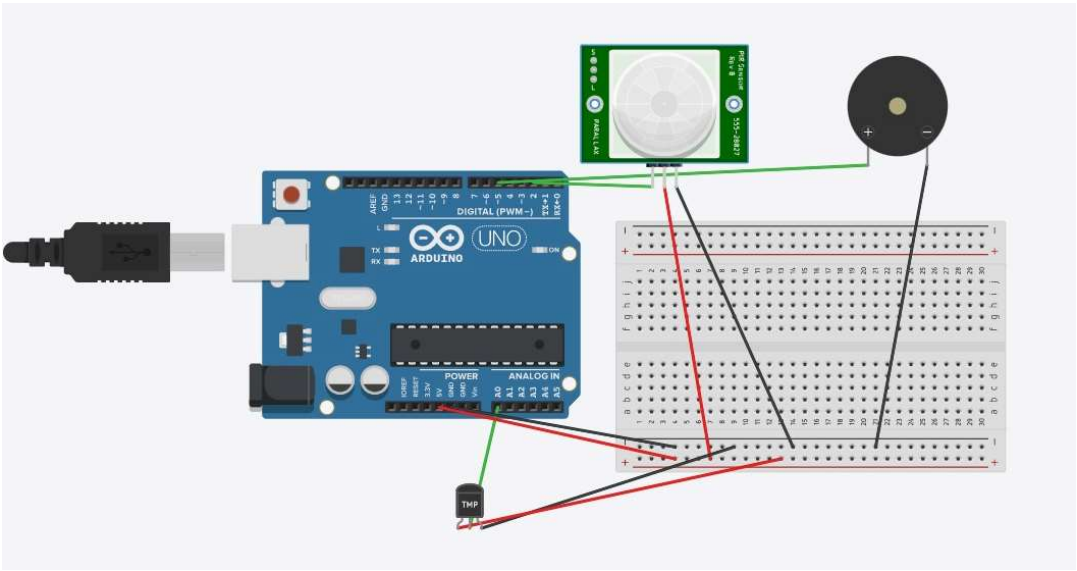
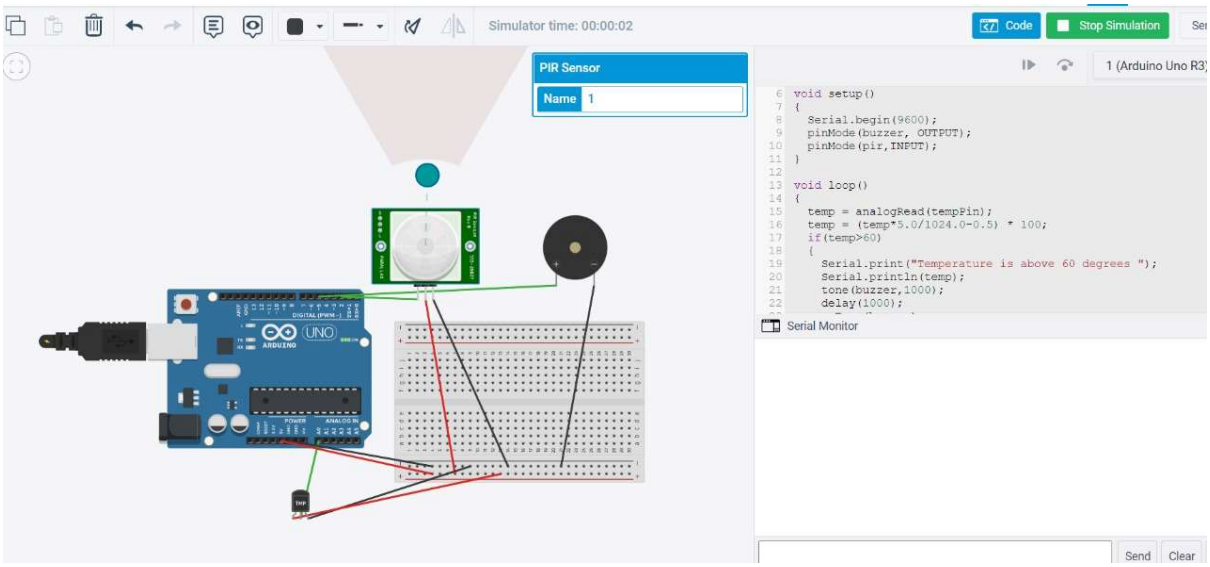
ASSIGNMENT – 1

Integrate PIR, piezo and temperature sensor in a single circuit, such that when a motion is detected a certain sound is produced and when temperature raise above 60-degree Celsius different sound is produced.

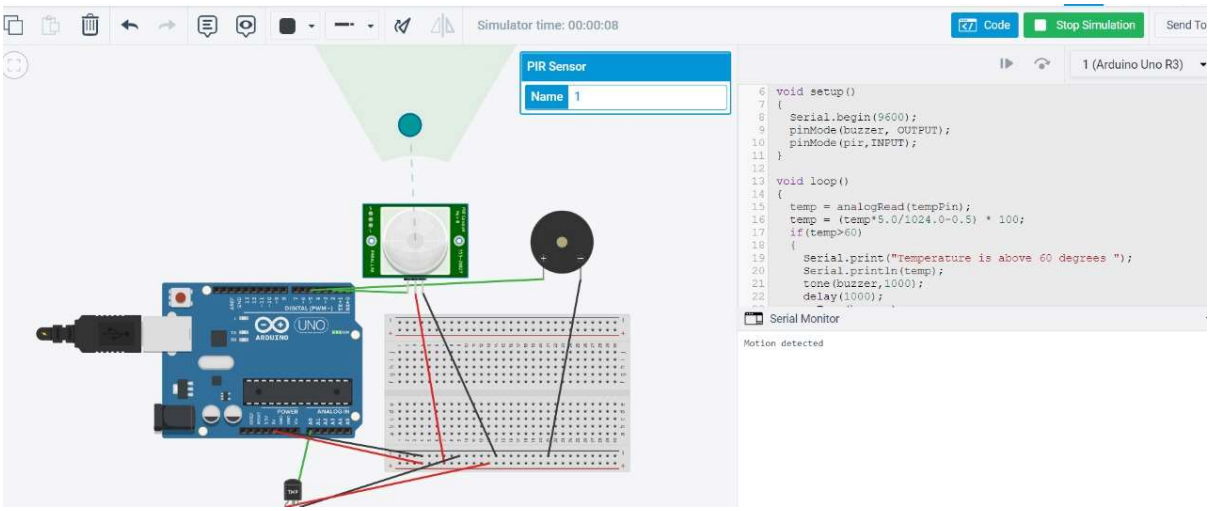
Circuit:



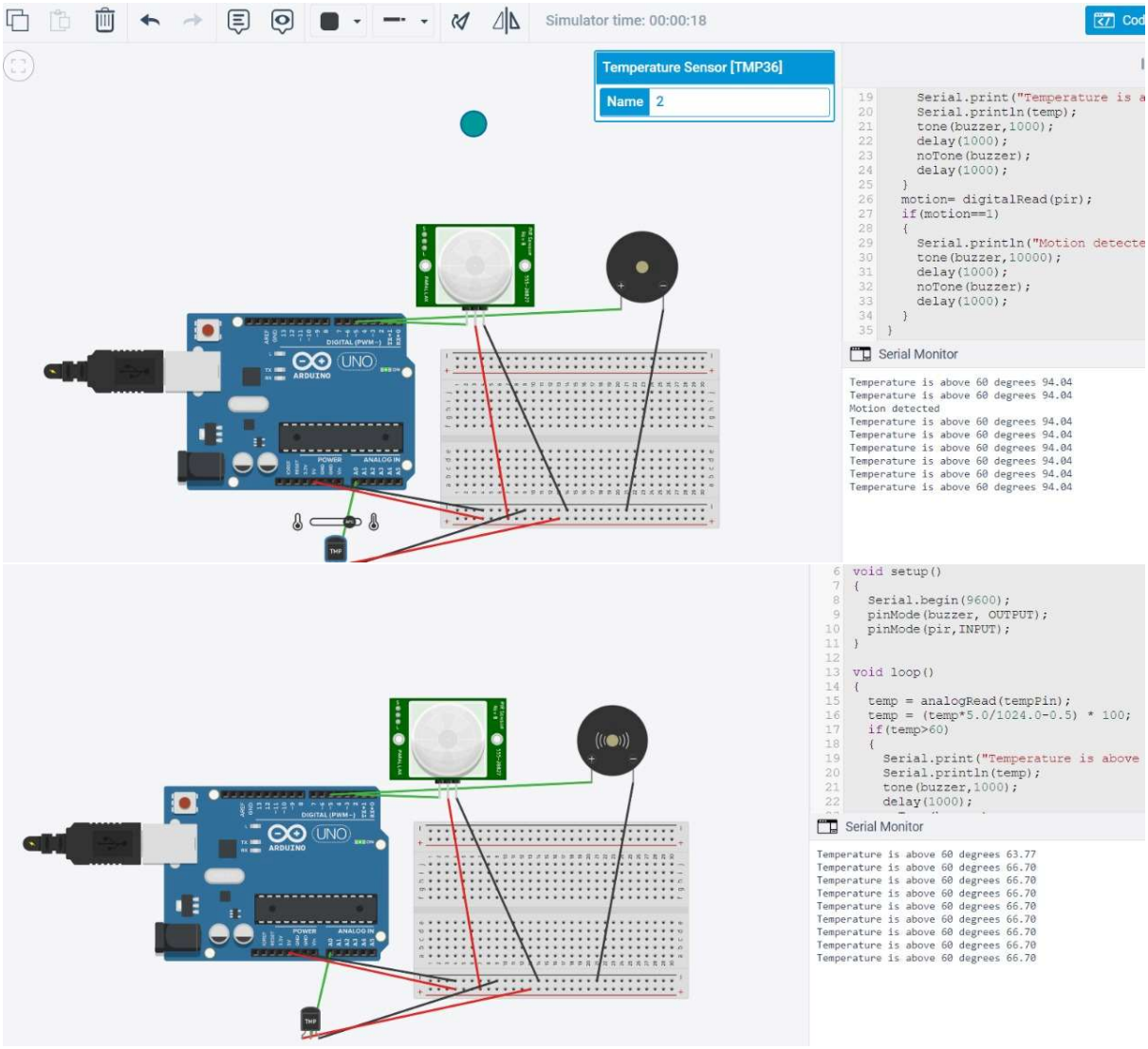
Circuit with text code:



Sensing motion:



Sensing temperature:



Code:

```
float temp;
int motion;
int pir=2;
int tempPin = A0;
int buzzer = 5;
void setup()
{
  Serial.begin(9600);
  pinMode(buzzer, OUTPUT);
  pinMode(pir,INPUT);
}

void loop()
{
  temp = analogRead(tempPin);
  temp = (temp*5.0/1024.0-0.5) * 100;
  if(temp>60)
  {
    Serial.print("Temperature is above 60 degrees");
    Serial.println(temp);
    tone(buzzer,1000);
    delay(1000);
    noTone(buzzer);
    delay(1000);
  }
  motion= digitalRead(pir);
  if(motion==1)
  {
    Serial.println("Motion detected");
    tone(buzzer,10000);
    delay(1000);
    noTone(buzzer);
    delay(1000);
  }
}
```