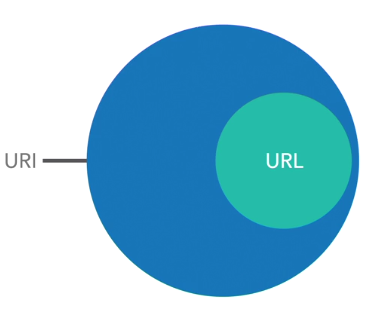
Representational state transfer protocol

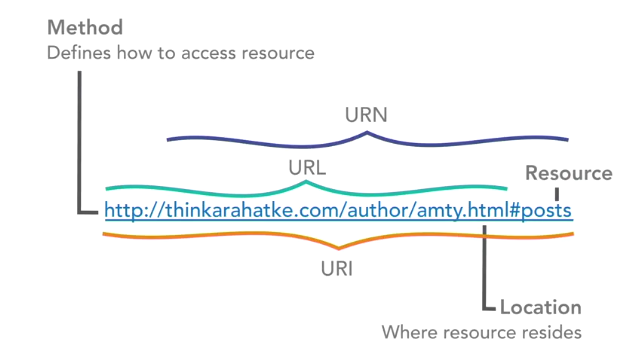
URL vs URI

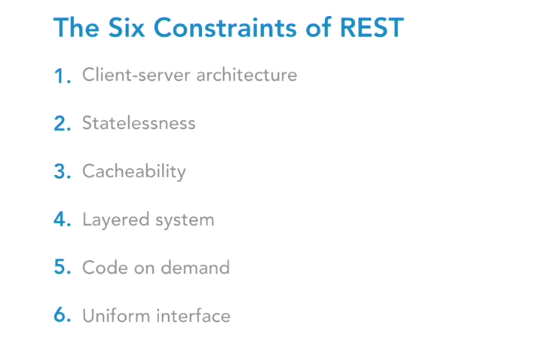
Universal resource locator, universal resource identifier.



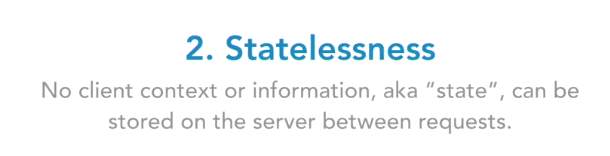
The above picture shows that URL is a subset of URI

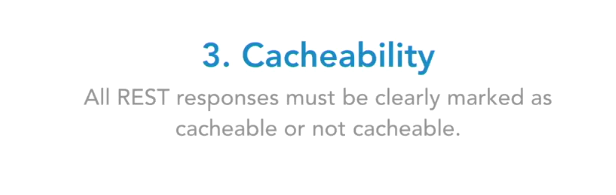
All URL’s are URI’s but not the converse.

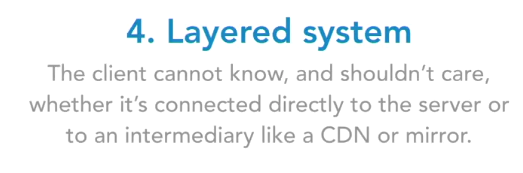


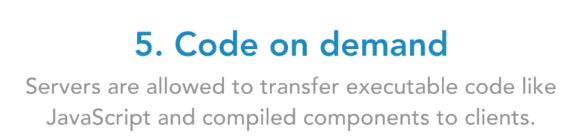


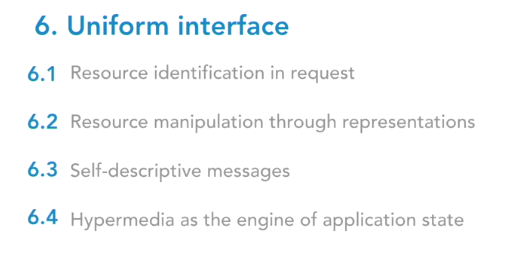


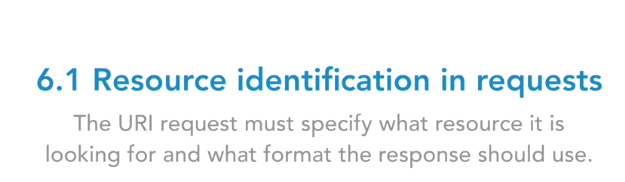
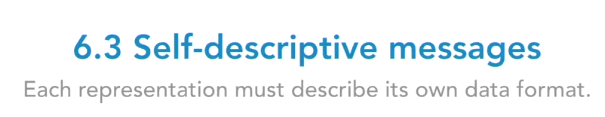










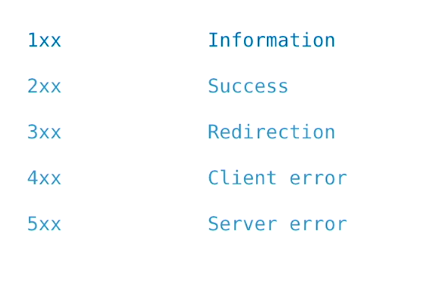
  
  




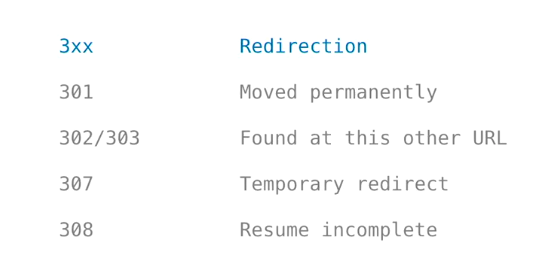
RESTful API

An API is called RESTful if it satisfies the above 6 constraints and it possible only when the API runs on web i.e, http. REST services will also run on SMTP, FTP and others.

Response codes:











Client side important tasks are input-type, content-type

Server side: produces and consumes

Resource:

[**Developing RESTful APIs with JAX-RS**](https://www.youtube.com/playlist?list=PLqq-6Pq4lTTZh5U8RbdXq0WaYvZBz2rbn)

<https://www.youtube.com/watch?v=xkKcdK1u95s&list=PLqq-6Pq4lTTZh5U8RbdXq0WaYvZBz2rbn>

total 31 videos under a folder and the author is [Java Brains](https://www.youtube.com/channel/UCYt1sfh5464XaDBH0oH_o7Q)

Website: [http://javabrains.koushik.org/tutoria...](https://www.youtube.com/redirect?q=http%3A%2F%2Fjavabrains.koushik.org%2Ftutorials%2Fjavaee_jaxrs%2FIntroduction.html&event=video_description&v=xkKcdK1u95s&redir_token=mIXhlA91Ptp7FP_1xg778XLli6Z8MTU0NzcxNTUxM0AxNTQ3NjI5MTEz)

# API Testing using Rest Assured

## GET Request

You need to install or add rest assured dependency in POM

Then the code looks like below to perform a get operation and how to parse the header, status line and body.

**package** groupid.artifactid;

**import** org.testng.Assert;

**import** org.testng.annotations.Test;

**import** io.restassured.RestAssured;

**import** io.restassured.http.Header;

**import** io.restassured.http.Headers;

**import** io.restassured.http.Method;

**import** io.restassured.path.json.JsonPath;

**import** io.restassured.response.Response;

**import** io.restassured.specification.RequestSpecification;

**public** **class** ApiTesting {

@Test

**public** **void** getweatherdetails()

{

RestAssured.*baseURI*="http://restapi.demoqa.com/utilities/weather/city";

RequestSpecification httpRequest = RestAssured.*given*();

Response response = httpRequest.request(Method.***GET***, "/Hyderabad");

//getting response status code

**int** StatusCode= response.getStatusCode();

System.***out***.println("Statuscode is "+StatusCode);

Assert.*assertEquals*(StatusCode /\*actual value\*/, 200/\*expected value\*/, "Correct status code returned");

//getting response status line

String statusLine = response.statusLine();

System.***out***.println("statusLine is "+statusLine);

//getting response header

Headers header = response.headers();

**for**(Header header1:header)

System.***out***.println("Key value is"+header1.getName()+" "+"Value is "+header1.getValue());

//getting response body

String responseBody=response.getBody().asString();

System.***out***.println(responseBody);

//if you want to parse the response and check for particular node value

//like if you want to see the city node contains value hyderabad then follow the below

JsonPath jsonpathevaluator = response.jsonPath();

String cityinresponse = jsonpathevaluator.get("City");

Assert.*assertEquals*(cityinresponse, "Hyderabad", "Cities are same");

}}

## POST request

We need to have the below dependency to work with JSON objects for POST request

<dependency>

<groupId>com.googlecode.json-simple</groupId>

<artifactId>json-simple</artifactId>

<version>1.1.1</version>

</dependency>

**package** groupid.artifactid;

**import** org.json.simple.JSONObject;

**import** org.testng.Assert;

**import** org.testng.annotations.Test;

**import** io.restassured.RestAssured;

**import** io.restassured.response.Response;

**import** io.restassured.specification.RequestSpecification;

**public** **class** APiPost {

@SuppressWarnings("unchecked")

@Test

**public** **void** RegistrationSuccessful()

{

RestAssured.*baseURI* ="http://restapi.demoqa.com/customer";

RequestSpecification request = RestAssured.*given*();

JSONObject requestParams = **new** JSONObject();

requestParams.put("FirstName", "Virender"); // Cast

requestParams.put("LastName", "Singh");

requestParams.put("UserName", "sdimpleuser2dd2011");

requestParams.put("Password", "password1");

requestParams.put("Email", "sample2ee26d9@gmail.com");

request.body(requestParams.toJSONString());

Response response = request.post("/register");

**int** statusCode = response.getStatusCode();

Assert.*assertEquals*(statusCode, "201");

String successCode = response.jsonPath().get("SuccessCode");

Assert.*assertEquals*( "Correct Success code was returned", successCode, "OPERATION\_SUCCESS");

}}