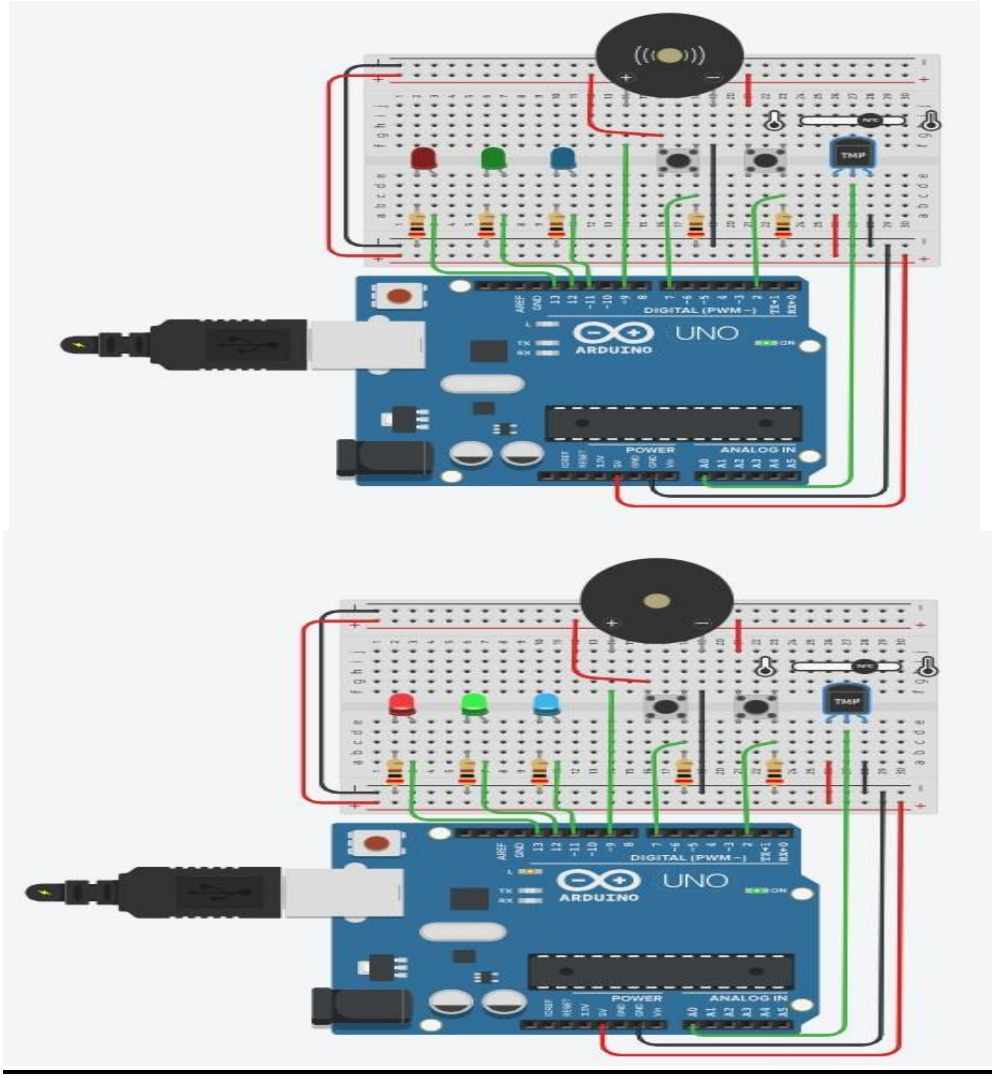
ASSIGNMENT 02

CODE:

```
// C++ code
//
/*
  Temperature alert system
*/

int sensorTemp = 0;

int bottonstateA = 0;

int bottonstateB = 0;

void setup() {
pinMode(7, INPUT);
pinMode(A0, INPUT);
pinMode(13, OUTPUT);
pinMode(12, OUTPUT);
pinMode(11, OUTPUT);
pinMode(2, INPUT);
pinMode(9, OUTPUT);
  Serial.begin(9600);
}

void loop() {   bottonstateA =
digitalRead(7);   if
(bottonstateA == HIGH) {
sensorTemp = (-40 + 0.488155
* (analogRead(A0) - 20));
```

```
   Serial.print(sensorTemp);
Serial.print(" C, ");     if
(sensorTemp < 34) {
digitalWrite(13, HIGH);
   }
   if (sensorTemp >= 34 && sensorTemp <= 38) {
digitalWrite(12, HIGH);       digitalWrite(13,
HIGH);
   }
   if (sensorTemp > 38) {
digitalWrite(11, HIGH);
digitalWrite(12, HIGH);
digitalWrite(13, HIGH);
   }
 } else {
   // check if B is pushed     bottonstateB = digitalRead(2);
if (bottonstateB == HIGH) {       sensorTemp = (-40 +
0.488155 * (analogRead(A0) - 20));
     Serial.print(sensorTemp);       Serial.print(" C, ");
if (sensorTemp > 38) {         tone(9, 165, 1000); //
play tone 40 (E3 = 165 Hz)
     } else {
noTone(8);
     }
   } else {
digitalWrite(11, LOW);
digitalWrite(12, LOW);
digitalWrite(13, LOW);
   }
 }   delay(10); // Delay a little bit to improve simulation
performance }
```

CIRCUIT:



OUTPUT: