ASSIGNMENT 1
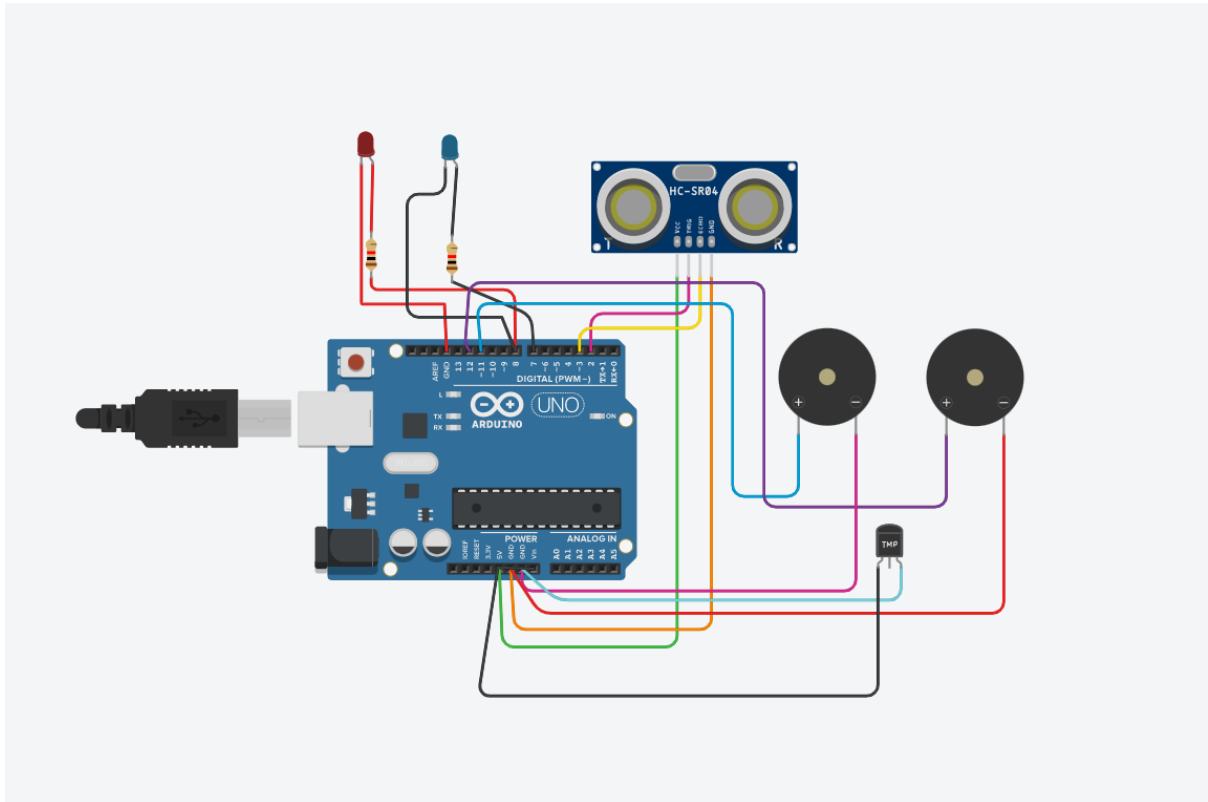
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CODE FOR SIMULATION:

int t=2;

int e=3;

void setup()

{

  Serial.begin(9600);

  pinMode(t,OUTPUT);

  pinMode(e,INPUT);

  pinMode(12,OUTPUT);

}

void loop()

{

                //FOR ULTRASONIC SENSOR//

  digitalWrite(t,LOW);

```arduino
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);

                //FOR LED ON//

if(dis>=100)

{

  digitalWrite(87,HIGH);

  digitalWrite(7,HIGH);

}

                //FOR BUZZER - ULTRASONIC SENSOR//

if(dis>=100)

{

  for(int i=0;i<=30000;i=i+10)

  {

    tone(12,i);

    delay(1000);

    noTone(12);

    delay(1000);

  }

}

                //FOR TEMPERATE SENSOR//

  double a = analogRead(A0);

  double t=(((a/1024)*5)-0.5)*100;

  Serial.print("Temp Value: ");

  Serial.println(t);

  delay(1000);

                //FOR LED ON//
```

```
  if(t>=100)

  {

   digitalWrite(8,HIGH);

   digitalWrite(7,HIGH);

  }

              //FOR BUZZER - TEMPERATE SENSOR//

  if(if t>=100)

  {

   for(int i=0;i<=30000;i=i+10)

   {

    tone(12,i);

    delay(1000);

    noTone(112);

    delay(1000);

   }

  }

      //FOR LED OFF//

  if(t<100)

  {

   digitalWrite(8,LOW);

   digitalWrite(7,LOW);

  }

}
```