Setup Instructions

1. Generate the API Key for OpenWeatherMap
2. Download the provided Postman Collection file "HomeWorkAutomatedTests.postman_collection.json"
3. Open Postman
4. Click the Import button and select the provided JSON file
5. Open the "Environments" tab and Create a new environment
6. Create a new environment called "appid" and paste you generated OpenWeatherMap API Key into "appid" Current Value field, change the Type to "Secret" and Save it.
7. Open the "Collections" tab and select the imported "HomeWorkAutomatedTests" Collection.
8. Expand the Environment Tab in the Top right corner and select the newly created environment which holds the API Key value.
9. Press the "Run" button and then "Run HomeWorkAutomatedTests" button.

Guidelines and the taken approach

1. Verify successful response: this test verifies that the response status code is 200, indicating a successful response.
2. Validate city specific data: this test validates specific data related to the city: longitude, latitude, country code, city name, timezone, and ID. We used the pm.expect function to assert the expected values.
3. Validate weather condition: this test validates the weather condition returned in the response. It defines a dictionary of weather conditions and their corresponding weather IDs. The test checks if the returned weather ID and keyword match the expected conditions defined in the dictionary. It also validates the weather description based on the weather keyword.
4. Validate coordinate data: this test validates the coordinate data (longitude and latitude) returned in the response. It checks if the values are of type "number" and have a minimum length of 7 digits.
5. Validate response time: this test validates the response time of the API request. We expect the response time to be below 200 milliseconds.

6. Negative test scenario - Invalid API key: this test simulates a negative scenario where an invalid API key is used in the request. We retrieve the API key from the environment variables and append a "1" to make it invalid then make an URL GET request. It expects the response code to be 401 (“Unauthorized”).

   A second test is conducted inside the “InvalidAPIRequest” request. There we use “Pre-request script” to change the value of the API Key to make it invalid. The test expects the response code to be 401 and the repsonse message to be "*Invalid API key. Please see https://openweathermap.org/faq#error401 for more info.*"
7. Country code is a valid 2-letter code: this test validates that the country code returned in the response is a valid 2-letter code using REGEX: /^[A-Za-z]{2}$/. It expects the country code to match the provided pattern.
8. Negative test scenario - Invalid city name: this test simulates a negative scenario where a typo is made inside the GET call URL. It expects the response code to match 404 (“Not found”) and the response message to match "city not found".