**TestNG**: Test NG is another Testing framework base upon Unit testing and nUnit testing.

Test Ng: Testing for next generation. Light weighted framework. Test NG we can use for unit testing as well as integration testing.

**Selenium automation** testing tool: Using Selenium we can do the Testing for UI page(Web application develop using any language using html, jsp, asp, php, angular, react js).

Selenium is base upon DOM concept. Selenium provided driver concept to load the web page on browser(we need to configure browser driver). It provided DOM related functions to access particular tag or elements contents using class selector, id selector, name selector, css selector. Then we get the value of that particular tags.

We need to integrate **JUnit or Test NG** tool. Because tool or framework provided assert function/ method to check actual and expected output.

Selenium support all language like Java, python, JavaScript etc.

TestNG we use suite as xml file

**Priority attribute**

@DataProvider : This annotation help us to pass the value to test function. (those value can be static or dynamic to test function)

**Test NG support group testing concept.**

Hdfc

Withdraw group withdraw

Sbi

Withdraw group withdraw

**Selenium tool:** Selenium is one the open source widely use **Web UI automation tool** mainly use for testing Web application develop using any language.

It is browser independent, support all language like C#, Java, Python, Php and JS etc.

Selenium allow to integrate with existing testing framework jUnit and TestNG.

It allow to integrate with DevOps tool.

Git

Junit/TestNG

Maven

Gradle

Docker

CI and CD : Jenkin etc

Kubernetes

Ansible

Any Cloud provider like AWS, Azure or Google etc.

**Selenium components**

1. Selenium Web Driver : Lot of programming language like Java, C#, python, JavaScript they provided pre defined function or methods which help to read the, and interact with Web Page on any browser. Using Selenium tool with help of web driver we open the web page on browser. We need the browser Driver. Selenium provided set of methods to access the DOM elements. We can use byName,byClass, byId, byCSS etc.

Selenium doesn’t provide any assert method we need to integrate existing testing tool like **TestNG or Junit Test** etc.

1. Selenium IDE : Chrome or Edge provide Selenium IDE extension which help to do the testing without programs. Using recording and playing back option we can test the application.
2. Selenium Grid : it is uses to run the test case in different nodes or machine or different browser parallelly.

Refer below URL to download chromedriver 138.x version

<https://googlechromelabs.github.io/chrome-for-testing/>