Project Based Learning:

TestNG Annotations

### 1 - Introduction

# TestNG is a testing framework designed to simplify a broad range of testing needs, from unit testing (testing a class in isolation of the others) to integration testing (testing entire systems made of several classes, several packages and even several external frameworks, such as application servers).

### 2 - Installation:

The below dependency can be added to the pom.xml and it will download the plugin from the Maven repository.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | <dependency> |  |  | | --- | | <groupId>org.testng</groupId> |  |  | | --- | | <artifactId>esting</artifactId> |  |  | | --- | | <version>6.10</version> |  |  | | --- | | <scope>test</scope> |  |  | | --- | | </dependency> | |

**Install via Eclipse Marketplace:**

Go to the [TestNG page on the Eclipse Market Place](https://marketplace.eclipse.org/content/testng-eclipse) and drag the icon called "Install" onto your workspace.

**Install from update site:**

Select Help / Install New Software...

Enter the update site URL in "Work with:" field:

Update site for release: <https://beust.com/eclipse>.

Or, Update site for beta: <https://beust.com/eclipse-beta> , use it if you want to experiment with the new features or verify the bug fixes, and please [report back if you encounter any issues](https://github.com/cbeust/testng-eclipse/issues).

Make sure the check box next to URL is checked and click Next.

Eclipse will then guide you through the process.

### 3 - Annotations

|  |  |
| --- | --- |
| **Annotations** | **Description** |
| @BeforeSuite | The annotated method will be run before all tests in this suite have run. |
| @AfterSuite | The annotated method will be run after all tests in this suite have run. |
| @BeforeTest | The annotated method will be run before any test method belonging to the classes inside the <test> tag is run |
| @AfterTest | The annotated method will be run after all the test methods belonging to the classes inside the <test> tag have run |
| @BeforeGroups | The list of groups that this configuration method will run before. This method is guaranteed to run shortly before the first test method that belongs to any of these groups is invoked. |
| @AfterGroups | The list of groups that this configuration method will run after. This method is guaranteed to run shortly after the last test method that belongs to any of these groups is invoked. |
| @BeforeClass | The annotated method will be run before the first test method in the current class is invoked |
| @AfterClass | The annotated method will be run after all the test methods in the current class have been run |
| @BeforeMethod | The annotated method will be run before each test method. |
| @AfterMethod | The annotated method will be run after each test method |
|  |  |

|  |  |
| --- | --- |
| **Annotations with Parameters** | **Description** |
| @Test(dependsOnMethods = { "MethodName" }) | The dependent method will run first |
| @Test(dependsOnMethods = { "MethodName1" ,”MethodName2”}) | The dependent Methods MethodNAme3 and MethodName1 will run first |
| alwaysRun | Setting **alwaysRun** attribute on a test method to **true** forces the execution of this test even if the tests it depends on were failed. |
| enabled | To enable /disable test case |
| expectedExceptions | Feature to test the expected exception your code might throw in certain situations |
| @Parameters | Can be used to pass the parameters |
| @DataProvider | Can be used to pass the complex parameters.For example: [Example](https://howtodoinjava.com/testng/testng-dataprovider/) |
| description | It is a string which is attached to the @Test annotation that describes the information about the test. |
| priority | When no 'priority' attribute is specified then the TestNG will run the test cases in alphabetical order.   When the priority is set, the lowest priority test case will run first and the highest priority test case will be executed last |
| groups | The 'groups' attribute is used to group the different test cases that belong to the same functionality. |
| timeOut | The timeOut is a time period provided to the test case to completely execute its test case. |