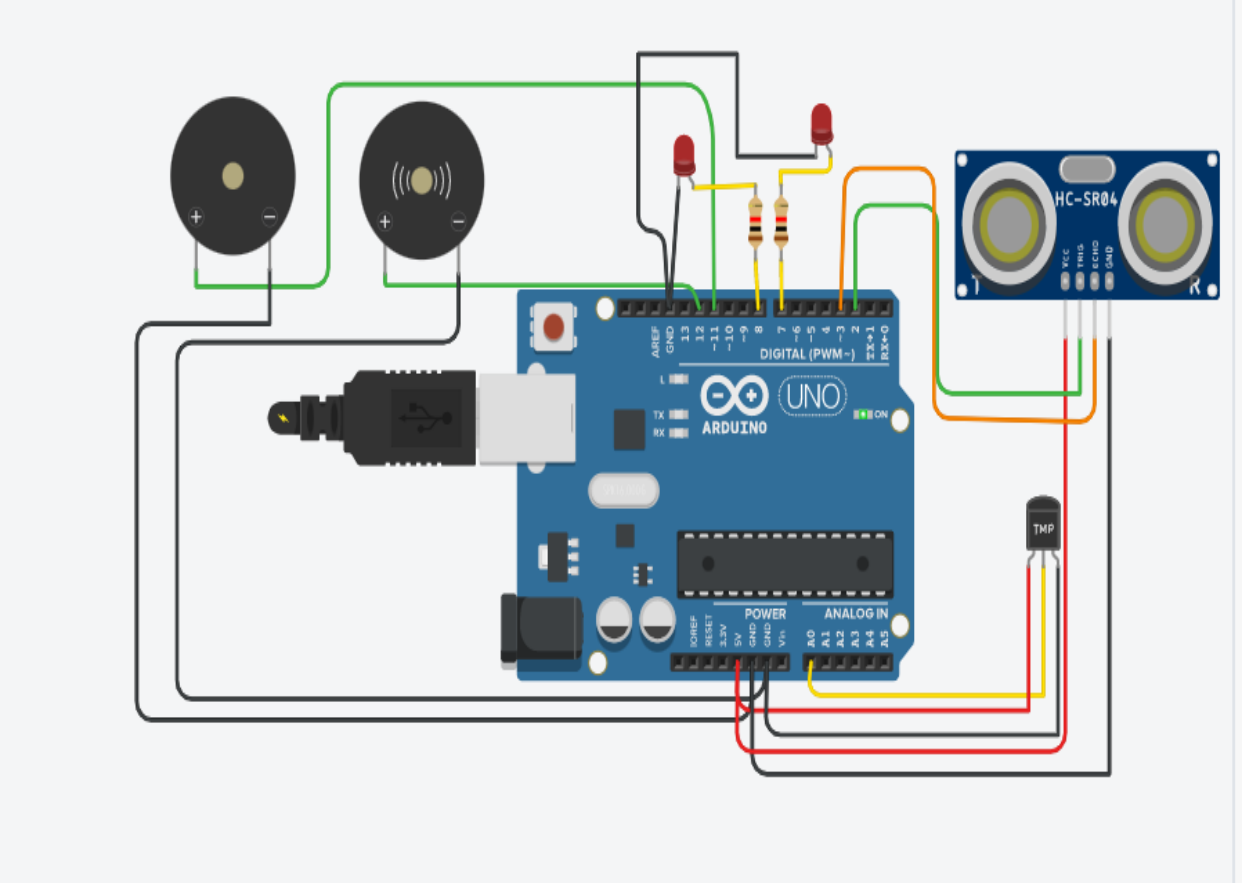
```
Serial.println(dis);

  //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 trig=(((a/1024)*5)-0.5)*100;
Serial.print("Temp Value: ");
Serial.println(trig);
delay(1000);


//LED ON
if(trig>=100)
{
  digitalWrite(8,HIGH);
  digitalWrite(7,HIGH);
}

//Buzzer for Temperature Sensor
if(trig>=100)
{
for(int i=0; i<=30000; i=i+10)
{
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}
```

```
  //LED OFF
 if(trig<100)
 {
   digitalWrite(8,LOW);
   digitalWrite(7,LOW);
 }
}
```

OUTPUT:




HC-SR04
Vcc
Trig
Echo
Gnd
TMP
ARDUINO
UNO
DIGITAL (PWM~)
POWER
ANALOG IN