

Parameters in TestNG: Passing the values to Test method through TestNG xml file

If we want to pass a value from TestNg xml file then

we need to use @Parameters annotation on the top of Test method

```
@Parameter("paramter_name")
@Test
public void m1()
{
    //logic
}
```

In the TestNg xml file we need to specify **parameter** tag as bleow

```
<suite name="DemoSuite">
    <test name="Test1">
        <paramter name="paramter_name">
    <classes>
        <class name="fully qualified name">
            <include name="">
        </class>
    </classes>
    </test>
</suite>
```

Complete Example

```
public class ParameterDemoTest
{
    @Parameters("url")
    @Test
    public void launchBrowser(String url)
    {
        WebDriverManager.chromedriver().setup();
        WebDriver driver=new ChromeDriver();
        driver.manage().window().maximize();
        driver.get(url);
    }
}

<suite name="DemoSuite">
    <test name="Test1"> 1
        <parameter name="url" value="https://www.google.com/">
    <classes>
        <class name="com.testng.demo.ParameterDemoTest">
    <methods>
        <include name="LaunchBrowser"/>
    </methods>
    </class>
    </classes>
    </test>
</suite>
```

1 must be same

Passing parameters at Test Level

-> If we are passing parameters at suite level then those parameters are available for all Test under suite

```
<suite name="DemoSuite">
  <parameter name="url" value="https://www.google.com/" />
  <test name="Test1">
    <classes>
      <class name="com.testng.demo.ParameterDemoTest">
        <methods>
          <include name="LaunchBrowser" />
        </methods>
      </class>
    </classes>
  </test>
</suite>
```

If I have applied parameter at suite level and parameter at test level then which one will get high priority?

-> If we have applied parameter at suite level and at test level then test level parameter gets high priority

```
<suite name="DemoSuite">
  <parameter name="url" value="https://www.google.com/" />
  <test name="Test1">
    <parameter name="url" value="https://www.guru99.com/xpath-selenium.html" />
    <classes>
      <class name="com.testng.demo.ParameterDemoTest">
        <methods>
          <include name="LaunchBrowser" />
        </methods>
      </class>
    </classes>
  </test>
</suite>
```

Demo program to pass url and browser name from Xml file and open that browser and url

Test Class Code is as below

```
public class ParameterDemoTest {
    WebDriver driver;
    @Parameters({"url","browserName"})
    @Test
    public void launchBrowser(String url,String browserName)
    {
        switch (browserName) {
            case "chrome":
                WebDriverManager.chromedriver().setup();
                driver=new ChromeDriver();
                driver.manage().window().maximize();
                driver.get(url);
                break;
            case "edge":
                WebDriverManager.edgedriver().setup();
                driver=new EdgeDriver();
                driver.manage().window().maximize();
                driver.get(url);
                break;
            default:
                System.out.println("Invalid Brwoser name");
                break;
        }
    }
}
```

XML File Code is as below

```
<suite name="DemoSuite">
  <parameter name="url" value="https://www.google.com/" />
  <test name="Test1">
    <parameter name="browserName" value="chrome" />
    <classes>
      <class name="com.testng.demo.ParameterDemoTest">
        <methods>
          <include name="launchBrowser" />
        </methods>
      </class>
    </classes>
  </test>
  <test name="Test2">
    <parameter name="browserName" value="edge" />
    <classes>
      <class name="com.testng.demo.ParameterDemoTest">
        <methods>
          <include name="launchBrowser" />
        </methods>
      </class>
    </classes>
  </test>
</suite>
```

Optional Parameters in TestNG

If we want to mark any parameter values as optional then we need to use @Optional Annotation

Where to use?

Example

```
@Parameters({"url", "browserName"})
@Test
public void launchBrowser(String url, @Optional("chrome") String browserName)
{
    //logic
}
```

default value

Grouping of Test in TestNg

suppose I have below different test group

- 1) sanity
- 2) regression
- 3) smoke
- 4) dailyBasis
- 5) weeklyBasis

If we want to group multiple test into a group then we need to use `groups` attribute of `@Test` annotation

Example : Apply one group

```
@Test(groups = {"sanity"})
public void t1()
{
    System.out.println("t1");
}
```

Example 2: Apply two groups for one Test

```
@Test(groups = {"sanity", "smoke"})
public void t3()
{
    System.out.println("t3");
}
```

Note: If we want to execute test of particular group then we need to execute it from `TestNg xml file`, from Test class it is not possible to execute Test of a particular group

Example : use groups at test level

```
<suite name="DemoSuite">
  <test name="Test1">
    <groups>
      <run>
        <include name="sanity"/>
        <exclude name="smoke"/></exclude>
      </run>
    </groups>
    <classes>
      <class name="com.testng.demo.ParameterDemoTest"/>
    </classes>
  </test>
</suite>
```

To include a group

To exclude or ignore a group

Example : adding groups at suite level

```
<suite name="DemoSuite">
  <groups>
    <run>
      <include name="sanity"/>
      <exclude name="smoke"/>
    </run>
  </groups>
  <test name="Test1">
    <classes>
      <class name="com.testng.demo.ParameterDemoTest"/>
    </classes>
  </test>
</suite>
```

Meta group (Group of groups)

```
<suite name="DemoSuite">
  <test name="Test1">
    <groups>
      <define name="dailyBasis">
        <include name="sanity" />
        <include name="smoke" />
      </define>
      <define name="WeeklyBasis">
        <include name="regression" />
      </define>
      <run>
        <include name="dailyBasis" />
        <include name="WeeklyBasis" />
      </run>
    </groups>
    <classes>
      <class name="com.testng.demo.ParameterDemoTest" />
    </classes>
  </test>
</suite>
```

defining your own group

Test class group name

Which group you want to run