ASSIGNMENT-1

SMART HOME

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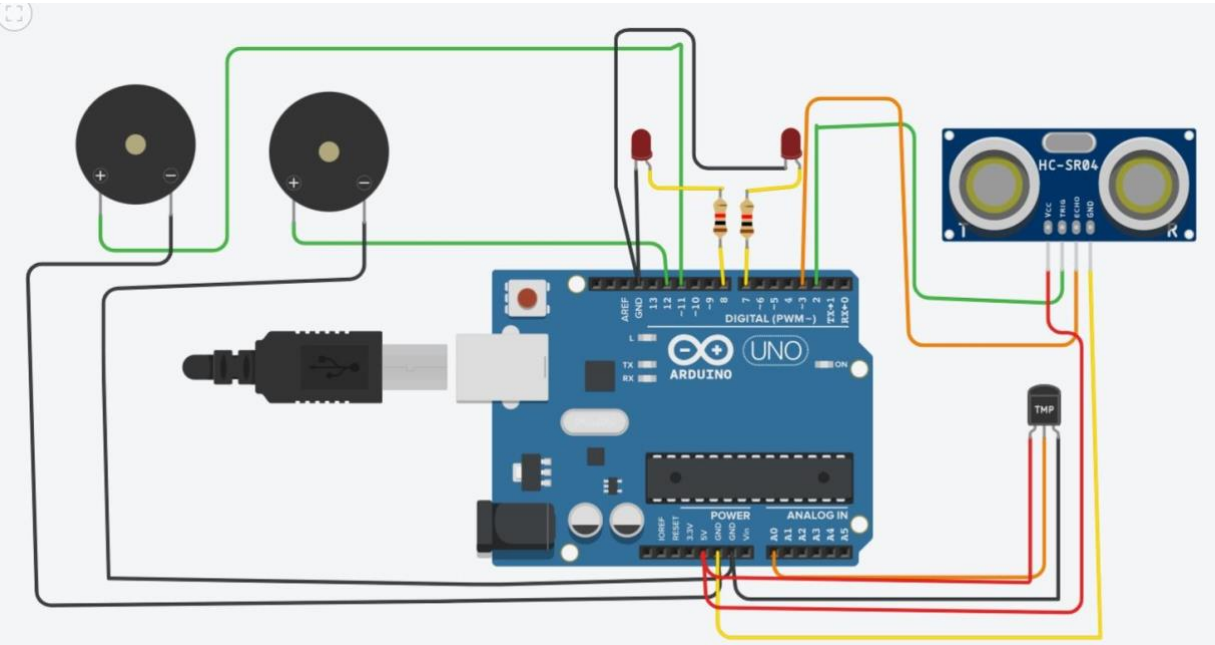
CIRCUIT DIAGRAM:



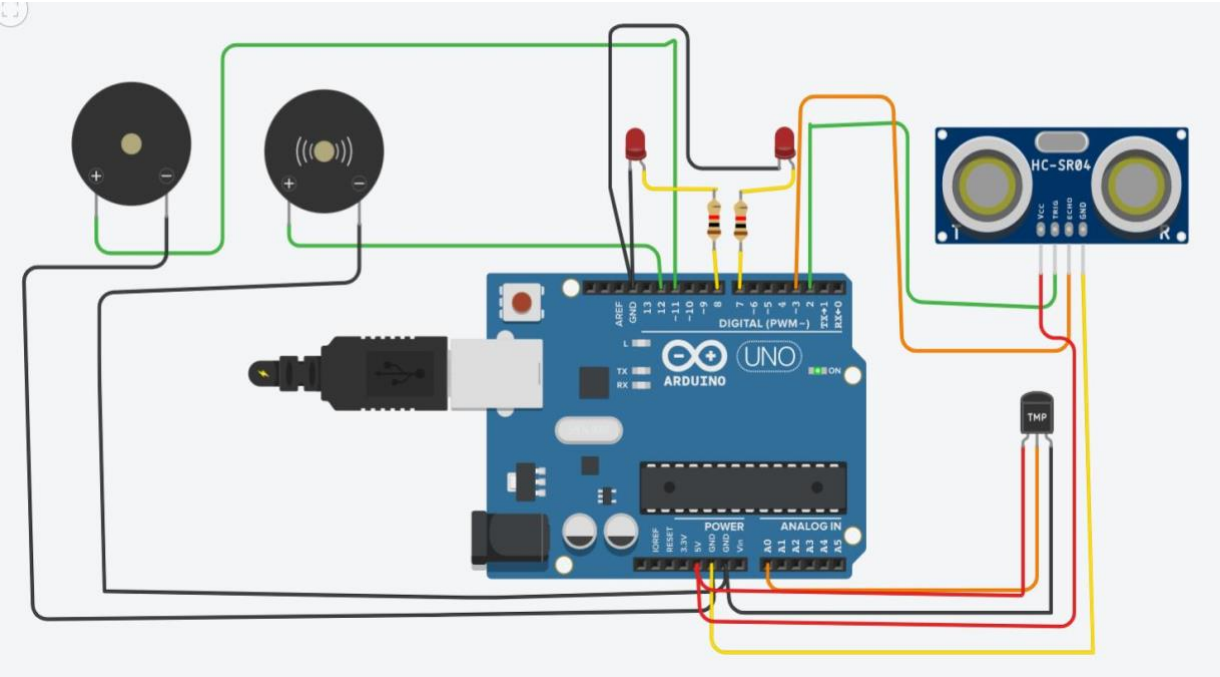
SOURCE CODE:

```
// 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
UNO
ARDUINO
DIGITAL (PWM~)
POWER
ANALOG IN