Course: TY BCA

Enrollment No.: 201803100110002

Subject: 030010517 CC12 Software Testing Techniques

Set: A

Workbook 7

Method	Assertion	Elements	Expected	Actual	Result (Pass/Fail)
GET (Select data)	verifyResponseStatusCode	-	200	201	Fail
GET (Select data)	verifyResponseStatusCode	-	200	200	Pass
GET	verifyResponseStatusCodeInRange(resonse,0,400)	-	199	200	Fail
GET	verifyResponseStatusCodeInRange(resonse,0,400)	-	200	200	Pass
GET	verifyResponseStatusCodeInRange(resonse,0,400)	-	201	200	Fail
POST (Create data)	verifyResponseStatusCode	-	201	200	Fail
POST (Create data)	verifyResponseStatusCode	-	200	200	Pass
PATCH (Update data)	verifyResponseStatusCode	-	200	201	Fail
PATCH (Update data)	verifyResponseStatusCode	-	200	200	Pass
Delete	verifyResponseStatusCode	-	204	201	Fail
Delete	verifyResponseStatusCode	-	204	204	Pass
PUT (UPDATE)	verifyResponseStatusCode	-	200	201	Fail

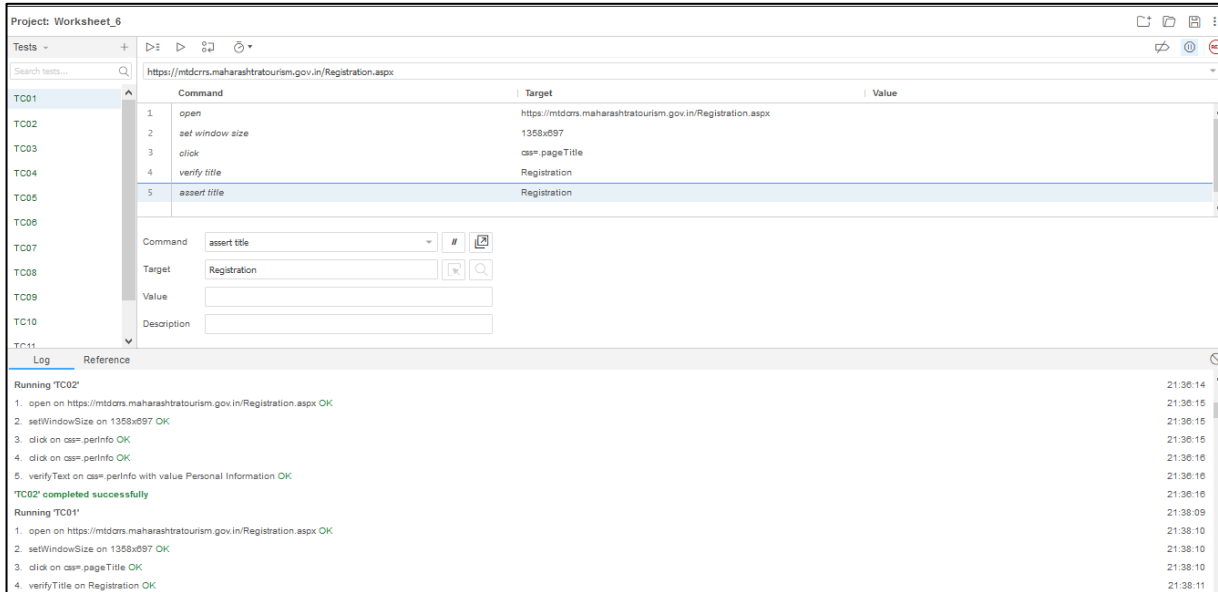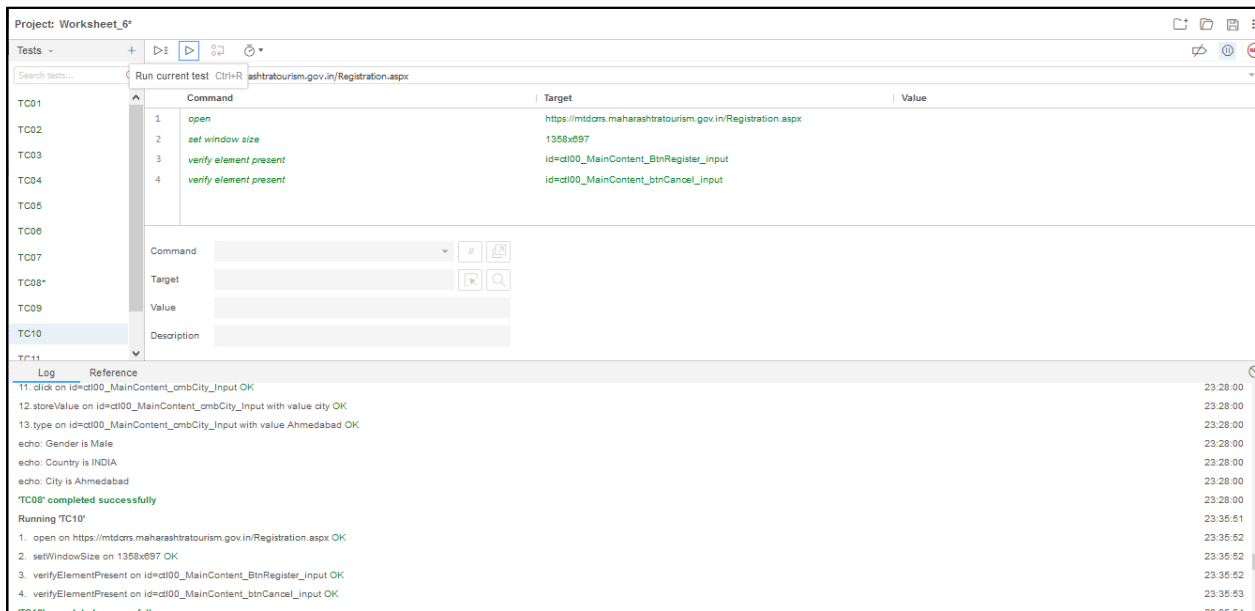## Screenshots

Figure 1

Figure 2

- **Enhancement Learning**
  - **Q-1**
    Step 1: Create a new project

    Go to File -> New -> Project and enter a project name and its location to start a new project.
    Step 2: Create a new RESTful endpoint at Object Repository

    · Object Repository -> New -> Web Service Request

    Katalon Studio stores Web service endpoint for testing at Object Repository, which is similar to Test Object in UI Test. At the Create New Web Service Request dialog, you can either choose to create a RESTful or a SOAP request.

    Request type is a required field. You need to specify it exactly at this step. In contrast, URL is not required. You can set this value later in the next step.

    Click OK, then we are ready to input more details to the first RESTful test.

    There are some important concepts needed to specify when testing a RESTful request:

    (1) Request method

    We can choose one of these following methods for your first request test: GET, POST, PUT, DELETE. The method needs to match with the URL to have a valid request. For instance, let's assume that our first test is a public API from Jira Cloud version. We should use the GET method to receive information on an existing ticket using its ID.

    (2) Request URL

    Along with the request method, request URL is used to tell the web server which API is utilized under test. Any mismatch between method and URL will lead to invalid request exception at runtime or wrong data response.

    (3) Verification

    Verification is the place where you define the assertion to ensure the response will contain the expected information.

(4) Formatter

The response will be automatically displayed in a neat format: JSON, XML, HTML, and JavaScript. It is helpful for a quick view of the response status.

Step 3: Create a new test case with an existing request

While the request at Object Repository is helpful for fast testing, we can add the request verification at the test case level for better managing and reporting.

Step 4: Add an existing request to a test case

A request can be inserted into a test case with Web service built-in keywords. There are many keywords can be used to send the request, to verify the response, and to make the request as part of a bigger testing flow.

The test case can be executed as a normal test case in Katalon Studio. Each verification step can be viewed from the log.

➢ **Write one difference showing to the process of designing and testing of APIs is different to Web Services.**
  Answer:
    • While APIs can be on- or offline, web services must use a network. APIs are protocol agnostic.
    • While APIs can use any protocols or design styles, web services usually use SOAP (but sometimes REST, UDDI, and XML-RPC).
    • API is used for any style of communication while Web service is used for REST, SOAP and XML-RPC for communication.

➢ **List one technical case when a SOAP or Rest API must be used.**
  Answer:
    • Registration

➢ **Write one purpose of Wizdler, XPath Helper, JSON Path Finder extensions for a browser.**
  Answer:

⇒ **Wizlder**
- It parses the WSDL files and generates SOAP messages for you.

⇒ **XPath Helper**
- XPath Helper makes it easy to extract, edit, and evaluate XPath queries on any webpage.
- After installing this extension, you must reload any existing tabs or restart Chrome for the extension to work.

⇒ **JSON Path Finder**
- The main purpose of JSON Path Finder is to select and extract values from JSON document.