# OpenWeatherMap Current Weather Data API testing approach

Test suite “OpenWeatherMapCurrent API testing” can be used to test <https://openweathermap.org/current> API using Postman API testing tool.

**1. Approach**

**1.1. Functional testing approach**

For the functional testing of the API positive and negative tests were created. Two requests are used to cover main scenarios – calling current weather data for one location by city name and calling current weather data for one location by zip code.

**1.1.1. Positive testing** includes inputting valid inputs in the request to see that API returns expected output.

**Calling current weather data for one location by city name (GET CurrentWeather\_ByCityName) :**

* Verify that Status Code is 200 when valid city and country code is specified as q parameter;
* Verify that for the valid input in the request, API returns the expected output:
  + API returns data for city “Vilnius” when q=Vilnius,lt (city name, country code);
  + API returns data for country “LT” when q=Vilnius, lt (city name, country code);
  + API returns weather temperature data in Celsius when parameter units=metric is specified.

**Calling current weather data for one location by zip code (GET CurrentWeather\_ByZip):**

* Verify that Status code is 200 when valid zip code and country code is specified as q parameter;
* Verify that for the valid input in the request, API returns the expected output:
  + API returns data for correct city “Vilnius” when q=01001,lt (zip code, country code);
  + API returns data for correct country “LT” when q=01001,lt (zip code, country code);
  + API returns weather temperature data in Celsius when parameter units=metric is specified.

**1.1.2. Negative testing** includes checking how API reacts to invalid inputs.

**Calling current weather data for one location by city name (GET CurrentWeather\_incorrectCity):**

* Verify that Status Code is 404 when incorrect city is specified, i.e. q=incorrectcity,lt (city name, country code);
* Verify that error message “city not found” is displayed when q=incorrectcity,lt (city name, country code);

**Calling current weather data for one location by city name (GET CurrentWeather\_IncorrectCountryCode):**

* Verify that Status code is 404 when incorrect country code is specified, i.e. q=Vilnius,us (city name, country code);
* Verify that error message “city not found” is displayed when q=Vilnius,us (city name, country code);

**1.2. Performance testing approach**

Response time testing – response time is tested in order to measure how much time it takes to execute and return data in JSON. Based on suggested best practices for API response times, it is tested for response time to be less than 0.2 sec for each call.