ASSIGNMENT 1

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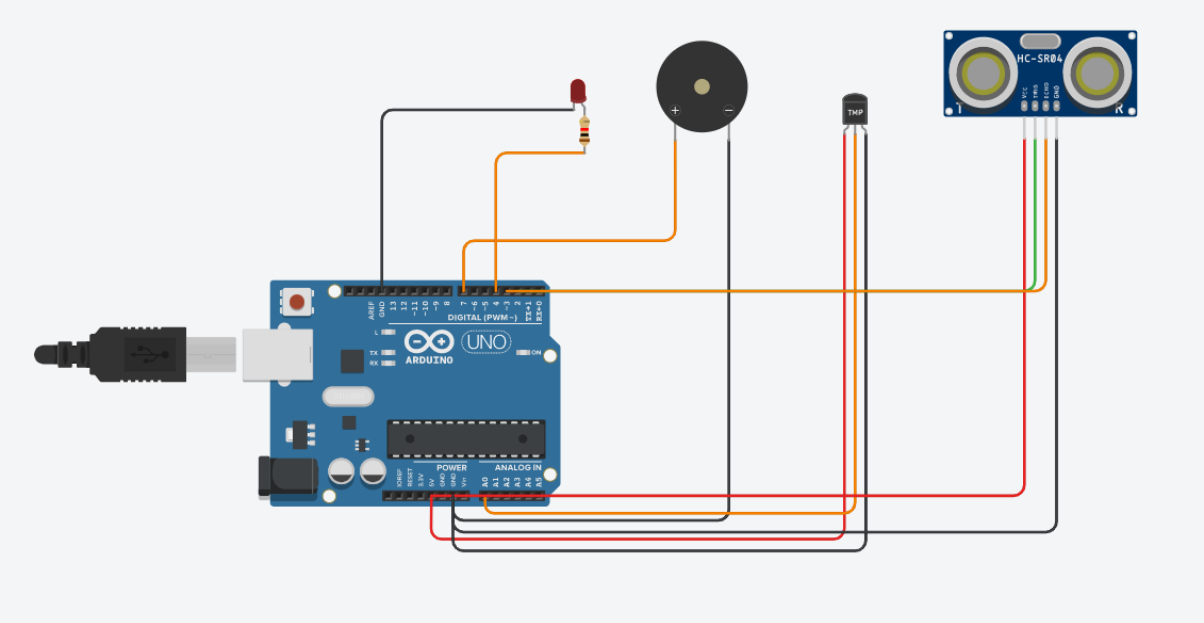
Create Smart home application using two sensors (temperature and ultrasonic), buzzer and an LED with the help of an Arduino.

APPARATUS

- LED
- Buzzer
- Temperature Sensor
- Ultrasonic Sensor
- Arduino UNO
- Connecting Wires

CIRCUIT CONNECTION



CODE:

```
int t=2;
int k=3;
void setup()
{
  Serial.begin(9600);
  pinMode(t,OUTPUT);
  pinMode(k,INPUT);
  pinMode(7,OUTPUT);
}

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

  //Buzzer AND LED
  if(dis>=100)
  {
  digitalWrite(4,HIGH);
  for(int i=0; i<=30000; i=i+10)
  {
  tone(7,i);
  delay(1000);
  noTone(7);
  delay(1000);
  }
  }

  //Temperate Sensor
  double a= analogRead(A0);
  double q=(((a/1024)*5)-0.5)*100;
  Serial.print("Temperature: ");
  Serial.println(q);
  delay(1000);
}
```