

QA Development Challenge

Duration: 7-10 days

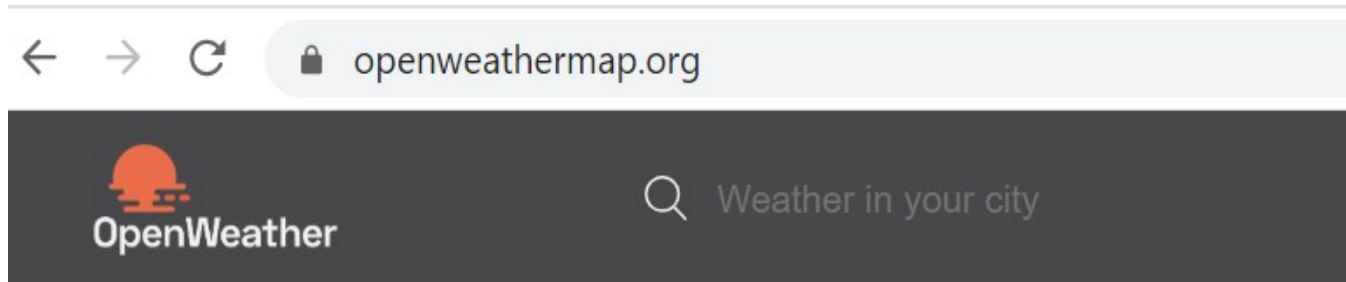
General instruction:

- The assignment is to simulate a practical test environment and the candidate will provide his/her best answer based on real testing experience.
- This "open-book" assignment allows you to do it at home with a comforting duration. The main aim is to drive questions for the 1st round interview based on the answer and solution that the candidate would provide.
- We consider this assignment as the main factor to judge your interview result. Hence, please use this as a chance for you to show your expertise in software testing and how passionate you are as an experienced QA engineer! If you have knowledge and hands-on experience in other concerns other than our requirement, do not hesitate to show it up.
 - ✓ Clear Readme/set up guideline must be given (*important - we will not consider if we cannot execute your test scripts*)
 - ✓ Working solution must be pushed to your git repository (github.com)

Part 1: Test Design and Bug Challenge

Given the application under test (AUT): <https://openweathermap.org/>

Feature: Search weather in your city



1. Create a Test approach for the given feature based on your Exploratory Testing skill (Different Test Type, Test Level, Test Coverage) (Please provide your assumptions in the requirement as long as they are reasonable).
2. Design test cases for given feature by using different testing techniques (E.g. black-box, white-box, ...) for UI / API testing.
3. Find bugs of the application/ features and report them in your desired bug template. Explain how you triage your defect in terms of priority/ severity as the higher priority/ severity bug, the higher score you get.

Ideal candidates should be able to:

- Provide good test approach/design/analysis on the given application:
 - ✓ Multiple testing types (functional/non-functional) and testing level should be included and analysed.
- Proven practical knowledge in designing test cases:
 - ✓ Minimum 1 UI test and 1 API test.

- ✓ Tests are designed to be automated-ready.
- ✓ Understand and be able to apply multiple test design techniques.
- Write a clear and self-explain Bug report with all the mandatory details included.

Part 2: API Automation

Write API automated tests for the feature "search weather in your city" API.

API: `api.openweathermap.org/data/2.5/weather?q={city name},{state code}&appid={API key}`

API Spec can be found here: [Current weather data - OpenWeatherMap](#)

Assignment:

1. An API Test for searching City (or State Code) with Data Driven for **q** parameter. Please ignore the test cases for other parameters in your assignment.
2. Verifying the Response Body based on the input parameter.
3. Environment variables, Test Data (if any) management for your test execution

(We want you to show off your expertise! Selected tests which are too easy will not give you high score)

Candidate can choose any programming languages, design a new framework or use any test automation frameworks, but the assignment must demonstrate his/her hands-on experience on the criteria mentioned below.

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Ideal candidates should be able to:

- Using valid verification/assertion point
- Follow coding standards of your chosen programming language, (a big plus if you could include static code check result together with your submission)
- Provide test reporting solution
- Functional API test. (status/ response body)

Seniority Assessment

	Sr.	Lead	Principal
Test Approach	N/A	MUST	MUST
Automation	MUST	MUST	MUST
CI/CD Solution	MUST	MUST	MUST
Automation Report	MUST	MUST	MUST
BDD	OPTIONAL	OPTIONAL	MUST
Cloud Integration	OPTIONAL	OPTIONAL	MUST
Contract Testing	OPTIONAL	OPTIONAL	OPTIONAL
Mock/ Stub API	OPTIONAL	OPTIONAL	OPTIONAL

- Having your assignment to show off on optional item will be plus point. However, your seniority on these skill sets will be evaluated based on how good your solution integrated with your automation framework as complete solution.
- Please make sure you have good hands-on experience on these optional skills in your assignment. Otherwise, you can focus on the must items to save your time

Confidential Note: This assignment is designed by and belonged to Vietnam Technology Delivery Center. Please do not use or share it without our permission.