

PROG8440–Software Quality: Spring/Summer 2021

Assignment 04

[Maximum points: 50]

Due Date: Refer to eConestoga Assignment #4

This assignment should be done individually. Do your own work and do not share your work with others. Sharing work is an academic offense and is subject to penalty. Be aware that documents are automatically checked by eConestoga against every other student's work in the course as well as resources on the internet. Academic offenses will be reported to the College Registrar.

We are now starting to look at test automation. This assignment is focused on using Postman to interact with APIs and using Python for Automated API testing.

In this assignment you will be using Postman, Python and Pytest to exercise and test the [NOVEL CoVID19 API](https://disease.sh/docs/#/) (<https://disease.sh/docs/#/>).

For this assignment, you will need to do the following:

- 1. Use Postman and generate ten (10) unique API calls (using a different route each time).**
(20 Marks)

For submission, for each API call:

- Copy your route into a Word document (with the API verb included as well).
- Take Screen shot of each postman request and the results (remember it must be legible)

- 2. Create and run Python scripts of the above**
(10 Marks)

For submission:

- Copy and paste your Python script into your Word document
- Include your Python script in your submission to eConestoga as well

- 3. Use PyTest to create tests. Create 19 passing tests (10 using the previous API calls above and 9 new calls) plus 1 test that fails. For a total of 20 tests.**

Each test must be based on a unique route.

(20 Marks)

Note: The failing test can be based on an existing test you already wrote. You can create a failing test by asserting something that you do not expect for example "response=500").

For your submission:

- Include a screen capture of your results in your Word document
- Include your Python script in your submission to eConestoga as well

Your submission to eConestoga should be a single Word document following the order outlined above and your Python scripts. Screenshots MUST be legible – otherwise no marks will be given.

Note – All scripts and tests must run on my system for full grades to be awarded.

Grading Rubric:

Criteria	Needs work	Developing	Got it
API Calls	Does not include all 10 API requests and/or does not use each of the routes at least once	Includes some of the 10 API requests and uses each of the routes at least once	Includes all 10 API requests and uses each of the routes at least once
Python Scripts	Does not include Python Scripts for the 10 API requests or there are significant scripting errors	Python Script created for some of the 10 API requests or there are scripting errors	Python Script created for each of the 10 API requests
Tests using Pytest	Does not include as sufficient number of tests and does not include 1 failing test	Includes some tests but does not show results and/or 1 failing test	Includes all 20 tests including 1 failing test
Basic Requirements	Submits late without prior notice and permission Submits incomplete	Late with prior notice and permission With most of the tasks completed	Submits on time With all tasks completed

The assignment must be submitted to eConestoga according to the due date listed in Assignment #4.

Late Penalties:

Late assignments will receive the following penalties:

Days Late	Penalty %
1	5
2	10
3	20
4	40
5	60
6	80
7	100