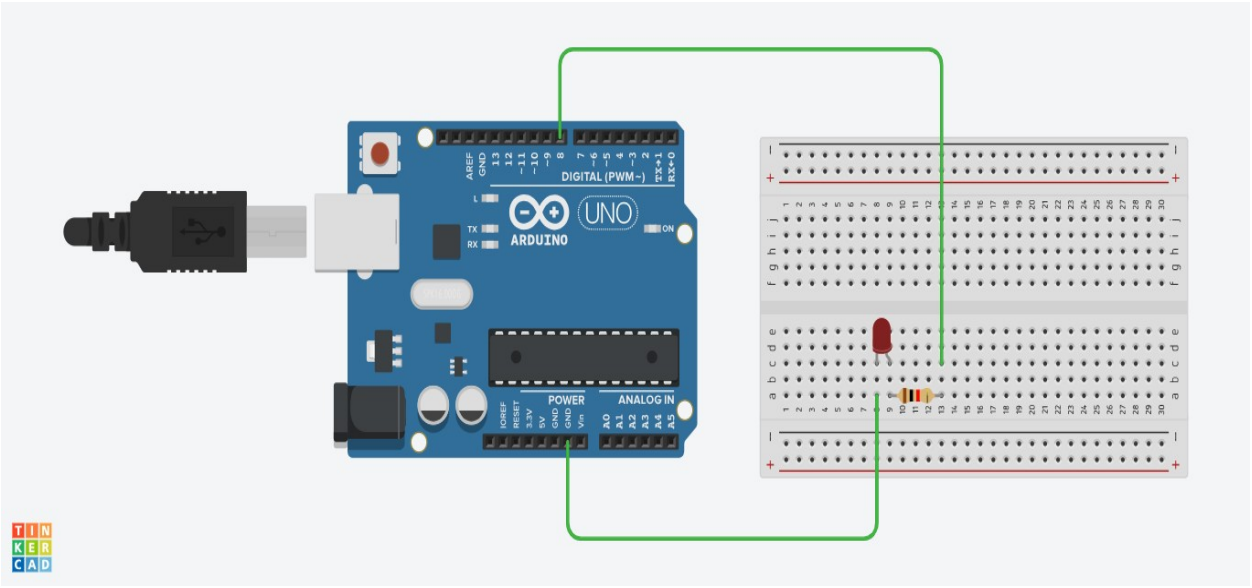
1. LED blink

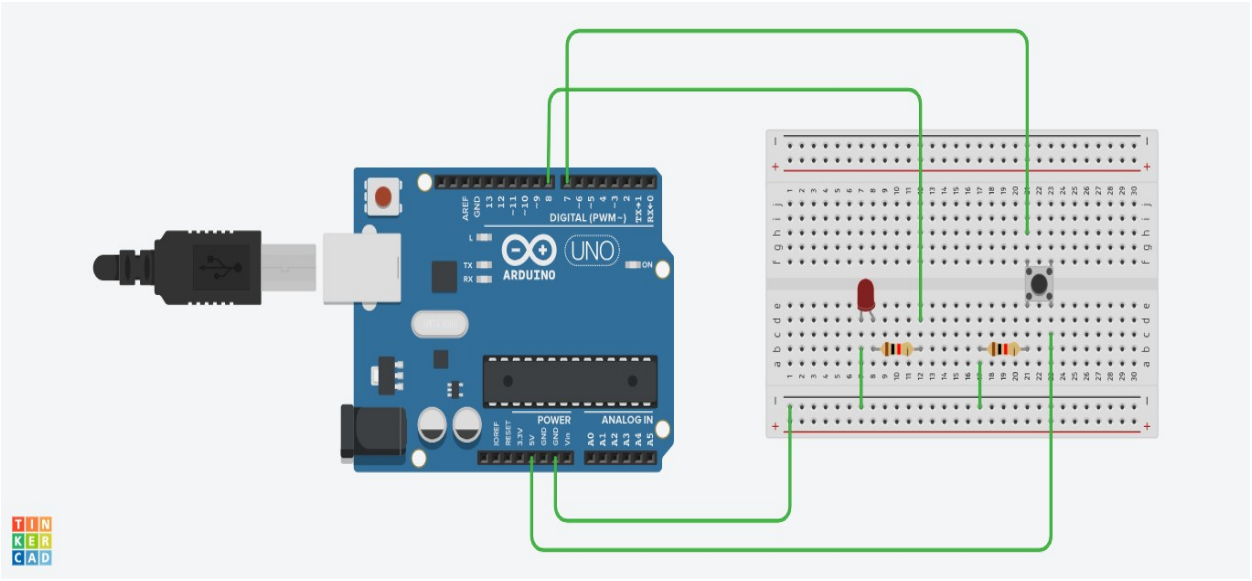



```
#define LED_PIN 8

void setup()
{
  pinMode(LED_PIN, OUTPUT);
}

void loop()
{
  digitalWrite(LED_PIN, HIGH);
  delay(1000);
  digitalWrite(LED_PIN, LOW);
  delay(1000);
}
```

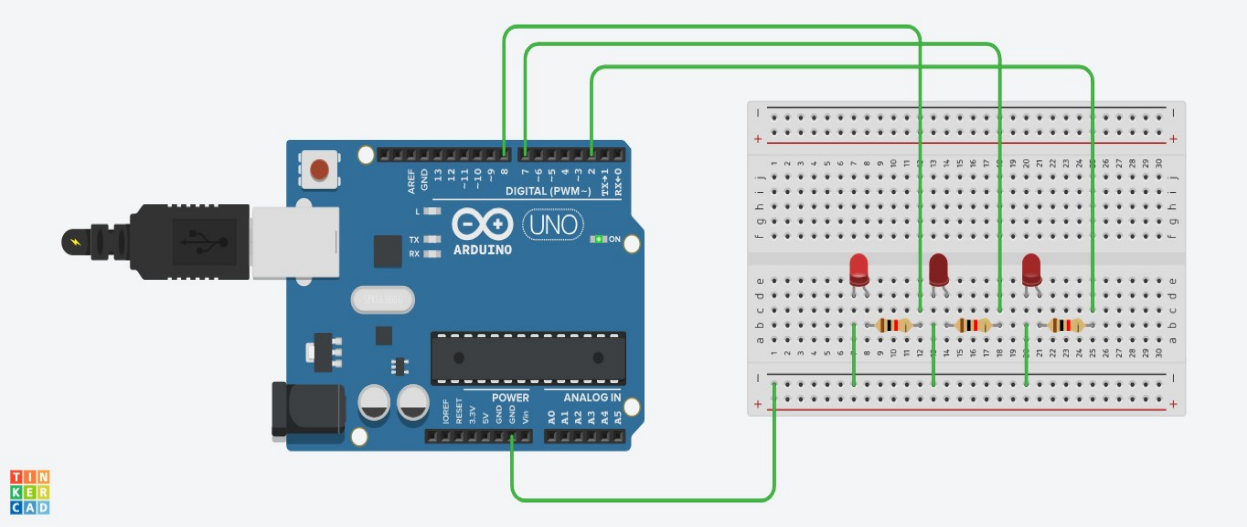
2. Pushbutton + LED




```
#define LED_PIN 8
#define BUTTON_PIN 7
int buttonReading = 0;
void setup()
{
  pinMode(LED_PIN, OUTPUT);
  pinMode(BUTTON_PIN, INPUT);
}

void loop()
{
  buttonReading = digitalRead(BUTTON_PIN);
  if(buttonReading  == HIGH)
    digitalWrite(LED_PIN, HIGH);
  else
    digitalWrite(LED_PIN, LOW);
}
```

3. 3 LED blink

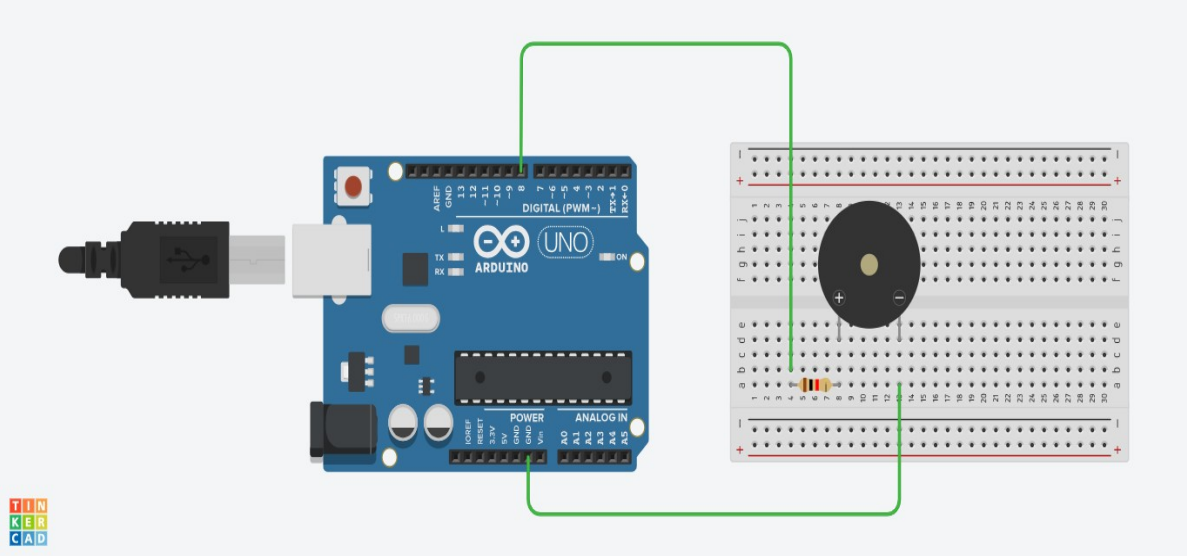



```
#define LED_PIN1 8
#define LED_PIN2 7
#define LED_PIN3 2

void setup()
{
  pinMode(LED_PIN1, OUTPUT);
  pinMode(LED_PIN2, OUTPUT);
  pinMode(LED_PIN3, OUTPUT);
}

void loop()
{
  digitalWrite(LED_PIN1, HIGH);
  delay(1000);
  digitalWrite(LED_PIN1, LOW);
  digitalWrite(LED_PIN2, HIGH);
  delay(1000);
  digitalWrite(LED_PIN2, LOW);
  digitalWrite(LED_PIN3, HIGH);
  delay(1000);
  digitalWrite(LED_PIN3, LOW);
}
```

4. Buzzer

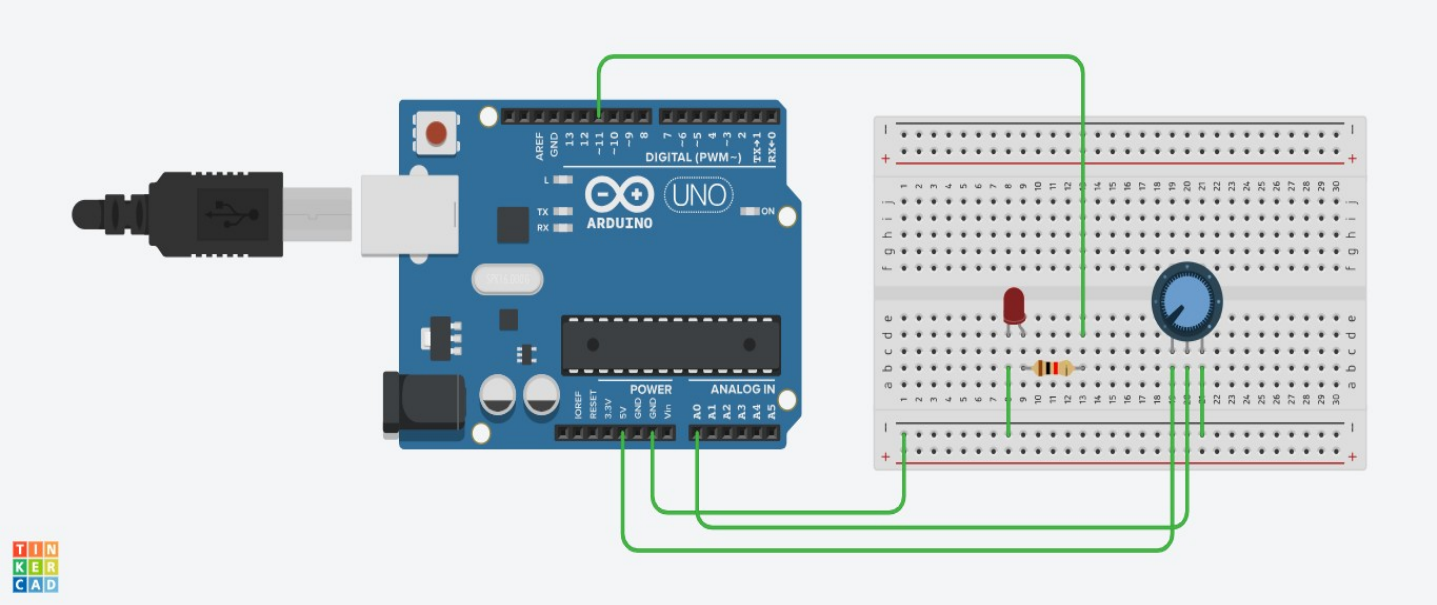



```
#define BUZZER_PIN 8

void setup()
{
  pinMode(BUZZER_PIN, OUTPUT);
}

void loop()
{
  tone(BUZZER_PIN, 1000);
  delay(1000);
  noTone(BUZZER_PIN);
  delay(1000);
}
```

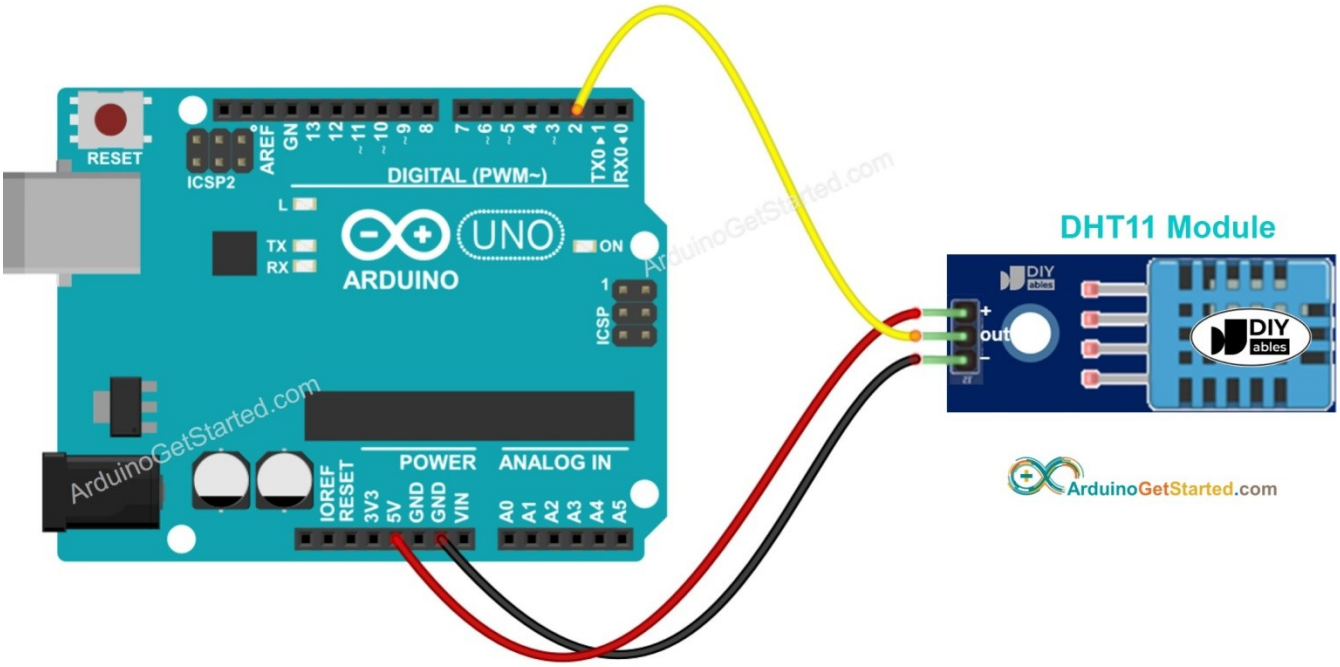
5. Potentiometer + LED




```
#define LED_PIN 11
#define POT_PIN A0

void setup()
{
  pinMode(LED_PIN, OUTPUT);
  Serial.begin(9600);
}
void loop()
{
  int pot_val = analogRead(POT_PIN);
  int brightness = pot_val / 4;
  analogWrite(LED_PIN, brightness);
}
```

6. DHT11



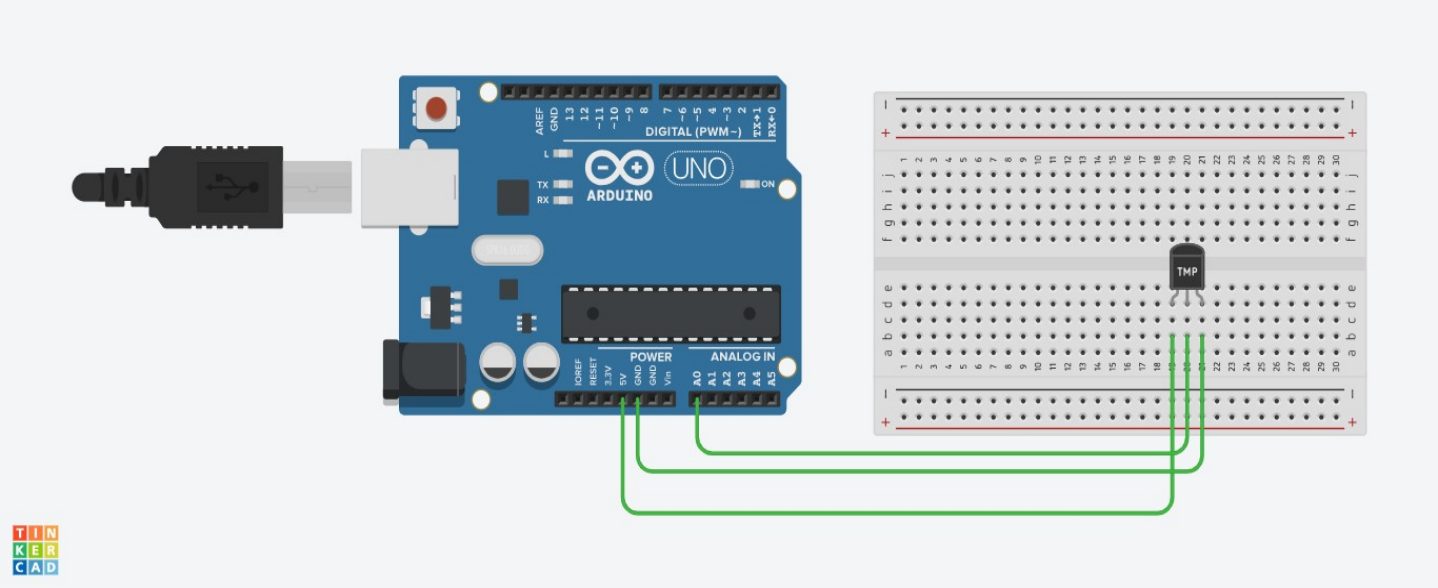

```
#include "DHT.h"
#define DHT_PIN 2
#define DHTTYPE DHT11
DHT dht(DHT_PIN, DHTTYPE);

void setup()
{
  Serial.begin(9600);
  dht.begin();
}

void loop()
{
  float h = dht.readHumidity();
  float t = dht.readTemperature();
  float f = dht.readTemperature(true);
  float hi = dht.computeHeatIndex(f,h);

  Serial.print("Humidity: ");
  Serial.print(h);
  Serial.print("%\t");
  Serial.print("Temperature: ");
  Serial.print(t);
  Serial.print(" C\t");
  Serial.print(f);
  Serial.print(" F\t");
  Serial.print("Heat Index: ");
  Serial.print(hi);
}
```

7. LM35



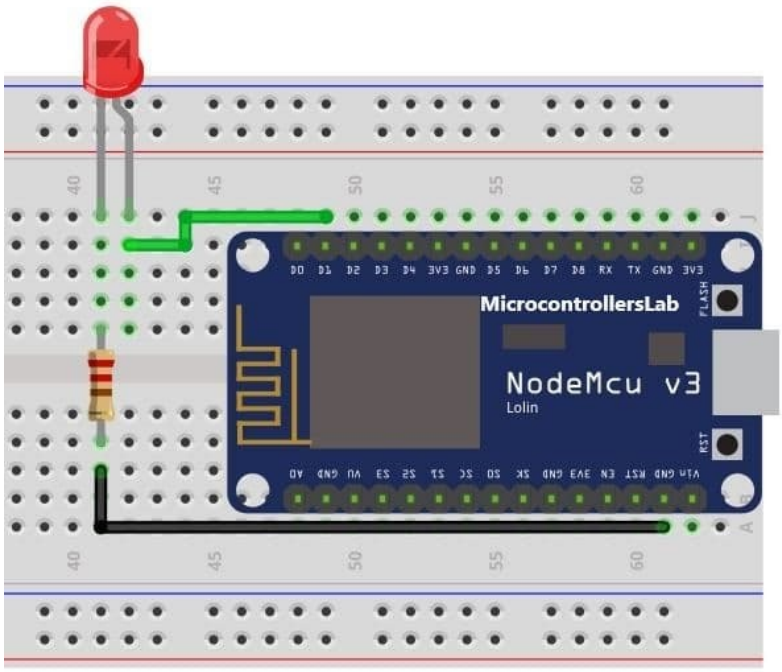

```
#define LM35_PIN A1

void setup()
{
  Serial.begin(9600);
}

void loop()
{
  int temp_adc_val = analogRead(LM35_PIN);
  int temp_val = temp_adc_val * 4.88;
  temp_val = temp_val/10;

  Serial.print("Temperature: ");
  Serial.print(temp_val);
  Serial.print(" *Celsius\n");
  delay(1000);
}
```

8. NodeMCU + LED

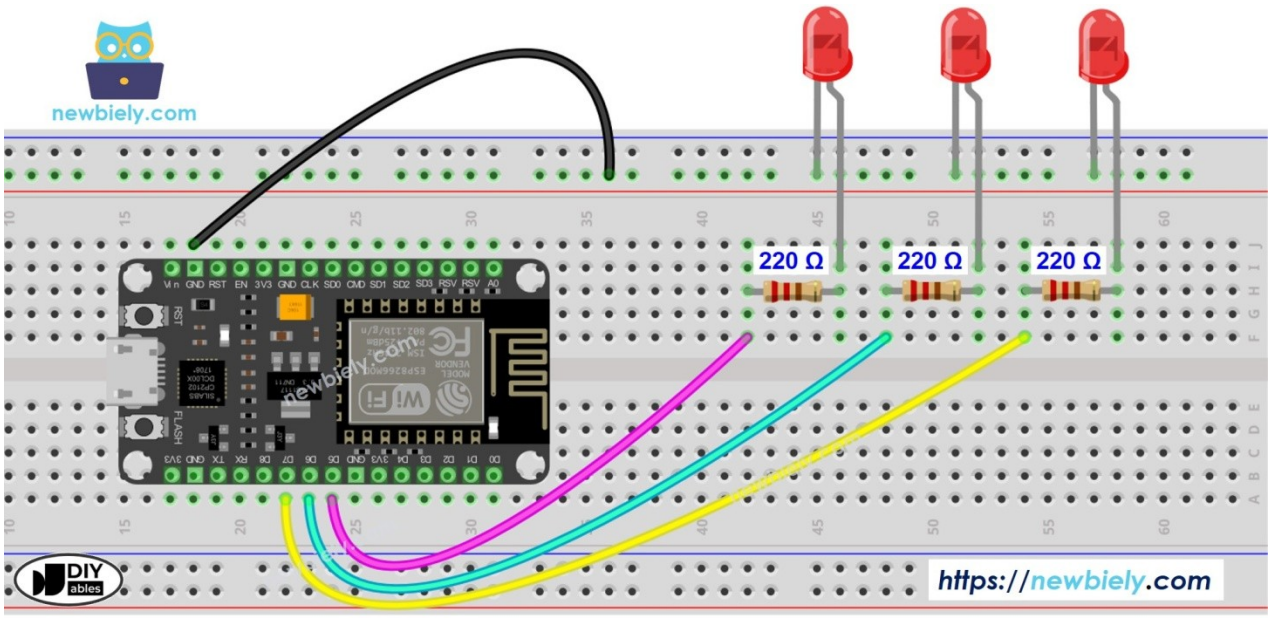



```
#define LED_PIN 8

void setup()
{
  pinMode(LED_PIN, OUTPUT);
}

void loop()
{
  digitalWrite(LED_PIN, HIGH);
  delay(1000);
  digitalWrite(LED_PIN, LOW);
  delay(1000);
}
```

9. NodeMCU + 3 LEDs

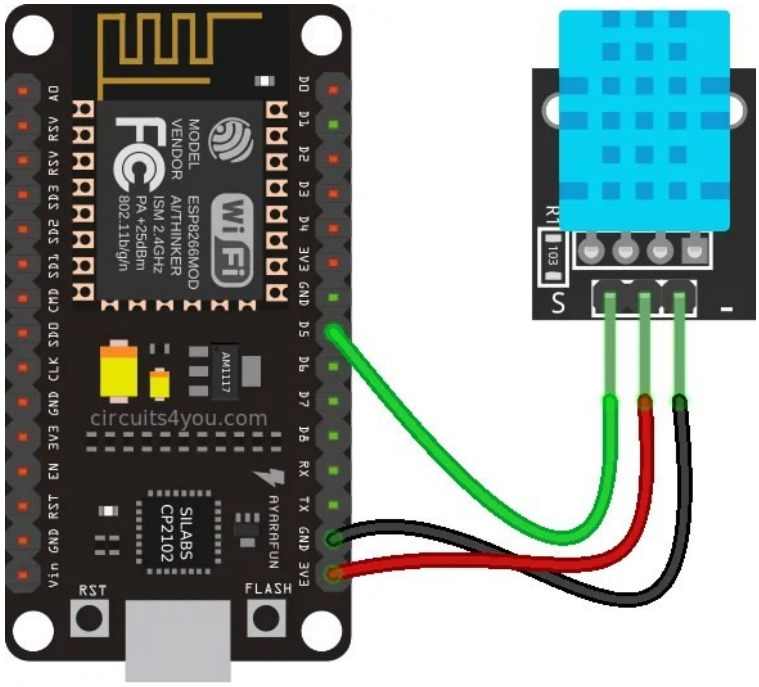



```
#define LED_PIN1 8
#define LED_PIN2 7
#define LED_PIN3 2

void setup()
{
  pinMode(LED_PIN1, OUTPUT);
  pinMode(LED_PIN2, OUTPUT);
  pinMode(LED_PIN3, OUTPUT);
}

void loop()
{
  digitalWrite(LED_PIN1, HIGH);
  delay(1000);
  digitalWrite(LED_PIN1, LOW);
  digitalWrite(LED_PIN2, HIGH);
  delay(1000);
  digitalWrite(LED_PIN2, LOW);
  digitalWrite(LED_PIN3, HIGH);
  delay(1000);
  digitalWrite(LED_PIN3, LOW);
}
```

10. NodeMCU + DHT11




```
#include "DHT.h"
#define DHT_PIN 2
#define DHTTYPE DHT11
DHT dht(DHT_PIN, DHTTYPE);

void setup()
{
  Serial.begin(9600);
  dht.begin();
}

void loop()
{
  float h = dht.readHumidity();
  float t = dht.readTemperature();
  float f = dht.readTemperature(true);
  float hi = dht.computeHeatIndex(f,h);

  Serial.print("Humidity: ");
  Serial.print(h);
  Serial.print("%\t");
  Serial.print("Temperature: ");
  Serial.print(t);
  Serial.print(" C\t");
  Serial.print(f);
  Serial.print(" F\t");
  Serial.print("Heat Index: ");
  Serial.print(hi);
}
```