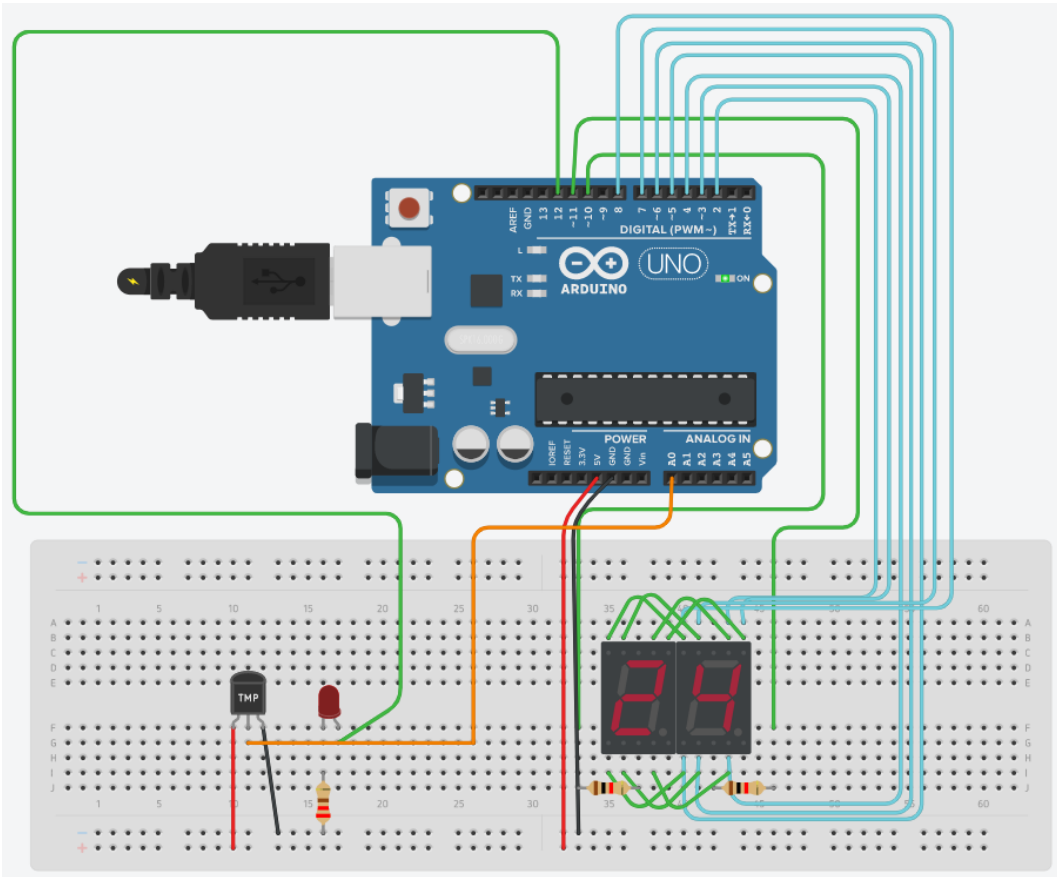


TMP36 to 2SSD



```
int num_array[10][7] = { { 1,1,1,1,1,1,0 }, // 0
                          { 0,1,1,0,0,0,0 }, // 1
                          { 1,1,0,1,1,0,1 }, // 2
                          { 1,1,1,1,0,0,1 }, // 3
                          { 0,1,1,0,0,1,1 }, // 4
                          { 1,0,1,1,0,1,1 }, // 5
                          { 1,0,1,1,1,1,1 }, // 6
                          { 1,1,1,0,0,0,0 }, // 7
                          { 1,1,1,1,1,1,1 }, // 8
                          { 1,1,1,0,0,1,1 } }; // 9

void Num_Write(int);
int ten_dig=10 ;
int uni_dig=11;
```

```
int tenths;

int units;

const int LM35_Pin = A0;

const int LED_Pin=12;

const float temp_limit=40.00;

float temperature=0.00;

int temper=0;

int sensorPin = 0;

void setup()
{
  pinMode(2, OUTPUT);
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
  pinMode(5, OUTPUT);
  pinMode(6, OUTPUT);
  pinMode(7, OUTPUT);
  pinMode(8, OUTPUT);
  pinMode(9, OUTPUT);
  pinMode(ten_dig, OUTPUT);
  pinMode(uni_dig, OUTPUT);
  digitalWrite(ten_dig, HIGH);
  digitalWrite(uni_dig, HIGH);
  Serial.begin(9600); }

void loop()
{
  int reading = analogRead(sensorPin);
  float voltage = reading * 5.0;
  voltage /= 1024.0;
  Serial.print(voltage); Serial.println(" volts");
```

```

float temperatureC = (voltage - 0.5) * 100 ;
Serial.print(temperatureC);
Serial.println(" degrees C");
float temperatureF = (temperatureC * 9.0 / 5.0) + 32.0;
Serial.print(temperatureF); Serial.println(" degrees F");
if (temperatureC>temp_limit)
{
digitalWrite(LED_Pin, HIGH);
}
else
{
digitalWrite(LED_Pin, LOW);
}

if ((temperatureC>0)&&(temperatureC<100))
{
digitalWrite(9, LOW);
tenths=temperatureC /10;
units= int(temperatureC) %10;
digitalWrite(ten_dig, LOW);
Num_Write(tenths);
delay(30);
digitalWrite(ten_dig, HIGH);
digitalWrite(uni_dig, LOW);
Num_Write(units);
delay(30);
digitalWrite(uni_dig, HIGH);
}
else
{
/* tenths=0;

```

```

units= 0;
digitalWrite(ten_dig, LOW);
Num_Write(tenths);
delay(30);
digitalWrite(ten_dig, HIGH);
digitalWrite(uni_dig, LOW);
Num_Write(units);
delay(30);
digitalWrite(uni_dig, HIGH);
*/
digitalWrite(ten_dig, LOW);
digitalWrite(uni_dig, LOW);
digitalWrite(2, LOW);
digitalWrite(3, LOW);
digitalWrite(4, LOW);
digitalWrite(5, LOW);
digitalWrite(6, LOW);
digitalWrite(7, LOW);
digitalWrite(8, LOW);
digitalWrite(9, HIGH);
}
}
void Num_Write(int number)
{
int pin= 2;
for (int j=0; j < 7; j++) {
digitalWrite(pin, num_array[number][j]);
pin++;
}
}
}

```