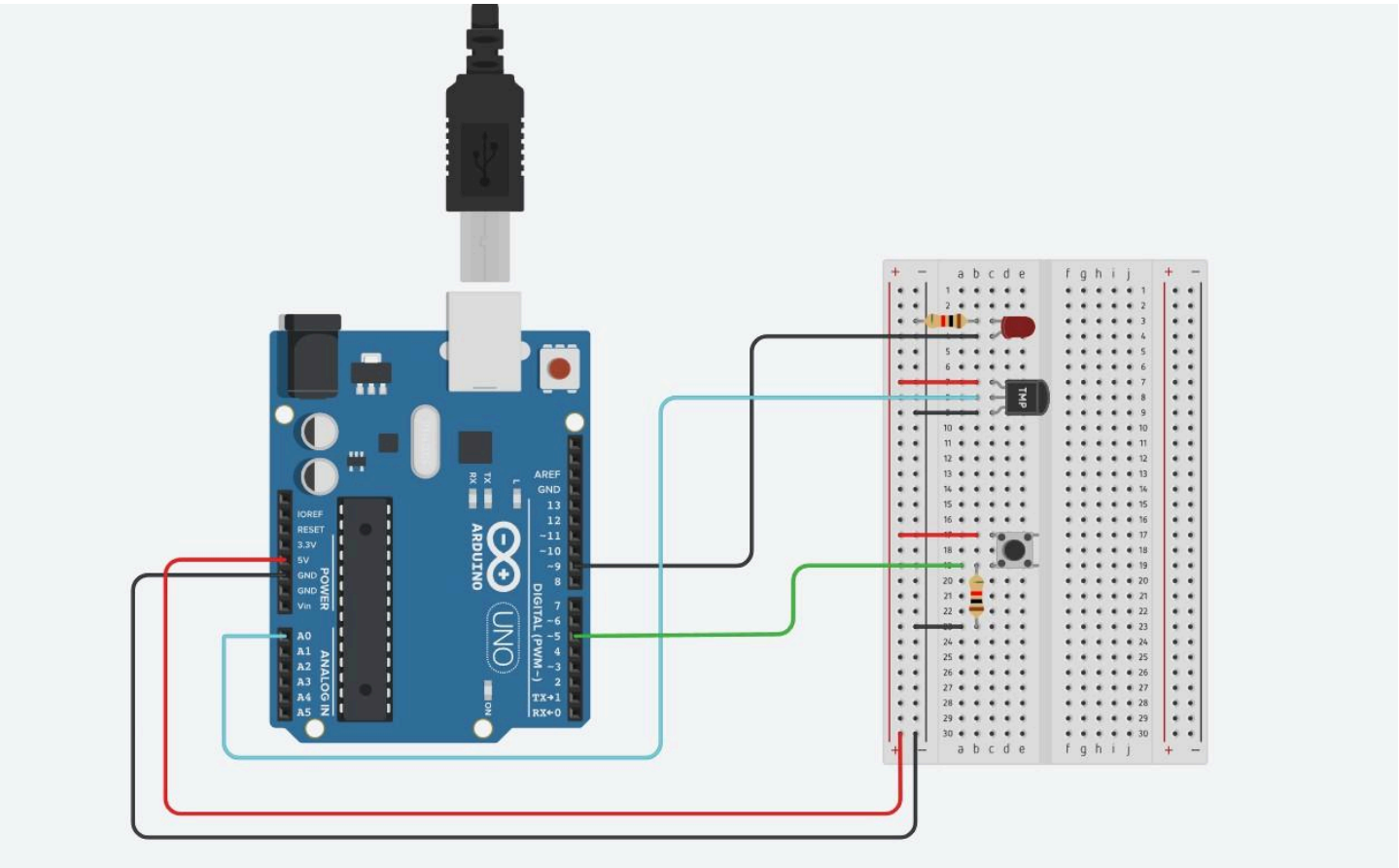


```
// Pin numbers
int ledPin = 9;
int butPin = 5;
int tempPin = A0;

// Button state variables
int switchState = 0;
int prevSwitchState = 0;

// LED enable/disable state
int ledState = 0;

void setup()
{
  // Set LED as output
  pinMode(ledPin, OUTPUT);

  // Set button as input
  pinMode(butPin, INPUT);
}

void loop()
{
  // Read temperature sensor value
  int senseVal = analogRead(tempPin);

  // Convert sensor value to voltage
  float voltage = (5.0 * senseVal) / 1023.0;
```

```
  // Convert voltage to temperature
  float tempVal = (voltage - 0.5) * 100.0;

  // Read button state
  switchState = digitalRead(butPin);

  // Toggle LED system when button is pressed once
  if (switchState == HIGH && switchState != prevSwitchState) {
    ledState = !ledState;
    delay(200); // Simple debounce
  }

  // If LED system is enabled and temperature is above 60°C, flash LED
  if (ledState == 1 && tempVal > 60) {
    digitalWrite(ledPin, HIGH);
    delay(1000);
    digitalWrite(ledPin, LOW);
    delay(1000);
  } else {
    // Otherwise keep LED off
    digitalWrite(ledPin, LOW);
  }

  // Save current button state for next loop
  prevSwitchState = switchState;
}
```