**TestNG**

**Order of execution of annotations:**

@BeforeSuite

@BeforeTest

@BeforeClass

@BeforeMethod

@Test

@AfterMethod

@BeforeMethod

@Test

@AfterMethod

@AfterClass

@AfterTest

@AfterSuite

**Data driven testing:**

Can be done via ->

Excel

Properties file

Json files

Testng files using parameter tag

MongoDB

**Verbose in testNG file:**

Verbose givem on suite level on testNG file. Valuenormally 1-10. It basically gived details of testrun on console. More the value of verbose, more the details printed on console.

<suite name = "Design Pattern tetsing" verbose="10">

<test name ="Open Browser">

<classes>

<class name = "parametrization.ParametrizeDemo"></class>

</classes>

</test>

TestNG Listeners:

TestNG provides the @Listeners annotation which listens to every event that occurs in a selenium code. Listeners are activated either before the test or after the test case. It is an interface that modifies the TestNG behavior. For example, when you are running a test case either through selenium or appium and suddenly a test case fails. We need a screenshot of the test case that has been failed, to achieve such scenario, TestNG provides a mechanism, i.e., Listeners. When the test case failure occurs, then it is redirected to the new block written for the screenshot.

Listeners are implemented by the **ITestListener** interface. An ITestListener interface has the following methods:

**onTestStart():** An onTestStart() is invoked only when any test method gets started.

**onTestSuccess():** An onTestSuccess() method is executed on the success of a test method.

**onTestFailure():** An onTestFailure() method is invoked when test method fails.

**onTestSkipped():** An onTestSkipped() run only when any test method has been skipped.

**onTestFailedButWithinSuccessPercentage():** This method is invoked each time when the test method fails but within success percentage.

**onStart():** An onStart() method is executed on the start of any test method.

**onFinish():** An onFinish() is invoked when any test case finishes its execution.

1. <?xml version="1.0" encoding="UTF-8"?>
2. <!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd">
3. <suite name="Suite">
4. <listeners>
5. <listener **class**-name="com.javatpoint.Listener"/>
6. </listeners>
7. <test name="Listeners\_program">
8. <classes>
9. <**class** name="com.javatpoint.Testcases"></**class**>
10. </classes>
11. </test>
12. </suite>
13. <!-- Suite -->

On testing if listener provided it will be applicable to all classes