

7. Consider the web service from the following free service platform. Use any one REST and SOAP WebService/APIs and do as directed:

<https://reqres.in/>

<http://www.dneonline.com/calculator.asmx>

- a. Configure the test environment for the Web services testing that involves GET, POST, PUT, DELETE methods.
- b. Prepare a test case table covering following assertions to be tested using Katalon Studio/Postman/Fiddler tool that:
 - i. Verifies that the method retrieves data from an API.
 - ii. Verifies that the method creates new data to an API.
 - iii. Verifies that the method updates the existing data.
 - iv. Removes/deletes the existing data.
 - v. Verify the status code for each method.
 - vi. Create an assertion to test the range of status code for a method.
 - vii. Create an assertion to count the data retrieved using JSON
 - viii. Create an assertion to verify element property value that must cover:
 - ✓ Data Count
 - ✓ Verification of each JSON node eg. For customer list it may be ID, Name, Email etc.
 - ix. Create an assertion to verify a particular string in the method returned.

Following is an exemplary test case table :

Method	Assertion	Element	Expected	Actual	Test Result
GET	<code>verifyElementsCount</code>	<code>data</code>	3	6	Fail
GET	<code>verifyElementsCount</code>	<code>data</code>	6	6	Pass
GET	<code>verifyElementPropertyValue</code>	<code>data[0].id</code>	7	7	Pass
GET	<code>verifyElementPropertyValue</code>	<code>data[0].id</code>	6	7	Fail

Enhance your learning:

- ✓ Write one difference showing to the process of designing and testing of APIs is different to Web Services.
- ✓ List one technical case when a SOAP or Rest API must be used.
- ✓ Write one purpose of Widdler, XPathHelper, JSONPathFinder extensions for a browser.

Solution Must Contain: Screenshots of all the steps performed to set up API Testing configuration environment, Request and Response results, Snippet of the service method used, Assertions, Results, Test Case Table with testing parameters to be tested along with Assertions prescribed. Screenshots of test execution and test results with analysis and description.