

Selenium Class 38 - TestNG Testing Framework for Selenium Part-3

5) Execute multiple Programs / Classes using XML

- HTML and XML are tag based languages and no control flow in these languages

- HTML - Web page design (Web UI design)

- XML - Data Transporting

XML file for executing multiple programs / classes

```
<suite name = "Suite Name">
<test name = "Test Name">
<classes>
<class name = "package.class1name"/>
<class name = "package.class2name"/>
</classes>
</test>
</suite>
```

.....

Tags in this XML file

suite tag,

test tag,

classes tag,

class tag

.....

Writing tags,

<tagName> -Open tag

</tagName> -Close tag

Or

<tagName/> -Open and Close

.....

Navigation for creating XML file in Eclipse IDE,

In Eclipse IDE,

Select Java Package and right click

> New

> Other

> Enter "TestNG"

> Enter source and package names

> Enter XML file Name

> Finish

.....

1) Execute multiple programs / classes using xml with @BeforeMethod and @AfterMethod

XML File:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<suite name="Suite" parallel="false">
```

```
  <test name="Test">
```

```
    <classes>
```

```
      <class name="abcd.Class1"/>
```

```
<class name="abcd.Class2"/>
</classes>
</test> <!-- Test -->
</suite> <!-- Suite -->
```

.....

Class1 File:

```
public class Class1 {
    WebDriver driver;
    @BeforeMethod
    public void launchBrowser(){
        System.setProperty("webdriver.chrome.driver", "E:/chromedriver.exe");
        driver = new ChromeDriver();
        driver.manage().window().maximize();
    }
    @Test (priority=1)
    public void verifyGoogleTitle(){
        driver.get("https://www.google.com/");
        Assert.assertEquals("Google", driver.getTitle());
    }
    @Test (priority=2)
    public void verifyYahooTitle(){
        driver.get("https://in.yahoo.com/");
        Assert.assertEquals("Yahoo", driver.getTitle());
    }
    @Test (priority=3)
    public void verifyGcritTitle(){
```

G C Reddy Technologies (www.gcreddy.com)

```
driver.get("http://www.gcrit.com/build3/admin/");
Assert.assertEquals("GCR Shop", driver.getTitle());
}
@AfterMethod
public void closeBrowser(){
driver.close();
}
}
```

Class2 File:

```
public class Class2 {
WebDriver driver;
@BeforeMethod
public void launchBrowser(){
System.setProperty("webdriver.chrome.driver", "E:/chromedriver.exe");
driver = new ChromeDriver();
driver.manage().window().maximize();
}
@Test (priority=4)
public void verifyBankOfAmericaTitle(){
driver.get("https://www.bankofamerica.com/");
Assert.assertEquals("Bank of America - Banking, Credit Cards, Home Loans
and Auto Loans", driver.getTitle());
}
@Test (priority=5)
public void verifyICICIBankTitle(){
driver.get("https://www.icicibank.com/");
```

```
Assert.assertEquals("Personal Banking, Online Banking Services - ICICI
Bank", driver.getTitle());
}
@Test (priority=6)
public void verifyGcreddyTitle(){
driver.get("http://www.gcreddy.com/");
Assert.assertEquals("Software Testing - A blog about Manual Testing,
Selenium, UFT/QTP, SQL, Java and Python Step by Step Tutorials by G C
Reddy.", driver.getTitle());
}
@AfterMethod
public void closeBrowser(){
driver.close();
}
}
```

2) Execute multiple programs / classes using xml with @BeforeClass and @AfterClass

Class1 File:

```
public class Class1 {
WebDriver driver;
@BeforeClass
public void launchBrowser(){
System.setProperty("webdriver.chrome.driver", "E:/chromedriver.exe");
driver = new ChromeDriver();
driver.manage().window().maximize();
}
@Test (priority=1)
```

```
public void verifyGoogleTitle(){
driver.get("https://www.google.com/");
Assert.assertEquals("Google", driver.getTitle());
}
@Test (priority=2)
public void verifyYahooTitle(){
driver.get("https://in.yahoo.com/");
Assert.assertEquals("Yahoo", driver.getTitle());
}
@Test (priority=3)
public void verifyGcritTitle(){
driver.get("http://www.gcrit.com/build3/admin/");
Assert.assertEquals("GCR Shop", driver.getTitle());
}
@AfterClass
public void closeBrowser(){
driver.close();
}
}
```

Class2 File:

```
public class Class2 {
WebDriver driver;
@BeforeClass
public void launchBrowser(){
System.setProperty("webdriver.chrome.driver", "E:/chromedriver.exe");
```

```
driver = new ChromeDriver();
driver.manage().window().maximize();
}
@Test (priority=4)
public void verifyBankOfAmericaTitle(){
driver.get("https://www.bankofamerica.com/");
Assert.assertEquals("Bank of America - Banking, Credit Cards, Home Loans
and Auto Loans", driver.getTitle());
}
@Test (priority=5)
public void verifyICICIBankTitle(){
driver.get("https://www.icicibank.com/");
Assert.assertEquals("Personal Banking, Online Banking Services - ICICI
Bank", driver.getTitle());
}
@Test (priority=6)
public void verifyGcreddyTitle(){
driver.get("http://www.gcreddy.com/");
Assert.assertEquals("Software Testing - A blog about Manual Testing,
Selenium, UFT/QTP, SQL, Java and Python Step by Step Tutorials by G C
Reddy.", driver.getTitle());
}
@AfterClass
public void closeBrowser(){
driver.close();
}
}
}
.....
```

Using @BeforeTest and @AfterTest Annotations

(Common precondition and common post condition for all test cases in multiple programs/classes)

Note: use one parent class to create Browser driver and close, by inheriting classes we can execute

@BeforeTest and @AfterTest Annotations

XML File:

```
<?xml version="1.0" encoding="UTF-8"?>
<suite name="Suite" parallel="false">
  <test name="Test">
    <classes>
      <class name="abcd.Class1"/>
      <class name="abcd.Class2"/>
    </classes>
  </test> <!-- Test -->
</suite> <!-- Suite -->
```

.....

Parent File:

```
public class ClassP {
static WebDriver driver;
```

@BeforeTest

```
public void launchBrowser(){
```



```
System.setProperty("webdriver.chrome.driver", "E:/chromedriver.exe");
driver = new ChromeDriver();
driver.manage().window().maximize();
}
@AfterTest
public void closeBrowser(){
driver.close();
}
}
```

Class1 File:

```
public class Class1 extends ClassP {

@Test (priority=1)
public void verifyGoogleTitle(){
driver.get("https://www.google.com/");
Assert.assertEquals("Google", driver.getTitle());
}

@Test (priority=2)
public void verifyYahooTitle(){
driver.get("https://in.yahoo.com/");
Assert.assertEquals("Yahoo", driver.getTitle());
}

@Test (priority=3)
public void verifyGcritTitle(){
driver.get("http://www.gcrit.com/build3/admin/");
```

```
Assert.assertEquals("GCR Shop", driver.getTitle());  
}  
}
```

Class2 File:

```
public class Class2 extends ClassP{  
  
    @Test (priority=4)  
    public void verifyBankOfAmericaTitle(){  
        driver.get("https://www.bankofamerica.com/");  
        Assert.assertEquals("Bank of America - Banking, Credit Cards, Home Loans  
and Auto Loans", driver.getTitle());  
    }  
    @Test (priority=5)  
    public void verifyICICIBankTitle(){  
        driver.get("https://www.icicibank.com/");  
        Assert.assertEquals("Personal Banking, Online Banking Services - ICICI  
Bank", driver.getTitle());  
    }  
    @Test (priority=6)  
    public void verifyGcreddyTitle(){  
        driver.get("http://www.gcreddy.com/");  
        Assert.assertEquals("Software Testing - A blog about Manual Testing,  
Selenium, UFT/QTP, SQL, Java and Python Step by Step Tutorials by G C  
Reddy.", driver.getTitle());  
    }  
}
```

6) Grouping Test Cases

```
<suite name = "Suite Name">  
<test name = "Test Name">  
<groups>  
<run>  
<include name ="Group name">  
</run>  
  
<classes>  
<class name = "package.Class1Name"/>  
<class name = "package.Class2Name"/>  
</classes>  
</groups>  
</test>  
</suite>
```

a) tags in XML file for executing multiple programs

suite,
test,
classes,
class,

b) Tags in XML file for grouping Test Cases

suite,
test,
groups,

run,

include,

classes,

class,

.....

Test Groups

1) Sanity Tests

i) launchBrowser()

ii) verifyGoogleTitle()

iii) verifyGcritTitle()

iv) closeBrowser()

2) Regression Tests

i) launchBrowser()

ii) verifyYahooTitle()

iii) verifyGcritTitle()

iv) verifyGcreddyTitle()

v) closeBrowser()

.....

XML File:

```
<suite name="Suite" parallel="false">  
  <test name="Test">  
    <groups>  
    <run>
```

```
<include name = "regression"/>
</run>
  <classes>
    <class name="abcd.Class7"/>
  </classes>
</groups>
</test> <!-- Test -->
</suite> <!-- Suite -->
```

Class File:

```
public class Class7 {
WebDriver driver;

@Test(groups = {"sanity", "regression"}, priority=1)
public void launchBrowser(){
System.setProperty("webdriver.chrome.driver", "E:/chromedriver.exe");
driver = new ChromeDriver();
driver.manage().window().maximize();
}

@Test(groups = {"sanity", "regression"}, priority=6)
public void closeBrowser(){
driver.close();
}

@Test (groups = {"sanity"}, priority=2)
public void verifyGoogleTitle(){
```

```
driver.get("https://www.google.com/");
Assert.assertEquals("Google", driver.getTitle());
}
@Test (groups = {"regression"}, priority=3)
public void verifyYahooTitle(){
driver.get("https://in.yahoo.com/");
Assert.assertEquals("Yahoo", driver.getTitle());
}
@Test (groups = {"sanity", "regression"}, priority=4)
public void verifyGcritTitle(){
driver.get("http://www.gcrit.com/build3/admin/");
Assert.assertEquals("GCR Shop", driver.getTitle());
}
@Test (groups = {"regression"}, priority=5)
public void verifyGcreddyTitle(){
driver.get("http://www.gcreddy.com/");
Assert.assertEquals("Software Testing - A blog about Manual Testing,
Selenium, UFT/QTP, SQL, Java and Python Step by Step Tutorials by G C
Reddy.", driver.getTitle());
}
}
}
.....
```