TEST THE REST

TESTING RESTFUL WEBSERVICES USING REST ASSURED

WHAT IS THE REST

- REST (REpresentational State Transfer) is an architectural style, and an approach to communications that is often used in the development of Web Services
- REST uses HTTP protocols to communicate between producer and consumers.
- HTTP Methods:- GET, POST, PUT, DELETE
- Working with URL's

EXAMPLE OF GET REQUEST

```
http://services.groupkt.com/country/get/iso2code/IN
```



```
{
  "RestResponse" : {
    "messages" : [ "Country found matching code [IN]." ],
    "result" : {
      "name" : "India",
      "alpha2_code" : "IN",
      "alpha3_code" : "IND"
    }
  }
}
```

WHY API AUTOMATION REQUIRED?

1.Early Defect Detection:-

Most of the time UI layer users the REST Web services to fetch the data from back end and do the business validation. If their are any issue with the REST services, It will be found before the developers actually consumer that web services. It will saves the development time over the defected web services.

2.Contract Validation:-

In distributed environment different scrum teams are involved in development the single functionality. In this case suppose a scrum team changes the some parameters related to a web service which was consume by your team in last spring and they failed to notify your team. This situation leads to a production detect of that functionality which you have not touched in the current sprint. so validating contact is necessary thing.

3.Stops the further build:-

If a test failed in Jenkins automation environment, It stops the further build unless that error is rectified. Which assured that only good build pass to manual testers for testing.

WHY API AUTOMATION REQUIRED?

4. Fast Result:-

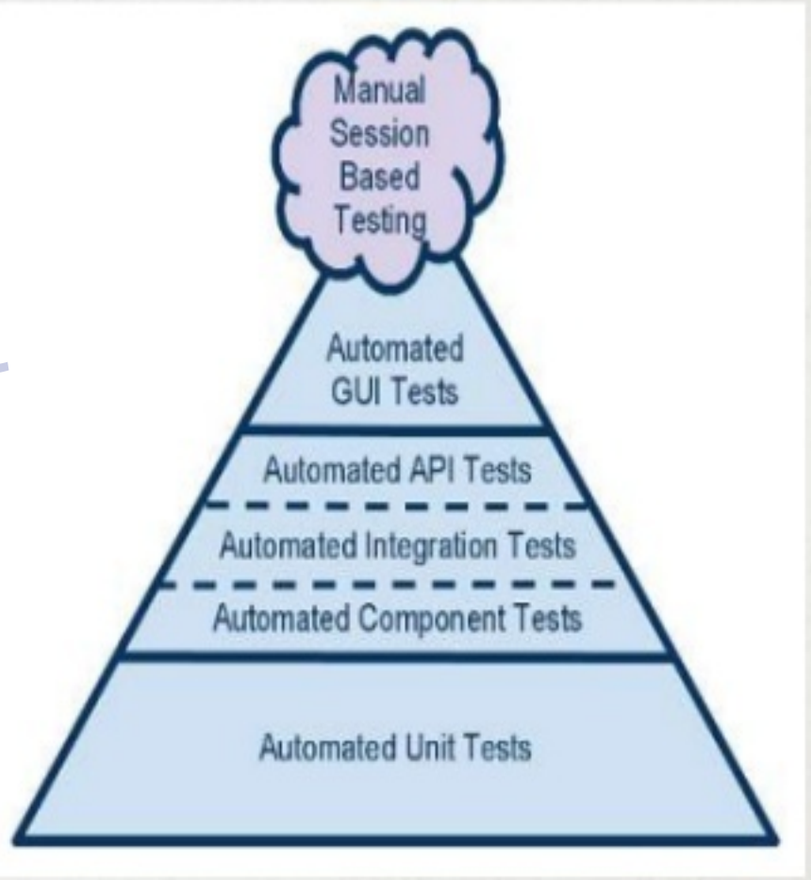
API Automation test jobs took very less time to complete the one testing cycle. this help in automating the regression suit for an application. This will very helpful in CICD (Continuous Integration, Continuous Deployment) environments.

5. Reliable :-

If these test are passed without any issue then we can sure that business layer is not having any defect.

6. Test Pyramid:-

API Automation involves significant role in building the test pyramid. As the after the unit test cases it comes with majority of numbers. Which helps overall automation framework



WHAT IS A REST ASSURED:-

- Testing and validating REST services in Java is harder than in dynamic languages such as Ruby and Groovy. REST Assured brings the simplicity of using these languages into the Java domain.
- REST Assured is a simple Java library for testing of REST services.
- Integrates seamlessly with existing Java based testing frameworks
  - Junit, TestNG
  - Selenium Webdriver
- Rest Assured features
  - Supports for HTTP methods
  - Supports for BDD/Gherkin(Given, When, Then)
  - Use of Hamcrest matches for checks (equalTo)
  - Use of Gpath for selecting element from JSON response.

WHAT IS A REST ASSURED GIVES:-

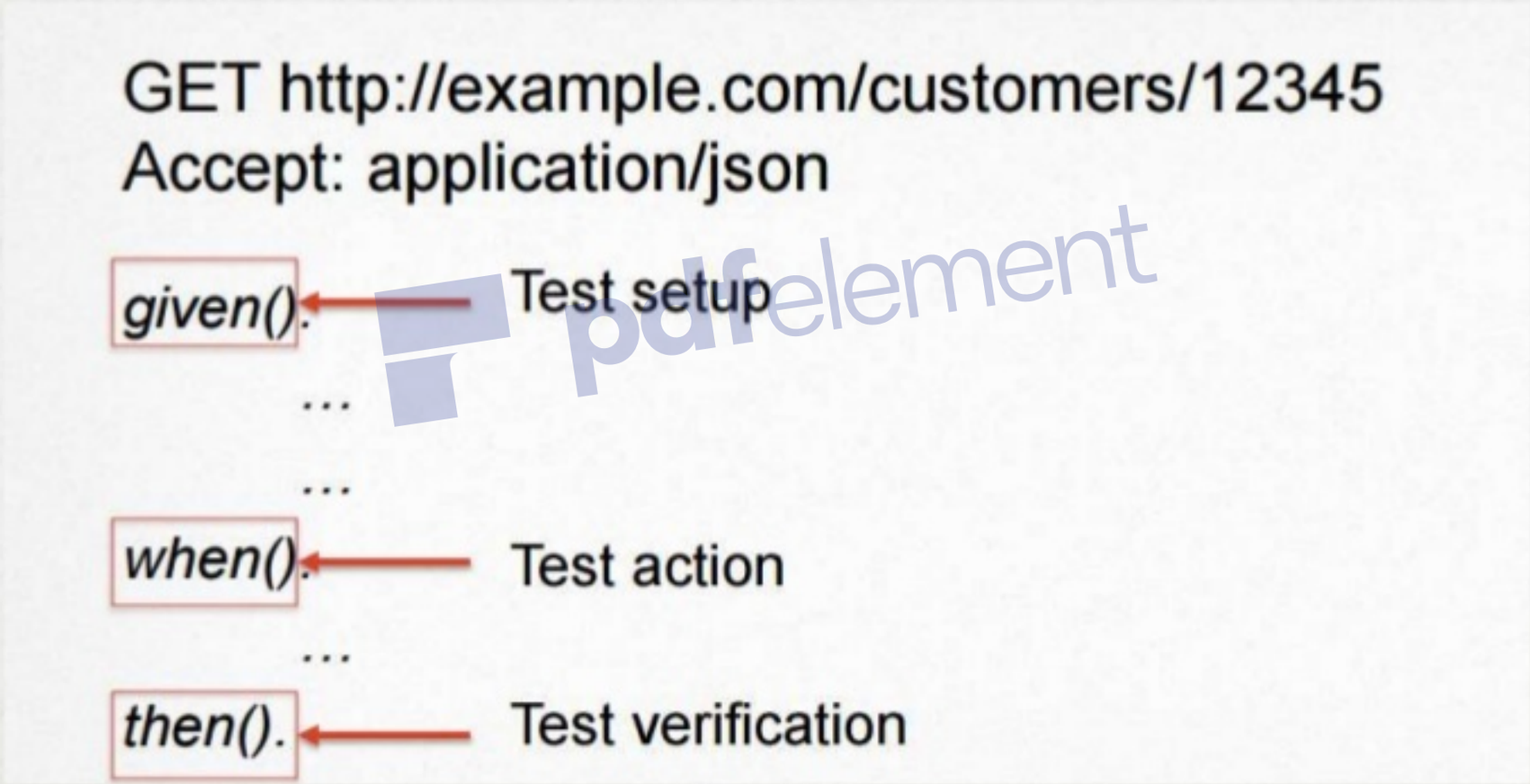
- It gives various methods to
  - 1. format the HTTP request
  - 2. send it over a network
  - 3. validating HTTP status code of an request
  - 4. Finally validating response data.
- It also handles the various authentication mechanism for the REST Requests
  - 1. Basic Authentication(with username and password)
  - 2. OAuth
  - 3. OAuth 2.0
  - 4. Certificates
  - 5. Digest
  - 6. Form based authentication

GETTING STARTED WITH REST ASSURED:-

1. Maven Dependency of REST Assured

```
<dependency>
    <groupId>io.rest-assured</groupId>
    <artifactId>rest-assured</artifactId>
    <version>3.0.1</version>
    <scope>test</scope>
</dependency>
```

WRITING THE TEST



GETTING STARTED WITH REST ASSURED:-

1. For HTTP GET Request

- ```
  request = given()
                .contentType("application/json")
                .auth()
                .basic(authData.getUserName(),authData.getPassword())
                .when()
                .get(url);
  ```
  ```