

# Selenium Class 39 - TestNG Testing Framework for Selenium Part-4

- 1) Introduction to TestNG Testing Framework
- 2) Install TestNG and write first TestNG program
- 3) Create multiple Test cases and run
- 4) TestNG Annotations
- 5) Execute multiple Programs / Classes using XML
- 6) Grouping Test Cases

## 7) Data Driven Testing using @DataProvider Annotation

- i) Read Test Data (String type data) from an excel file and conduct Data Driven testing for Admin Login Functionality
  
- ii) Read Test Data (Integer Type) from an excel file and conduct Data driven Testing for addition operation

.....

### **i) Read Test Data (String type data) from an excel file and conduct Data Driven testing for Admin Login Functionality**

#### **Test Steps:**

- i) Launch Browser
- ii) Navigate to gcrShop Admin interface (<http://www.gcrit.com/build3/admin/>)
- iii) Enter "Username"
- iv) Enter "Password"
- v) Click "Login" Button

**Expected URL/Result:**

http://www.gcrit.com/build3/admin/index.php

**Verification Point:**

Capture the URL after click Login and compare with expected result

Input / Test Data:

Ref: input.xls

**Selenium WebDriver Test Script:**

```
public class DataDriven {
static WebDriver driver;

@Test (dataProvider = "testdata")
public void adminLogin(String User, String Pwd) throws
InterruptedException{
System.setProperty("webdriver.chrome.driver", "E:/chromedriver.exe");
driver = new ChromeDriver();
driver.manage().window().maximize();

driver.get("http://www.gcrit.com/build3/admin/");
driver.findElement(By.name("username")).sendKeys(User);
driver.findElement(By.name("password")).sendKeys(Pwd);
driver.findElement(By.id("tdb1")).click();
Thread.sleep(4000);
String url = driver.getCurrentUrl();
```

```
/*if (url.contains("http://www.gcrit.com/build3/admin/index.php")){  
System.out.println("Admin Login is Successful - Passed");  
}  
else {  
System.out.println("Admin Login is Unsuccessful - Failed");  
}*/  
Assert.assertEquals(url, "http://www.gcrit.com/build3/admin/index.php");  
}
```

@AfterMethod

```
public void closeBrowser(){
```

```
driver.close();
```

```
}
```

@DataProvider (name = "testdata")

```
public Object[][]readExcel()throws BiffException, IOException {
```

```
File f = new File ("C:\\Users\\admin\\Desktop\\input.xls");
```

```
Workbook w = Workbook.getWorkbook(f);
```

```
Sheet s= w.getSheet(0);
```

```
int columns = s.getColumns();
```

```
int rows = s.getRows();
```

```
//System.out.println(columns);
```

```
//System.out.println(rows);
```

```
String inputData [] [] = new String [rows][columns];
```

```
for (int i=0; i<rows; i++){
```

```
        for (int j=0; j<columns; j++){
            Cell c= s.getCell(j,i);
            inputData[i][j]=c.getContents();
            //System.out.println(inputData[i][j]);
        }
    }
    return inputData;
}
}
```

**ii) Read Test Data (Integer Type) from an excel file and conduct Data driven Testing for addition operation**

```
public class DataDriven2 {
    @Test(dataProvider="abcd")
    public void addition(String num1, String num2, String num3){
        int a= Integer.parseInt(num1);
        int b= Integer.parseInt(num2);
        int c= Integer.parseInt(num3);
        int result =a+b+c;

        Assert.assertEquals(result, a+b+c);
    }
    @DataProvider(name = "abcd")
    public Object[][]readFile() throws BiffException, IOException {
        File f = new File ("C:\\Users\\admin\\Desktop\\input.xls");
        Workbook w = Workbook.getWorkbook(f);
        Sheet s = w.getSheet(1);
```

```
int rows = s.getRows();
int columns = s.getColumns();
//System.out.println(rows);
//System.out.println(columns);

String inputData[] [] = new String [rows][columns];

for (int i=0; i<rows; i++){
    for (int j=0; j<columns; j++){
        Cell c= s.getCell(j, i);
        inputData[i][j]=c.getContents();
        //System.out.println(inputData[i][j]);
    }
}
return inputData;
}
}
```