



UNITED INTERNATIONAL UNIVERSITY (UIU)

Dept. of Computer Science & Engineering

Trimester: Spring 2023

Course No: CSE 4495

Title: Software Quality Assurance and Testing

Section: A

Assignment - 1

Consider the following REST API: <http://dummy.restapiexample.com/> (there is more documentation at the URL). This API surfaces the following functions:

Route	Method	Example URL	Description
/employee	GET	http://dummy.restapiexample.com/api/v1/employees	Get all employee data.
/employee/{id}	GET	http://dummy.restapiexample.com/api/v1/employee/1	Get data for a single employee ² .
/create	POST	http://dummy.restapiexample.com/api/v1/create	Create a new record in the database ³ .
/update/{id}	PUT	http://dummy.restapiexample.com/api/v1/update/21/	Update an employee record.
/delete/{id}	DELETE	http://dummy.restapiexample.com/api/v1/delete/2/	Delete an employee record.

1. If you do not have one already, create a free account at <https://www.postman.com/>
2. Use Postman to create tests for this API. Create 10 test cases in total, with at least one test case for each of these five API functions.
 - a. A test case has its own input (REST method + request body) and one or more assertions on the output (called “tests” in Postman). Do not simply submit 10 assertions!
 - b. Test cases should test both normal functionality as well as handling of erroneous input. Test cases may, optionally, also address performance aspects such as response time.
3. In your report, include the request type, body, assertions (“tests”), and any other information that you used as part of your test cases. Please explain each test case - describe the goal/purpose, as well as the assertions you used to verify the behavior.

Tips: You may use the process described in Lectures 4-5 (with choices, representative values, and constraints), but do not have to. Use your creativity and the test snippets provided by Postman to ensure that this API works as expected. Try error cases, like an ID of 0, and see if the API works as expected. You may want to consider adding tests to check for quality goals such as performance as well.

For a starting place on testing in Postman, see

<https://learning.postman.com/docs/writing-scripts/test-scripts/>

Submit the `.postman_collection` file as well as your report on eLMS. Follow the instructions provided.

Note: The test cases do not have to pass! The tests should reflect how you think the system *should* work, so if they fail, that indicates the system is faulty (in your view).

Deadline – 22/03/2023(Wednesday), 11:59PM.

² If you want to verify the normal results of `/employee/{id}`, use an ID between 1-24. IDs of 0 or higher than 24 are great for checking “error” cases.

³ Note - the POST/PUT/DELETE methods do not actually make permanent changes in this example. You will get an appropriate response, but the record will not actually be created, updated, or deleted. You can use the result body to verify the “results” of running these three functions.