

Fase_5/Ir_Alem_1/wokwi_teste.py

```
1 import network
2 import time
3 from machine import Pin
4 import dht
5 import urequests
6 import ntptime
7
8 def connect_to_wifi():
9     print("Connecting to WiFi", end="\n")
10    sta_if = network.WLAN(network.STA_IF)
11    sta_if.active(True)
12    sta_if.connect('Wokwi-GUEST', '')
13    while not sta_if.isconnected():
14        print(".", end="")
15        time.sleep(0.1)
16    print("\nConnected to WiFi:", sta_if.isconnected(), "IP Address:", sta_if.ifconfig()[0])
17
18 def get_current_time_iso():
19     seconds = time.time() + 946684800
20     tm = time.localtime(seconds)
21     year, month, day, hour, minute, second, weekday, yearday = tm
22     return "{:04d}-{:02d}-{:02d}T{:02d}:{:02d}:{:02d}.000Z".format(year, month, day, hour, minute, second)
23
24 connect_to_wifi()
25 ntptime.settime()
26 sensor = dht.DHT22(Pin(15))
27
28 api_url = "https://g12bbd4aea16cc4-orcl1.adb.ca-toronto-1.oraclecloudapps.com/ords/fiap/leituras/"
29 prev_value = ""
30
31 while True:
32     print("Measuring weather conditions... ", end="\n")
33     sensor.measure()
34     humidity = sensor.humidity()
35     dt = get_current_time_iso()
36     if humidity != prev_value:
37         message = f'{{"data_leitura": "{dt}", "sensor": "DHT22", "valor": {humidity}}}'
38         print("Reporting to Server:", message)
39         headers = {"Content-Type": "application/json"}
40         try:
41             response = urequests.post(api_url, headers=headers, data=message)
42             if response.status_code == 201:
43                 response_json = response.json()
44                 print("Created ID:", response_json.get("id"))
45                 print("Data successfully posted to the server!")
46             else:
47                 print("Failed to post data. Status code:", response.status_code)
48             response.close()
49         except Exception as e:
50             print("Error:", e)
51         prev_value = humidity
52     time.sleep(5)
53
```