***API Testing using REST Assured and Selenium***

**Rest Assured:** An API or a library (just like selenium web-driver) which will provide a number of Methods through which we can automate REST API’s.

**Pre requisites:**

1. Java Eclipse
2. TestNG (Features, Test Suites, Test cases, Data Provider parameterization, running multiple test suites and test cases)
3. Maven (comes along with Eclipse)
4. Cucumber Framework (comes by default as Rest Assured supports BDD type of testcases).

**Advantages of Maven Project –**

1. We can add dependencies which will automatically download the required JAR Files/Libraries.
2. Versions can be changed easily under POM.xml which in turn removes the old dependencies and add the updated/new dependencies.

* **Group ID:** Project Name (RestAssuredProject)
* **Artifact ID:** Package Name created inside the project (ShubhamRestAssured)
* src/main/java; src/main/resources – Development purposes

**Dependencies:** Under pom.xml (added from mvnrepository website)

1. Rest-assured
2. JSON-path
3. JSON
4. GSON
5. TestNG
6. Scribe-java apis (3rd party api to send random test data)
7. JSON-schema-validator
8. XML-schema-validator

**HTTP Request:**

1. GET
2. POST
3. DELETE
4. PUT

Request and Response API: <https://reqres.in/>

Gherkin Keywords

**Methods in RestAssured:**

1. GIVEN (Pre requisites)
2. WHEN (Request)
3. THEN (Response)

**Static Imports**

* *io.restassured.RestAssured.\**
* *io.restassured.matcher.RestAssuredMatchers.\**
* *org.hamcrest.Matchers.\**

given, when and then are the methods. 1st method will not have dot but the rest will have dot which indicates the first method includes the other.

URL to access:

* **<https://reqres.in/>**[**api/users?page=**](https://reqres.in/api/users?page=2)**2**
* **<https://reqres.in/api/users>**

**{**

**"name": "morpheus",**

**"job": "leader"**

**}**

* **<https://reqres.in/api/users/2>**

**{**

**"name": "morpheus",**

**"job": "zion resident"**

**}**

* **<https://reqres.in/api/users/userid>**

**Hash map:** Storing the Json data into key value pair and converting the hash map into json format and pass the json format as part of our post request. Using hash map means hard coding the data which is generally not preferred.

**How many ways we can create POST request body:**

1. HashMap
2. Using org.json library
3. Using POJO Class (Plain Old Java Object)
4. Using External Json file

**Path and Query Parameters-**

* <https://reqres.in/api/users?page=2>
* <https://reqres.in/api/users?page=2&id=5>

**Cookies and Headers-**

* As part of response, sometimes we get cookies and headers.
* To handle the data sent in the form of cookies and headers in the request body, we need to validate it.

**Parsing-** Traversing the XML file, extracting the response and comparing it with the expected value.

* <http://restapi.adequateshop.com/api/Traveler?page=1>

**JSON/XML Schema Validations-** Verify the datatype of the field.

2 types of Validations

1. Response Validations- Kinds of data in response.
2. Schema Validations- Data type in response.