

 무료 전자 책

배우기

testng

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#testng

.....	1
1: testng	2
.....	2
.....	2
Examples.....	2
.....	2
TestNG	2
TestNG Hello World	3
Gradle TestNG Suite	4
Eclipse TestNG xml	4
2: @Test Annotation	11
.....	11
.....	11
Examples.....	11
@Test	11
3: TestNG -	13
Examples.....	13
TestNG API	13
4: TestNG	15
.....	15
Examples.....	15
TestNG	15
TestNG -	16
5:	18
Examples.....	18
.....	18
.....	19

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1: testng

testng , .

testng . testng .

1.0	2017-06-07
-----	------------

Examples

TestNG JDK 7 .

<http://testng.org/doc/download.html> testng maven pom.xml gradle build.gradle testng

:

```
<repositories>
  <repository>
    <id>jcenter</id>
    <name>bintray</name>
    <url>http://jcenter.bintray.com</url>
  </repository>
</repositories>

<dependency>
  <groupId>org.testng</groupId>
  <artifactId>testng</artifactId>
  <version>6.9.12</version>
  <scope>test</scope>
</dependency>
```

:

```
repositories {
    jcenter()
}

dependencies {
    testCompile 'org.testng:testng:6.9.12'
}
```

.

TestNG

```
package example;

import org.testng.annotations.*; // using TestNG annotations
```

```

public class Test {

    @BeforeClass
    public void setUp() {
        // code that will be invoked when this test is instantiated
    }

    @Test(groups = { "fast" })
    public void aFastTest() {
        System.out.println("Fast test");
    }

    @Test(groups = { "slow" })
    public void aSlowTest() {
        System.out.println("Slow test");
    }

}

```

setUp() . aFastTest() aSlowTest() .

TestNG Hello World

TestNG 3 .

1. - [TestNG](#) .
2. - testng.xml build.xml .
3. [TestNG](#) - Eclipse , ANT, IDE, IntelliJ IDEA)

():

RandomNumberGenerator generateFourDigitPin 4 PIN int . 4 . .

:

```

package example.helloworld;

public class RandomNumberGenerator {

    public int generateFourDigitPin(){
        return (int)(Math.random() * 10000);
    }
}

```

TestNG :

```

package example.helloworld;

import org.testng.Assert;
import org.testng.annotations.AfterClass;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.Test;

public class TestRandomNumberGenerator {

```

```

RandomNumberGenerator rng = null;

@BeforeClass
public void deSetup(){
    rng = new RandomNumberGenerator();
}

@Test
public void testGenerateFourDigitPin(){
    int randomNumber = rng.generateFourDigitPin();
    Assert.assertEquals(4, String.valueOf(randomNumber).length());
}

@AfterClass
public void doCleanup(){
    //cleanup stuff goes here
}
}

```

The testng.xml :

```

<suite name="Hello World">
  <test name="Random Number Generator Test">
    <classes>
      <class name="example.helloworld.TestRandomNumberGenerator" />
    </classes>
  </test>
</suite>

```

Gradle TestNG Suite

build.gradle :

```

plugin: 'java'

repositories {
    mavenLocal()
    mavenCentral()
    jcenter()
}

dependencies {
    compile "org.testng:testng:6.9.12"
}

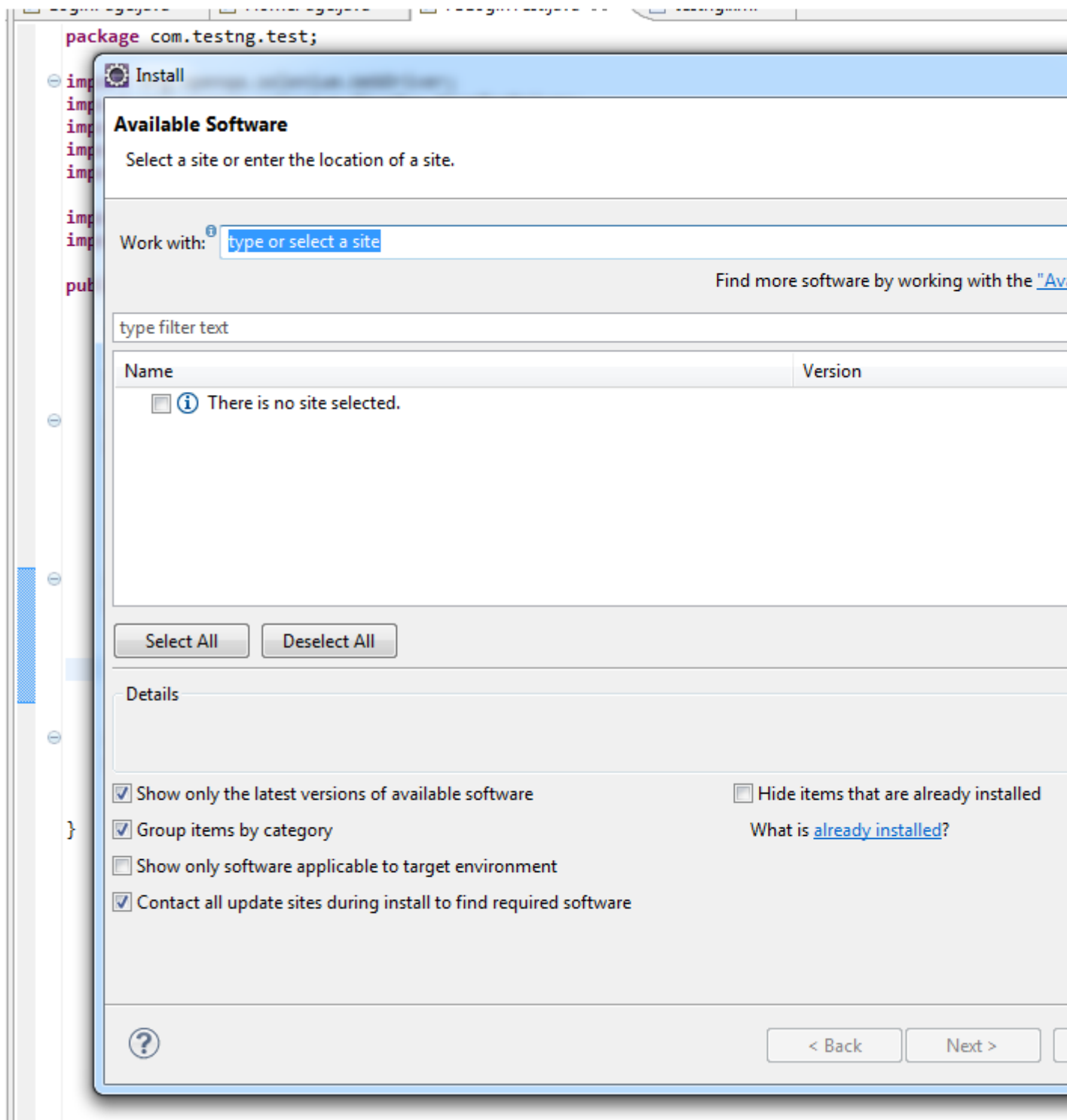
test {
    useTestNG() {
        suiteXmlBuilder().suite(name: 'Sample Suite') {
            test(name: 'Sample Test') {
                classes('') {
                    'class'(name: 'your.sample.TestClass')
                }
            }
        }
    }
}

```

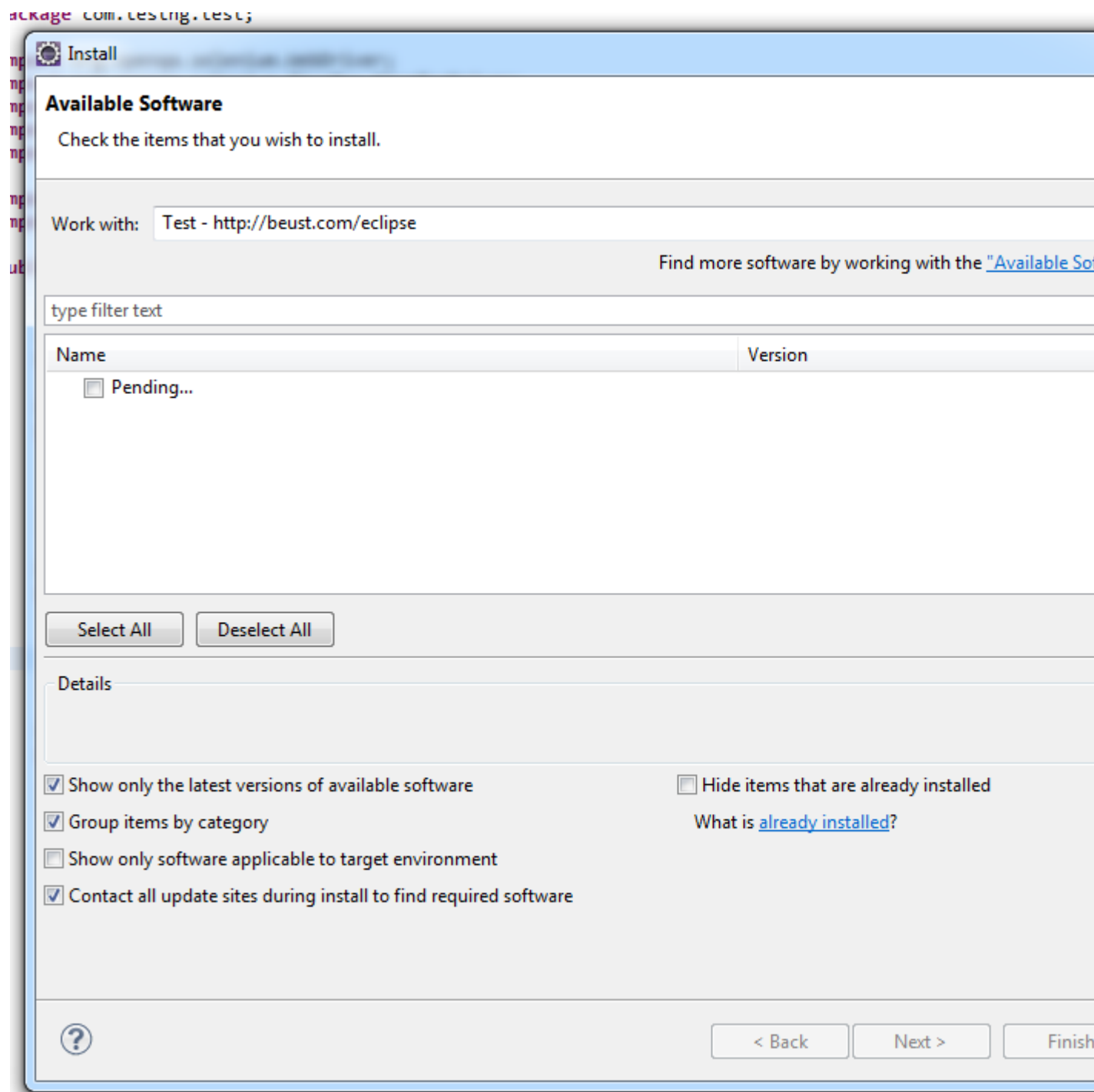
Eclipse TestNG xml

Eclipse TestNG

- 1.
2. > .

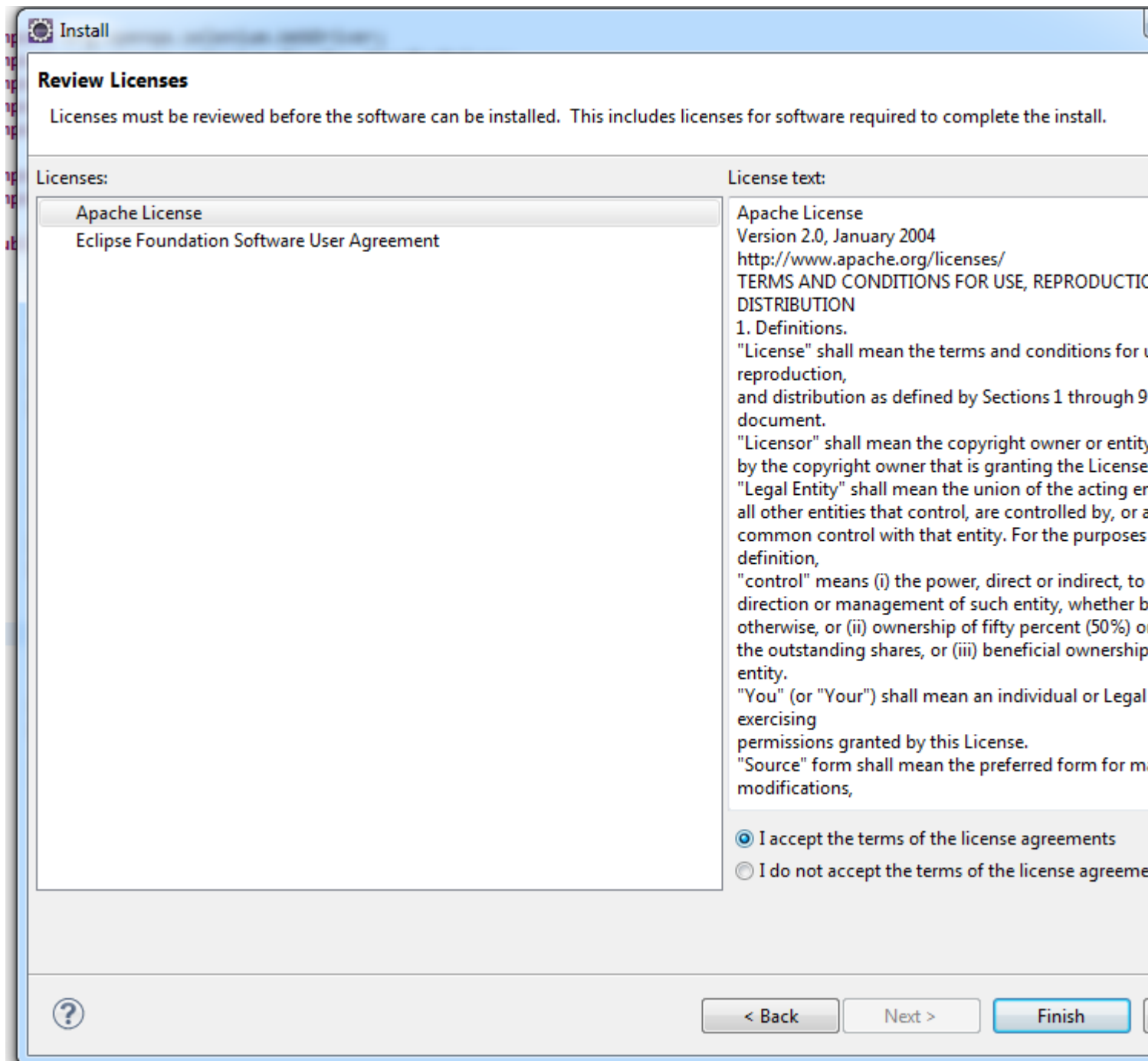


3. .
4. URL - <http://beast.com/eclipse>



5. TestNG

6. .



7. .

8. TestNG .

TestNG .

1. > > > .

2. TestNGClass

3. 1.LoginPage.class

2.HomePage.class

3.FBLoginTest.class

LoginPage

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.FindBy;
import org.openqa.selenium.support.PageFactory;

public class LoginPage {

    @FindBy(id = "email")
    private WebElement username;

    @FindBy(id = "pass")
    private WebElement password;

    @FindBy(xpath = "//*[@data-testid='royal_login_button']")
    private WebElement login;

    WebDriver driver;

    public LoginPage(WebDriver driver){
        this.driver = driver;
        PageFactory.initElements(driver, this);
    }
    public void enterUserName(String name){
        username.clear();
        username.sendKeys(name);
    }

    public void enterPassword(String passwr){
        password.clear();
        password.sendKeys(passwr);
    }

    public HomePage clickLoginButton(){
        login.click();
        return new HomePage(driver);
    }
}
```

HomePage

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.FindBy;
import org.openqa.selenium.support.PageFactory;

public class HomePage {

    @FindBy(id = "userNavigationLabel")
    private WebElement userDropdown;

    WebDriver driver;
```

```

public HomePage(WebDriver driver){
    this.driver = driver;
    PageFactory.initElements(driver, this);
}

public boolean isUserLoggedIn(){
    return userDropdown.isDisplayed();
}

}

```

FBLoginTest

```

import org.openqa.selenium.WebDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.testng.Assert;
import org.testng.annotations.Test;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.AfterClass;

import com.testng.pages.HomePage;
import com.testng.pages.LoginPage;

public class FBLoginTest {

    WebDriver driver;
    LoginPage loginPage;
    HomePage homePage;

    @BeforeClass
    public void openFBPage(){
        driver = new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        loginPage = new LoginPage(driver);
    }

    @Test
    public void loginToFB(){
        loginPage.enterUserName("");
        loginPage.enterPassword("");
        homePage = loginPage.clickLoginButton();
        Assert.assertTrue(homePage.isUserLoggedIn());
    }

    @AfterClass
    public void closeBrowser(){
        driver.quit();
    }

}

```

testng xml : XML .

```

<?xml version="1.0" encoding="UTF-8"?>
<suite name="Suite">
  <test name="Test">
    <classes>
      <class name="com.testng.FBLoginTest"/>
    </classes>
  </test>
</suite>

```

```
</test> <!-- Test -->
</suite> <!-- Suite -->
```

:

jar .

1. > > > > Jar .

TestNG xml ? xml> Run as> TestNGSuite .

:)

testng : <https://riptutorial.com/ko/testng/topic/5393/testng->

2: @Test Annotation

- @
- @Test (attribute1 = attributeValue, attribute2 = attributeValue)

alwaysRun	true
dataProvider	.
dataProviderClass	. . .
dependsOnGroups	.
dependsOnMethods	.
	.
	/ .
expectedExceptions	throw . .
	/ .
invocationCount	.
invocationTimeout	invocationcount (). invocationCount .
	. .
successPercentage	
	true parallel="methods" . . : ().
timeOut	().
threadPoolSize	. invocationCount . : invocationCount .

Examples

@Test

@Test . . .

1. @Test -
2. @Test @Test
 - @Test public @Test .
 - @Test

@Test :

```
import org.testng.annotations.Test;

public class TestClass1 {
    public void notTestMethod() {
    }

    @Test
    public void testMethod() {
    }
}
```

@Test of class level :

```
import org.testng.annotations.Test;

@Test
public class TestClass2 {
    public void testMethod1() {
    }

    @Test
    public void testMethod2() {
    }
}
```

@Test Annotation : <https://riptutorial.com/ko/testng/topic/6716/-test-annotation>

3: TestNG -

Examples

TestNG API

```
public class TestngAnnotation {
    // test case 1
    @Test
    public void testCase1() {
        System.out.println("in test case 1");
    }

    // test case 2
    @Test
    public void testCase2() {
        System.out.println("in test case 2");
    }

    @BeforeMethod
    public void beforeMethod() {
        System.out.println("in beforeMethod");
    }

    @AfterMethod
    public void afterMethod() {
        System.out.println("in afterMethod");
    }

    @BeforeClass
    public void beforeClass() {
        System.out.println("in beforeClass");
    }

    @AfterClass
    public void afterClass() {
        System.out.println("in afterClass");
    }

    @BeforeTest
    public void beforeTest() {
        System.out.println("in beforeTest");
    }

    @AfterTest
    public void afterTest() {
        System.out.println("in afterTest");
    }

    @BeforeSuite
    public void beforeSuite() {
        System.out.println("in beforeSuite");
    }

    @AfterSuite
    public void afterSuite() {
        System.out.println("in afterSuite");
    }
}
```

```
}  
  
}
```

C :> WORKSPACE testng.xml .

```
<suite name="Suite1">  
  <test name="test1">  
    <classes>  
      <class name="TestngAnnotation"/>  
    </classes>  
  </test>  
</suite>
```

C : \ WORKSPACE> javac TestngAnnotation.java

testng.xml . Test Case .

```
in beforeSuite  
in beforeTest  
in beforeClass  
in beforeMethod  
in test case 1  
in afterMethod  
in beforeMethod  
in test case 2  
in afterMethod  
in afterClass  
in afterTest  
in afterSuite  
  
=====
```

Suite
Total tests run: 2, Failures: 0, Skips: 0
=====

1. , **beforeSuite ()** .
2. **afterSuite ()** .
3. **beforeTest ()** , **beforeClass ()** , **afterClass ()** **afterTest ()** .
4. **beforeMethod ()** .
5. **afterMethod ()** .
6. **beforeMethod ()** **afterMethod ()** .

TestNG - : <https://riptutorial.com/ko/testng/topic/7889/testng---->

4: TestNG

- `@Test (groups = { "group1", "group.regression"}, dependsOnGroups = { "group2", "group3"})`

Examples

TestNG

```
testng.xml Suite / Test . tesng.xml , .@Test testng.xml @Test .
```

```
Test testng.xml .
```

```
<suite name="Suite World">
<test name="Test Name">
  <groups>
    <run>
      <include name="functest" />
      <exclude name="regtest" />
    </run>
  </groups>
  <classes>
    <class name="example.group.GroupTest"/>
  </classes>
</test>
</suite>
```

```
:
```

```
package example.group;

import org.testng.annotations.AfterClass;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.Test;

public class GroupTest {

    @BeforeClass
    public void deSetup(){
        //do configuration stuff here
    }

    @Test(groups = { "functest", "regtest" })
    public void testMethod1() {
    }

    @Test(groups = { "functest", "regtest" } )
    public void testMethod2() {
    }

    @Test(groups = { "functest" })
    public void testMethod3() {
    }

    @AfterClass
```

```

public void cleanUp(){
    //do resource release and cleanup stuff here
}
}

```

```

GroupTest TestNG testMethod3() .

```

:

- <include name="functest" /> functest .
- <exclude name="regtest" /> regtest .
- testMethod1() testMethod2() regtest .
- testMethod3() regtest .

TestNG -

TestNG . @Test .

@Test . . **MetaGroup** .

1. allstack - liux.jboss.oracle aix.was.db2 .
2. systemtest - allstack , regression acceptance .

testng.xml

```

<suite name="Groups of Groups">
  <test name="MetaGroups Test">
    <groups>
      <!-- allstack group includes both liux.jboss.oracle and aix.was.db2 groups -->
      <define name="allstack">
        <include name="liux.jboss.oracle" />
        <include name="aix.was.db2" />
      </define>

      <!-- systemtest group includes all groups allstack, regression and acceptance -->
      <define name="systemtest">
        <include name="allstack" />
        <include name="regression" />
        <include name="acceptance" />
      </define>

      <run>
        <include name="systemtest" />
      </run>
    </groups>

    <classes>
      <class name="example.group.MetaGroupsTest" />
    </classes>
  </test>
</suite>

```

MetaGroupsTest

```

package example.group;

import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.Test;

public class MetaGroupsTest {

    @BeforeMethod
    public void beforeMethod(){
        //before method stuffs - setup
    }

    @Test(groups = { "liux.jboss.oracle", "acceptance" })
    public void testOnLinuxJbossOracleStack() {
        //your test logic goes here
    }

    @Test(groups = {"aix.was.db2", "regression" } )
    public void testOnAixWasDb2Stack() {
        //your test logic goes here
    }

    @Test(groups = "acceptance")
    public void testAcceptance() {
        //your test logic goes here
    }

    @Test(groups = "regression")
    public void testRegression(){
        //your test logic goes here
    }

    @AfterMethod
    public void afterMthod(){
        //after method stuffs - cleanup
    }
}

```

TestNG : <https://riptutorial.com/ko/testng/topic/5821/testng->

5:

Examples

. @DataProvider Object[][] Iterator<Object[]> . @DataProvider name .

```
import org.testng.annotations.DataProvider;

public class DoublingDataProvider {
    public final static String DOUBLING_DATA_PROVIDER = "doublingDataProvider";

    @DataProvider(name = DOUBLING_DATA_PROVIDER)
    public static Object[][] doubling() {
        return new Object[][]{
            new Object[]{1, 2},
            new Object[]{2, 4},
            new Object[]{3, 6}
        };
    }
}
```

Object[] . . .

dataProvider . dataProviderClass . int .

```
import org.testng.annotations.Test;
import static org.testng.Assert.assertEquals;

public class DoublingTest {

    @Test(dataProvider = DoublingDataProvider.DOUBLING_DATA_PROVIDER, dataProviderClass =
    DoublingDataProvider.class)
    public void testDoubling(int number, int expectedResult) {
        assertEquals(number * 2, expectedResult);
    }
}
```

: <https://riptutorial.com/ko/testng/topic/5684/--->

S. No		Contributors
1	testng	Atul Dwivedi , Community , Idos , mackowski , RocketRaccoon , Sudha Velan
2	@Test Annotation	Atul Dwivedi , Benoit
3	TestNG -	Shrikant
4	TestNG	Atul Dwivedi
5		Benoit , mszymborski