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1  #include <WiFi.h>
2  #include <HTTPClient.h>
3  #include <SdsDustSensor.h>
4
5  const char* ssid = "your_SSID";
6  const char* password = "your_PASSWORD";
7  const char* server = "http://api.thingspeak.com/update?api_key=your_API_KEY";
8
9  SdsDustSensor sds(Serial1);
10 const int coPin = 34;
11 const int no2Pin = 35;
12 const int o3Pin = 32;
13 const int vocPin = 33;
14
15 void setup() {
16   Serial.begin(115200);
17   Serial1.begin(9600);
18   WiFi.begin(ssid, password);
19   while (WiFi.status() != WL_CONNECTED) {
20     delay(1000);
21     Serial.println("Connecting to WiFi...");
22   }
23   Serial.println("Connected to WiFi");
24   sds.begin();
25 }
26
27 void loop() {
28   PmResult pm = sds.readPm();
29   int coValue = analogRead(coPin);
30   int no2Value = analogRead(no2Pin);
31   int o3Value = analogRead(o3Pin);
32   int vocValue = analogRead(vocPin);
33
34   if (pm.isOk()) {
35     Serial.print("PM2.5: ");
36     Serial.print(pm.pm25);
37     Serial.print(" PM10: ");
38     Serial.println(pm.pm10);
39
40     if (WiFi.status() == WL_CONNECTED) {
41       HTTPClient http;
42       String url = server;
43       url += "&field1=" + String(pm.pm25);
44       url += "&field2=" + String(pm.pm10);
45       url += "&field3=" + String(coValue);
46       url += "&field4=" + String(no2Value);
47       url += "&field5=" + String(o3Value);
48       url += "&field6=" + String(vocValue);
49
50       http.begin(url);
51       int httpCode = http.GET();
52       if (httpCode > 0) {
53         String payload = http.getString();
54         Serial.println(payload);
55       } else {
56         Serial.println("Error in HTTP request");
57       }
58       http.end();
59     }
60   } else {
61     Serial.println("Could not read SDS011 sensor");
62   }
63 }

```

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64 Serial.print("CO: ");
65 Serial.println(coValue);
66 Serial.print("NO2: ");
67 Serial.println(no2Value);
68 Serial.print("O3: ");
69 Serial.println(o3Value);
70 Serial.print("VOC: ");
71 Serial.println(vocValue);
72
73 delay(10000); // Delay for 10 seconds before next reading
74 }
75
```