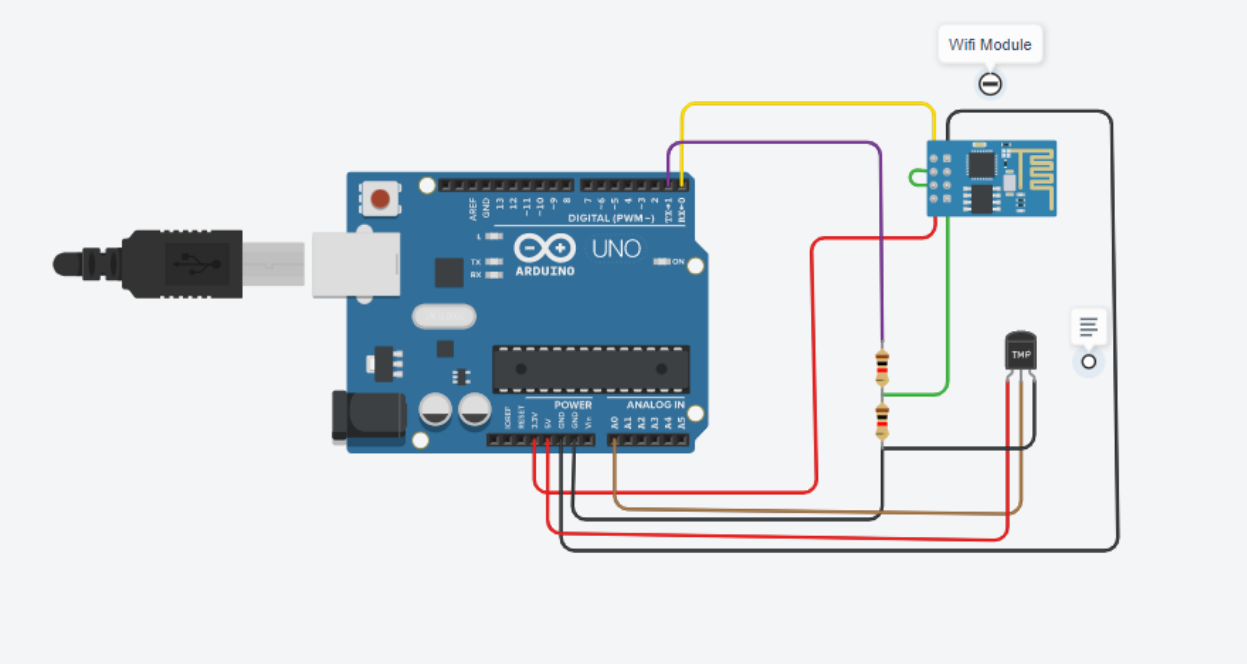
Posting temperature and humidity of the environment to Thing speak cloud service using NodeMCU.

COMPONENTS USED:

Name	Quantity	Component
U1	1	Arduino Uno R3
U2	1	Temperature Sensor [TMP36]
U3	1	Wifi Module (ESP8266)
R1 R2	2	1 kΩ Resistor

CIRCUIT DIAGRAM:



CODE:

```
float val, voltage, temp;

String ssid     = "Simulator Wifi";

String password = "";

String host     = "api.thingspeak.com";
```

```
const int httpPort   = 80;
String url     = "/update?api_key=4J2ET3G2MFQRYELM&field1=";
void setupESP8266(void)
 {
  Serial.begin(115200);
  Serial.println("AT");
  delay(10);
  if (Serial.find("OK"))
    Serial.println("ESP8266 OK!!!");
   Serial.println("AT+CWJAP=\"" + ssid + "\",\"" + password + "\"");
  delay(10);
  if (Serial.find("OK"))
    Serial.println("Connected to WiFi!!!");
  Serial.println("AT+CIPSTART=\"TCP\",\"" + host + "\"," + httpPort);
  delay(50);
  if (Serial.find("OK"))
   Serial.println("ESP8266 Connected to server!!!");
}
void anydata(void)
 {
  val=analogRead(A0);
  voltage=val*0.0048828125;
  temp = (voltage - 0.5) * 100.0;
  String httpPacket = "GET " + url + String(temp) + " HTTP/1.1\r\nHost: " + host + "\r\n\r\n";
  int length = httpPacket.length();
  Serial.print("AT+CIPSEND=");
  Serial.println(length);
  delay(10);
  Serial.print(httpPacket);
```

```
  delay(10);
  if (Serial.find("SEND OK\r\n"))
    Serial.println("ESP8266 sends data to the server");
}
void setup()
 {
  pinMode(A0, INPUT);
  setupESP8266();
}
void loop()
 {
 anydata();
  delay(4000);
}
```