

1. Practical task - REST API

Task1

Description:

There is a resource <https://nghttp2.org/httpbin/>, which describes all requests supported by the service.

Task:

Investigate the service, find a way to get all service requests.

Write a script that will find all internal url codes whose responses are not equal to 200

Algorithm:

1. Examine requests sent during navigation to <https://nghttp2.org/httpbin/>
2. Find a query that returns a list of all service requests (e.g. "/ip")
3. Get the response code of each subresource
4. Depending on the programming language, return HashMap or dictionary with subresources whose response code is not equal to 200

Additional requirements:

- Send requests with 'User-Agent': 'Learning Automation'
- Find the list of resources using fiddler/developer console
- The return should contain pairs like: "<https://nghttp2.org/httpbin/bla/>", 401

Task2

Description:

There is a form <http://httpbin.org/forms/post>

By clicking on the 'Submit order' button, a post request is sent to <http://httpbin.org/post>

Json with all the artifacts of the request is returned.

Task:

Write a script that will send a POST request, return a json part of the response ('form') and all response headers.

Algorithm:

1. Examine the request/response when the button on 'Submit order' is clicked <http://httpbin.org/forms/post>
2. Write a method that will take two parameters: the POST request body and headers. Depending on the programming language, return a List with two HashMaps or a tuple with two dictionaries: the 'form' object of the response body and response headers

Additional requirements:

- Send requests with 'User-Agent': 'Learning Automation'

Task3

Description:

There is a REST API for getting information by country:

<https://restcountries.com/>

Task 3.1:

Write a method that will find all language codes obtained from <https://restcountries.com/v3/all>

Algorithm:

1. Get json <https://restcountries.com/v3/all>
2. For every country get list of languages
3. Return list of unique languages

Task 3.2:

Write a method that will find the number of people for whom the specified language is the official language.

Algorithm:

1. The method takes as a parameter a list of language codes
2. For each language code get json from [https://restcountries.com/v3/lang/\[language code\]](https://restcountries.com/v3/lang/[language code])
3. In the received json, summarize the population values
4. Depending on the programming language, return a HashMap or dictionary with pairs: language code, sum of population for language

Additional requirements:

- Send requests with 'User-Agent': 'Learning Automation'