

RAJAT VERMA

SOFTWARE TESTING

SUBSCRIBE



TUTORIAL | TESTING FRAMEWORK

TESTNG

(1)- WHAT|WHY|HOW?

TestNG






<https://github.com/rajatt95>

<https://www.youtube.com/@rajatt95>



What is TestNG?

1. TestNG is an open-source
 - a. Testing framework
 - i. NG means Next Generation
2. It is inspired by JUnit and NUnit
 - a. JUnit | TestNG - 
 - b. NUnit - 
 - c. PyTest - 
3. It is designed to simplify all testing requirements

TestNG



Why use TestNG?

1. Flexible test configuration using Annotations
2. Control flow of test cases execution
 - a. Grouping (Regression/Smoke/Sanity/BVT)
 - b. Prioritizing (High/Medium/Low)
3. It supports the Parallel execution of test cases.
4. Data-driven testing
 - a. Parameters pass from the testng.xml file



Why use TestNG?

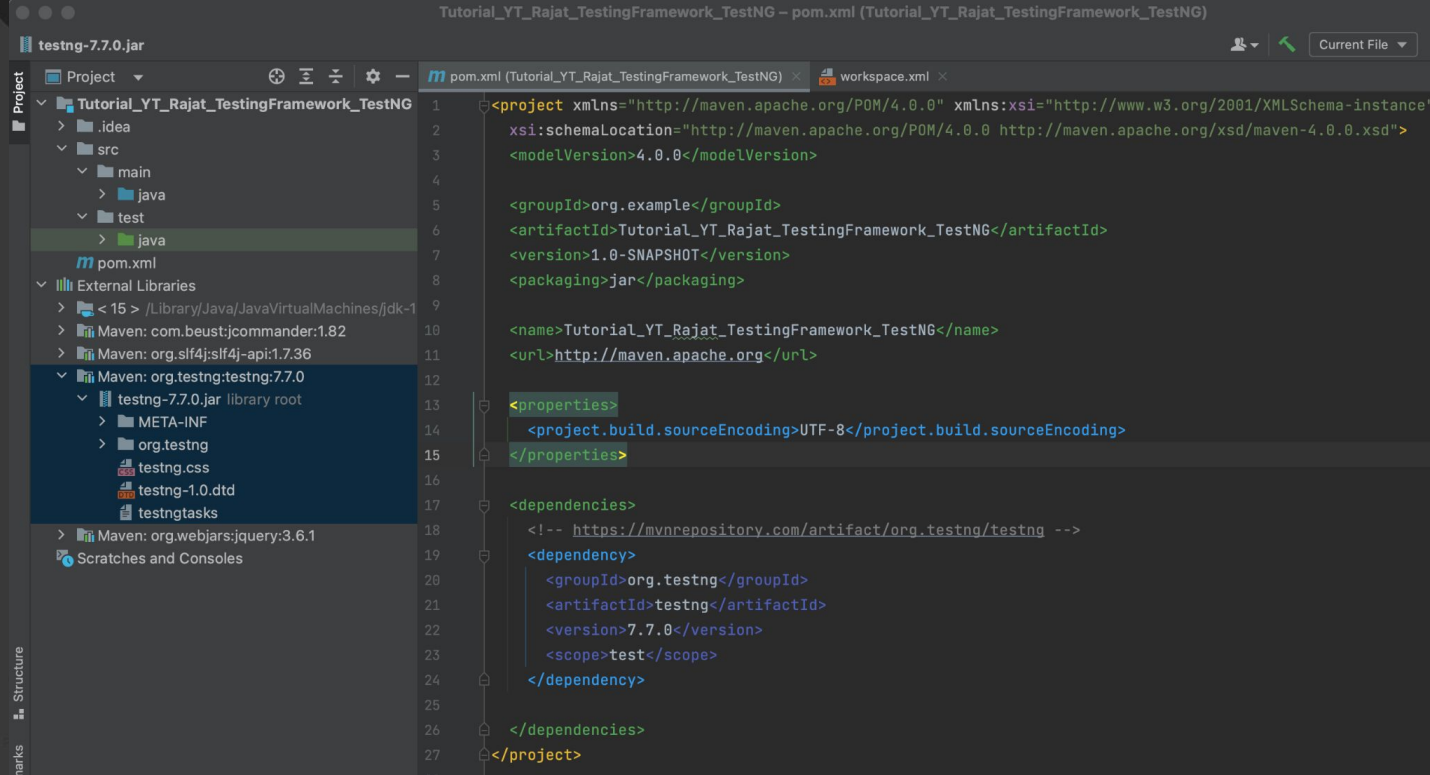
..... (2)

1. Data Provider
 - a. Execute the same test case with multiple data sets
 - i. Example - Login with valid/invalid credentials
 - ii. Test Data - .xlsx, .csv, .json, .xml
2. Re-run the failed test cases only
3. Report generation
 - a. Test cases details (PASS/FAIL/SKIP)

TestNG



How to add TestNG dependency?



The screenshot shows an IDE window titled "Tutorial_YT_Rajat_TestingFramework_TestNG - pom.xml (Tutorial_YT_Rajat_TestingFramework_TestNG)". The left sidebar displays the project structure, including "testng-7.7.0.jar" and "External Libraries". The main editor shows the `pom.xml` file with the following content:

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
4   <modelVersion>4.0.0</modelVersion>
5   <groupId>org.example</groupId>
6   <artifactId>Tutorial_YT_Rajat_TestingFramework_TestNG</artifactId>
7   <version>1.0-SNAPSHOT</version>
8   <packaging>jar</packaging>
9
10   <name>Tutorial_YT_Rajat_TestingFramework_TestNG</name>
11   <url>http://maven.apache.org/</url>
12
13   <properties>
14     <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
15   </properties>
16
17   <dependencies>
18     <!-- https://mvnrepository.com/artifact/org.testng/testng -->
19     <dependency>
20       <groupId>org.testng</groupId>
21       <artifactId>testng</artifactId>
22       <version>7.7.0</version>
23       <scope>test</scope>
24     </dependency>
25
26   </dependencies>
27 </project>
```

TestNG



.com/@rajatt95



Create Test case

```
AppTest.java x
1 package org.example;
2
3 import org.testng.Assert;
4 import org.testng.annotations.Test;
5
6 // AppTest - class name
7 // usage
8 public class AppTest {
9
10 // @Test - Annotation
11 // test_sample - custom method
12 // no usages
13 @Test
14 public void test_sample(){
15     String actual = "https://www.youtube.com/@rajatt95";
16     String expected = "https://www.youtube.com/@rajatt95";
17
18     // Assert - class provided by TestNG framework
19     // assertEquals - Pre-defined method coming from Assert class
20     Assert.assertEquals(actual, expected, message: "Assertion for Strings exact match");
21 }
22 }
```

TestNG

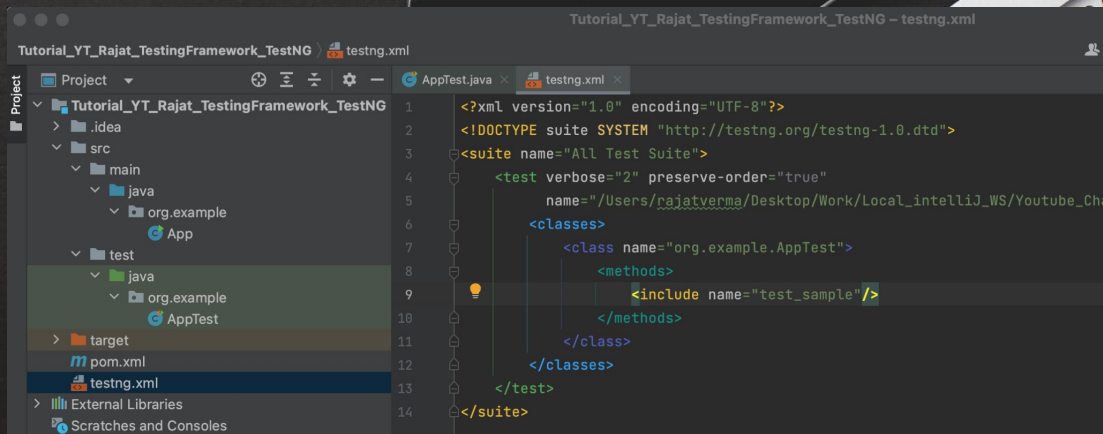
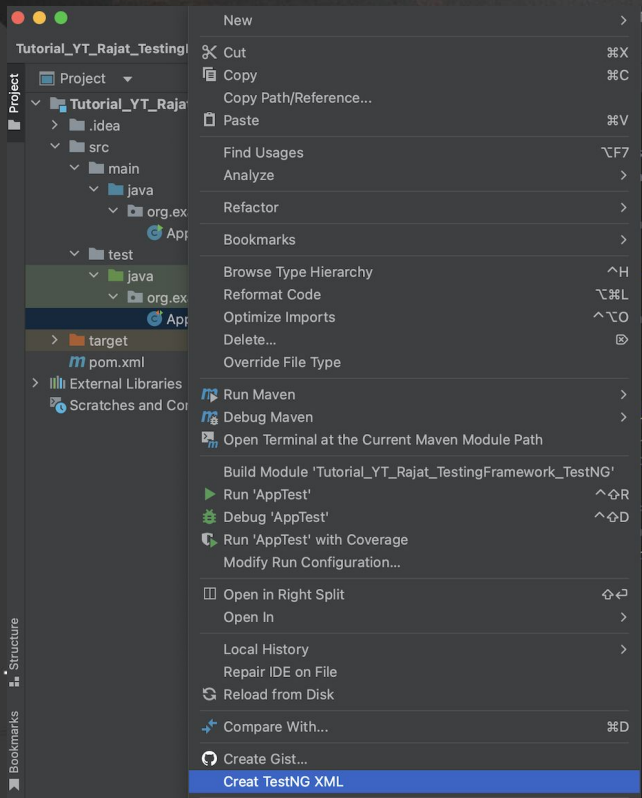


<https://github.com/rajatt95>

<https://www.youtube.com/@rajatt95>



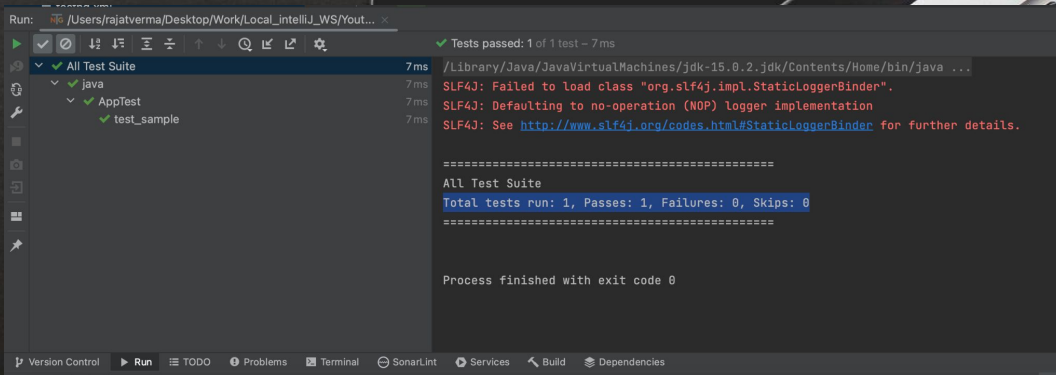
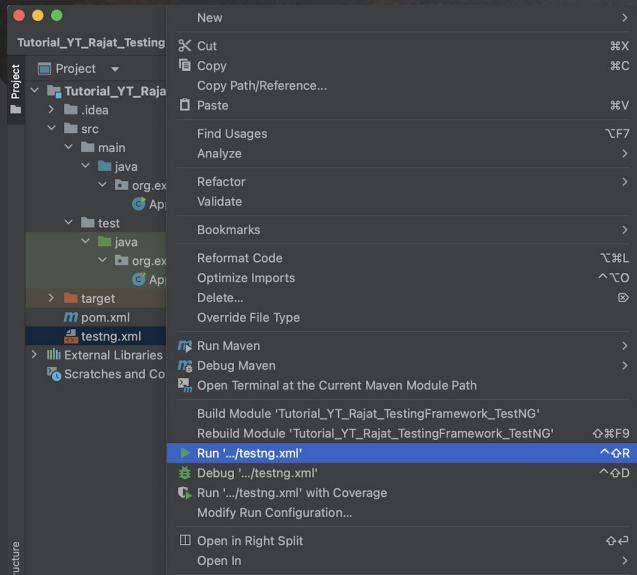
Create a testng.xml file



<https://www.youtube.com/@rajatt95>



Execute test case using testng.xml file



<https://github.com/rajatt95>

<https://www.youtube.com/@rajatt95>



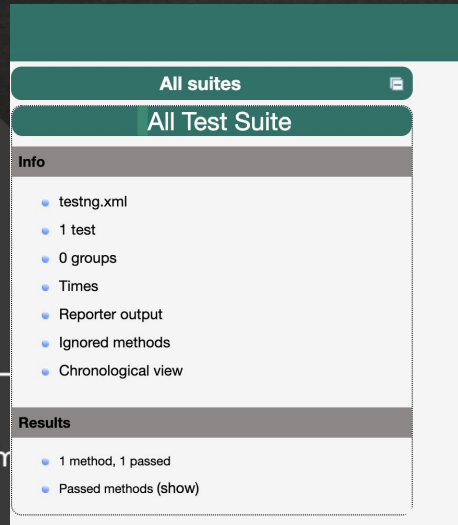
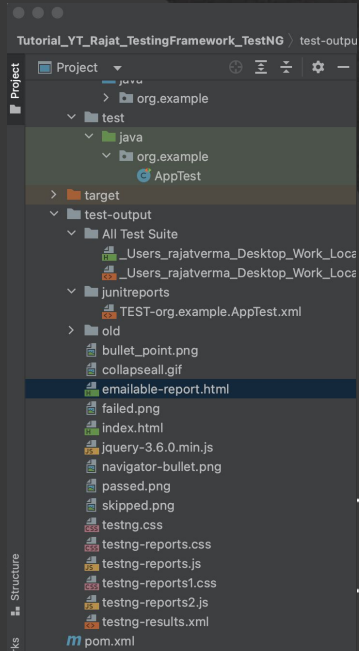
Reports generated by TestNG



1. Emaillable-report.html
2. Index.html

java

Test				# Passed	# Skipped	# Retried	# Failed	Time (ms)
All Test Suite								
/Users/rajatverma/Desktop/Work/Local_intelliJ_WS/Youtube_Channel/Tutorial_YT_Rajat_TestingFramework_TestNG/src/test/java/org/example/AppTest.java				1	0	0	0	65
Class	Method	Start	Time (ms)					
All Test Suite								
/Users/rajatverma/Desktop/Work/Local_intelliJ_WS/Youtube_Channel/Tutorial_YT_Rajat_TestingFramework_TestNG/src/test/java/org/example/AppTest.java — passed								
org.example.AppTest	test_sample	1677358373911	5					
/Users/rajatverma/Desktop/Work/Local_intelliJ_WS/Youtube_Channel/Tutorial_YT_Rajat_TestingFramework_TestNG/src/test/java/org/example.AppTest#test_sample								
back to summary								



<https://www.youtube.com/@rajatt95>



Upcoming Sessions

1. Multiple ways of test execution
2. Test Annotation attributes
3. Parameterization
4. Data Providers
5. Listeners
6. Re-run failed tests
7. Assertions - Soft/Hard
8. Parallel execution - Test cases
9.

TestNG



<https://github.com/rajatt95>

<https://www.youtube.com/@rajatt95>





RAJAT VERMA

SUBSCRIBE

SOFTWARE TEST ENGINEER



Gmail: rajatvermaa95@gmail.com



Github Profile: <https://github.com/rajatt95>



Github Page: <https://rajatt95.github.io>



LinkedIn: <https://www.linkedin.com/in/rajatt95>



Topmate: <https://topmate.io/rajatt95>



Telegram: <https://t.me/rajatt95>



Instagram: <https://www.instagram.com/rajattvermaa95>



Youtube: <https://www.youtube.com/@rajatt95>