

```
#include <ArduinoJson.h>
```

```
#include <WiFi.h>
```

```
#include <HTTPClient.h>
```

```
// Replace with your network credentials
```

```
const char* ssid = "";
```

```
const char* password = "";
```

```
// Replace with your latitude and longitude
```

```
const float latitude = 3.7395;
```

```
const float longitude = 51.1016;
```

```
// OpenWeatherMap API key
```

```
const char* apiKey =
```

```
"ri79Qbraj0TY33oWkNEg3C2LtoWdGe44AC3XrvUb";
```

```
void setup() {
```

```
Serial.begin(9600);18:42 14/07/2024
```

```
connectToWiFi();
```

```
getWeatherData();
```

```
}
```

```
void loop() {
```

```
    // Nothing to do here
```

```
}
```

```
void connectToWiFi() {
```

```
    Serial.println("Connecting to WiFi...");
```

```
    WiFi.begin(ssid, password);
```

```
    while (WiFi.status() != WL_CONNECTED) {
```

```
        delay(1000);
```

```
        Serial.println("Connecting to WiFi...");
```

```
    }
```

```
    Serial.println("Connected to WiFi");
```

```
}
```

```
void getWeatherData() {

    HTTPClient http;"

    String url = "https://api.nasa.
gov/mars-photos/api/v1/rovers/curiosity/photos?
sol=1000&camera=fhaz&api_key="ri79Qbraj0TY33oWkNEg3C2Lt
oWdGe44AC3XrvUb"

    String payload = http.getString();

    Serial.println("Received API response:");

    Serial.println(payload);

    parseWeatherData(payload);

} else {

    Serial.print("Error getting weather data: ");

    Serial.println(httpResponseCode);

}

http.end();

}
```

```
void parseWeatherData(String jsonData) {

    StaticJsonDocument<2000> doc; // Adjust the size
    according to your JSON

    DeserializationError error = deserializeJson(doc,
jsonData);

    size_t jsonSize = jsonData.length();

    Serial.print("JSON size: ");

    Serial.println(jsonSize);

    // Check for parsing errors

    if (error) {

        Serial.print("deserializeJson() failed: ");

        Serial.println(error.c_str());

        return;

    }

    // Extract data

    const char* cod = doc["cod"];
```

```
Serial.print("cod: ");

Serial.println(cod);

int cnt = doc["cnt"];

Serial.print("cnt: ");

Serial.println(cnt);

JSONArray list = doc["list"];

for (JsonObject obj : list) {

    int dt = obj["dt"];

    Serial.print("dt: ");

    Serial.println(dt);

    float temp = obj["main"]["temp"];

    Serial.print("temp: ");

    Serial.println(temp);

    const char* description =
obj["weather"][0]["description"];
```

```
Serial.print("description: ");
```

```
Serial.println(description);
```

```
int humidity = obj["main"]["humidity"];
```

```
Serial.print("humidity: ");
```

```
Serial.println(humidity);
```

```
float windSpeed = obj["wind"]["speed"];
```

```
Serial.print("wind speed: ");
```

```
Serial.println(windSpeed);
```

```
Serial.println(); // for readability
```

```
}
```

```
}
```