# Web Api Testing Automation

Q. What are the very basic pre-requisite for writing automation test in Java ?  
Ans - Below are the very basic pre-requisite,

* Java
* Maven
* TestNG
* Junit

Q. What is a web api , and what are some important popular keywords associated with it ?

Ans - Web Api is basically an application which sits on server and serves content to other application over network. Below are the some important jargon of words in the world of restful api testing,

* EndPoint
* Resource
* Media Type (JSON or XML probably)

Web Api typically works as client - server architecture. Automated test that we will be writing will work as a client.

Q. What is a endpoint and what is a resource ?

Ans - We send request (HTTP GET or POST request) to an endpoint (Exact point to which request is sent) and response is received. Response is nothing but resource. Resource can be of different media type. Different media types are,

* JSON
* XML
* Images

Below are the things which we just read on the PluralSight course ("Getting started with Web API Test Automation in Java") - by - "Andrejs Doronins"

* We read about important Http headers
* We read about important Http methods (GET, POST, DELETE, OPTIONS). Below is the sample java code to call them (Just an important thing - These are in Apache HttpClient Library) ,
  + new HttpGet(url)
  + new HttpPost(url)
  + new HttpDelete(url)
  + new HttpOptions(url)

Lets look at the different web api testing tools

* Curl for manual testing
* Postman for automated testing

I just used this command and it is pretty successful :-

curl -v https://api.github.com 2>&1 | grep Status

OR

curl -v https://api.github.com 2>&1 | grep -i status

curl is very handy in writing smoke test. We can write a very simple test script which will contain "curl" command , which will invoke appropriate end point of api and then use "grep" command to see status code of response.

Looked at the Postman and soapUI tool for testing of Rest api and XML based web services.

Now we are going to create a Java project suite for testing framework. This is going to use these 2 things heavily,

* Apache Http Client
* TestNG

Q. How did i installed "TestNG" plugin in the STS ?  
Ans - In STS do the following,

* Go to Help / Install new software
* Enter URL http://beust.com/eclipse/
* Click on Add button and in the name field enter "TestNG"
* Click on Add button and then follow instructions.
* In the end STS will re-start and TestNG plugin gets integrated

Note - An important point which i can add to my profile while discussion that i helped team creating a small testing framework in Java using Apache HttpClient.

Q. What is DataProvider in TestNG ?  
Ans - An important features provided by TestNG is the testng DataProvider feature. It helps you to write data-driven tests which essentially means that same test method can be run multiple times with different data-sets.