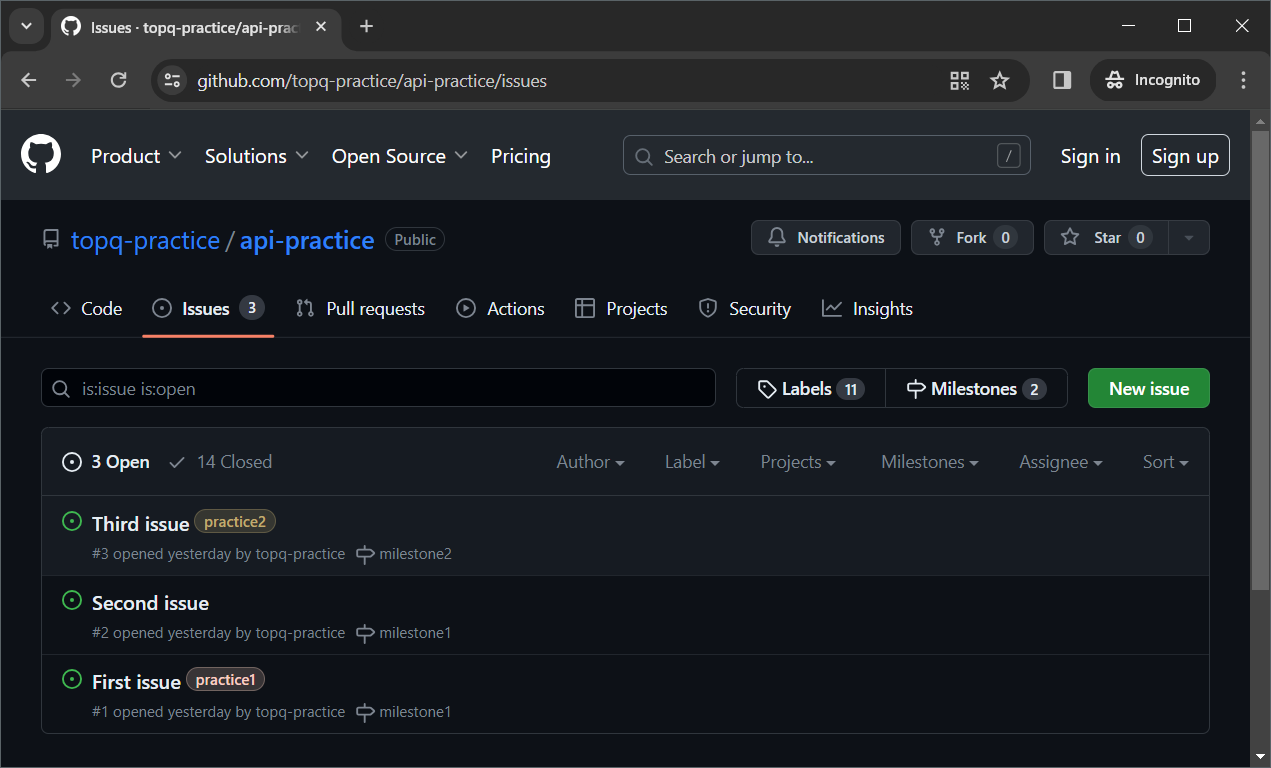
# Home Assignment: REST API Test Automation

### Objective:

Create a test automation project to automate interaction with GitHub via REST API in order to retrieve issues, create a new issue and update an existing issue.

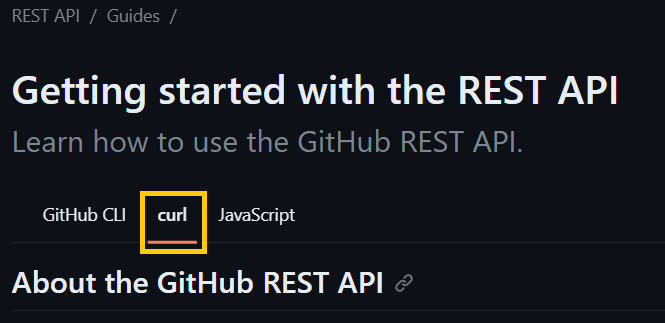


### Technology Stacks:

Choose one of the following programming languages and related frameworks:

* Java with TestNG
* C# with NUnit
* Python with PyTest

### Assignment Instructions:

1. In this assignment, you will need to interact with a GitHub repository via REST API to manipulate issues. If you’re not familiar with GitHub issues, you can read about them here: <https://docs.github.com/en/issues/tracking-your-work-with-issues/about-issues>
2. You’ll be working with the following GitHub repository:  
   <https://github.com/topq-practice/api-practice/>  
   and the issues can be viewed at: <https://github.com/topq-practice/api-practice/issues>
3. The key to solving this assignment is to carefully read the API documentation as provided here: <https://docs.github.com/en/rest/issues/issues?apiVersion=2022-11-28>  
   (no need to read everything in advance, but rather you should refer to this documentation to discover details about relevant endpoints as required in the test scenario below).
4. As you work on this assignment, it’s recommended to visually verify the effect of your API requests on the list of issues as can be viewed on the GitHub web UI:  
   <https://github.com/topq-practice/api-practice/issues>
5. Most of the operations require **token authentication**. You can read and see an example for token authentication here: <https://docs.github.com/en/rest/guides/getting-started-with-the-rest-api?apiVersion=2022-11-28#authenticating>  
   On the top of this page, make sure “curl” tab is selected to get the most relevant examples: **  
   Note:** you are not required to create a new token, but rather you should use the following existing token: github\_pat\_11BDPKE5Q05pVLvut7IGe9\_wOHau4FTEDq2aN32P9cysTUd43YZym4OHXOftbRCsSW646CCYKWpyB2qUU9
6. Where applicable, when required to provide repository owner and repository name, use the following values:  
   repository owner = “topq-practice”  
   repository name = “api-practice”
7. Project Setup:

* Set up a new automation project using your chosen programming language.
* Use a build tool (e.g., Maven, Gradle for Java; NuGet for C#; Pipenv or requirements.txt for Python) to manage project dependencies.

1. Automate the following test scenario using GitHub REST API:

|  |  |
| --- | --- |
| **1** | Get a list of all open issues and print the number of returned issues |
| **2** | Get a list of issues with label "practice1". Print the number of returned issues |
| **3** | Create a new issue with:  Title = <Your name>'s issue  Body = This issue was created via REST API from <Python/Java/C#> by <your name>  Label = practice1  Assignee = topq-practice |
| **4** | Verify response status code is 201 (created), and print the new issue number (contained in the response body) |
| **5** | Get a list of all issues and verify in the response JSON:   1. Total number of returned issues now equals to the initial number of issues +1 2. The first issue listed in the response JSON is your newly created issue with the correct title (as defined in step 3). |
| **6** | Update the issue created in step 3: change the state to "closed" and set "state\_reason" to "not\_planned". Verify response status code is 200 (OK) |
| **7** | Get a list of all issues and verify the total number of issues is again equal to the initial number of issues (because the issue you created is now closed, it shouldn't be in the returned list of issues). |

### Evaluation Criteria:

Candidates will be evaluated based on the following criteria:

* Correctness and completeness of test scenario.
* Project organization and code structure.
* Handling of dependencies and project setup.
* Appropriate use of assertions.
* Clean and efficient code.

### Submission:

* Create a GitHub repository to host your project.
* Include clear instructions on how to execute your automation script.
* Share the repository link with the hiring team for evaluation.

### Note:

* Feel free to use any HTTP client library (e.g., OkHttp, RestSharp, Requests) that you feel comfortable with.
* Use your creativity to make the assignment interesting, but keep it small and focused.