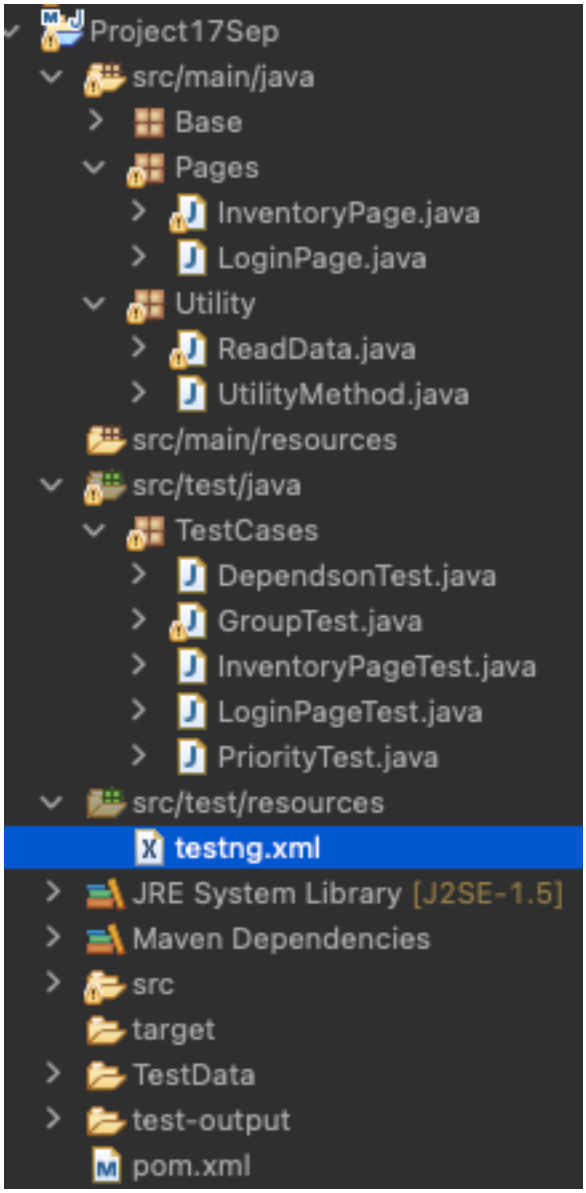
Project Architecture



Base Package

TestBase Class

```
package Base;

import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

import io.github.bonigarcia.wdm.WebDriverManager;

public class TestBase {
```

```
	public static WebDriver driver;  //Global and Public

	public void initalization()
	{
		WebDriverManager.chromedriver().setup();
		driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get(ReadData.readPropertyFile("url"));
//		driver.get("https://www.saucedemo.com/");	}
}
```

Pages Package

LoginPage class

```
package Pages;

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

import Base.TestBase;
import Utility.ReadData;

public class LoginPage extends TestBase {

	//Object Repository
	@FindBy(xpath = "//div[@class='login_logo']") private WebElement loginLogo;
	@FindBy(xpath = "//div[@class='bot_column']") private WebElement botLogo;
	@FindBy(xpath = "//input[@id='user-name']") private WebElement
usernameTextbox;
	@FindBy(xpath = "//input[@id='password']") private WebElement
passwordTextbox;
	@FindBy(xpath = "//input[@id='login-button']") private WebElement loginBtn;
	@FindBy(xpath = "//span[@class='title']") private WebElement productLabel;

//	driver.findElement(By.xpath(""));

	//COnstructor to initialize the elements of page
	public LoginPage()
	{
		PageFactory.initElements(driver, this);
	}

	public String verifyTitle() throws Exception
	{
		Thread.sleep(2000);
		return driver.getTitle();
	}
```

```
	public String loginToApp() throws Exception
	{
		usernameTextbox.sendKeys(ReadData.readPropertyFile("username"));
//		usernameTextbox.sendKeys(ReadData.readExcelFile(0, 0));
		passwordTextbox.sendKeys(ReadData.readPropertyFile("password"));
		loginBtn.click();
		return driver.getCurrentUrl();
	}

	public String verifyLabelofInventory() throws Exception
	{
		loginToApp();
		return productLabel.getText();
	}
}

//static method - use only static
//non static method - No restriction
```

Inventory Page

```
package Pages;

import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.FindBy;
import org.openqa.selenium.support.PageFactory;
import org.openqa.selenium.support.ui.Select;

import Base.TestBase;
import Utility.UtilityMethod;

public class InventoryPage extends TestBase {

	@FindBy(xpath = "//div[@class='peek']") private WebElement peekLogo;
	@FindBy(xpath = "//img[@alt='Swag Bot Footer']") private WebElement
swagBot;
	@FindBy(id = "add-to-cart-sauce-labs-backpack") private WebElement bagpack;
	@FindBy(id = "add-to-cart-sauce-labs-bike-light") private WebElement
bikeLight;
	@FindBy(id = "add-to-cart-sauce-labs-bolt-t-shirt") private WebElement
boltTshirt;
	@FindBy(id = "add-to-cart-sauce-labs-fleece-jacket") private WebElement
fleesJacket;
	@FindBy(xpath = "//select[@class='product_sort_container']") private
WebElement sortProductDropdown;
	@FindBy(xpath = "//span[@class='shopping_cart_badge']") private WebElement
productCount;
```

```
	public InventoryPage()
	{
		PageFactory.initElements(driver, this);
	}

	public boolean verifyPeekLogo()
	{
		return peekLogo.isDisplayed();
	}

	public boolean verifySwagBotLogo()
	{
		return swagBot.isDisplayed();
	}

	public String addProduct() throws Exception
	{
		UtilityMethod.selectClass(sortProductDropdown, "Name (Z to A)");
		Thread.sleep(3000);
		bagpack.click();
		bikeLight.click();
		fleesJacket.click();
		Thread.sleep(3000);
		productCount.click();
		return productCount.getText();
	}
}
```

Utility Package

ReadData Class

```
package Utility;

import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.util.Properties;

import org.apache.poi.ss.usermodel.Sheet;
import org.apache.poi.ss.usermodel.WorkbookFactory;

public class ReadData {

	public static String readPropertyFile(String value) throws Exception
	{
```

```
		Properties p = new Properties();
		FileInputStream file = new FileInputStream("/Users/Zenith/eclipse-
workspace/Project17Sep/TestData/config.properties");
		p.load(file);
		return p.getProperty(value);
	}

	public static String readExcelFile(int row,int col) throws Exception
	{
		FileInputStream file = new FileInputStream("/Users/Zenith/eclipse-
workspace/Project17Sep/TestData/Data.xlsx");
		Sheet excel = WorkbookFactory.create(file).getSheet("Sheet1");
		String value = excel.getRow(row).getCell(col).getStringCellValue();
		return value;
	}
}
```

UtilityMethod Class

```
package Utility;

import java.io.File;
import java.io.IOException;

import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.io.FileHandler;
import org.openqa.selenium.support.ui.Select;

import Base.TestBase;

public class UtilityMethod extends TestBase {

	public static void selectClass(WebElement ele,String option)
	{
		Select s = new Select(ele);
		s.selectByVisibleText(option);
	}

	public static void captureScreenshot(String name) throws Exception
	{
		File source =
((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
		File destination = new File("/Users/Zenith/eclipse-
workspace/Project17Sep/ScreenShots/"+ name +".jpeg");
		FileHandler.copy(source, destination);
	}
}
```

Testcases Package

LoginPageTest Class

```
package TestCases;

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

import Base.TestBase;
import Pages.LoginPage;

public class LoginPageTest extends TestBase {

	LoginPage login;// = new LoginPage();

	@BeforeMethod
	public void setup() throws Exception
	{
		initalization();
		login = new LoginPage();
	}

	@Test (enabled = true)
	public void verifyTitleTest() throws Exception
	{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}

	@Test (enabled = true)
	public void verifyUrlTest1() throws Exception
	{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}

	@Test
	public void loginToAppTest() throws Exception
	{
		String expRes = "https://www.saucedemo.com/inventory.html";
		String actRes = login.loginToApp();
```

```
		Assert.assertEquals(expRes, actRes);
		Reporter.log("URL of web application :- " + actRes);
	}

	@Test (enabled = true)
	public void verifyLabelofInventoryTest() throws Exception
	{
		String expRes = "PRODUCTS";
		String actRes = login.verifyLabelofInventory();
		Assert.assertEquals(expRes, actRes);
		Reporter.log("Label Title :- " + actRes);
	}

	@AfterMethod
	public void closeBrowser()
	{
		driver.close();
	}

}
```

InventoryPage Test

```
package TestCases;

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

import Base.TestBase;
import Pages.InventoryPage;
import Pages.LoginPage;

public class InventoryPageTest extends TestBase {

	LoginPage login;
	InventoryPage invent;

	@BeforeMethod
	public void setup() throws Exception
	{
		initalization();
		login = new LoginPage();
		invent = new InventoryPage();
		login.loginToApp();
	}
```

```
	@Test (enabled = false)
	public void verifyPeekLogoTest()
	{
		boolean result = invent.verifyPeekLogo();
		Assert.assertEquals(result, true);
	}

	@Test
	public void addProductTest() throws Exception
	{
		String result = invent.addProduct();
		Assert.assertEquals(result, "3");
		Reporter.log("Total product added = " + result);
	}


	@AfterMethod
	public void closeBrowser()
	{
		driver.close();
	}
}
```

DependentTest Class

```
package TestCases;

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

import Base.TestBase;
import Pages.LoginPage;

public class DependsonTest extends TestBase {

LoginPage login;// = new LoginPage();

	@BeforeMethod
	public void setup() throws Exception
	{
		initalization();
		login = new LoginPage();
	}
```

```
	@Test
	public void verifyTitleTest() throws Exception
	{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}

	@Test (dependsOnMethods = "verifyTitleTest")
	public void loginToAppTest() throws Exception
	{
		String expRes = "https://www.saucedemo.com/inventory.html";
		String actRes = login.loginToApp();
		Assert.assertEquals(expRes, actRes);
		Reporter.log("URL of web application :- " + actRes);
	}



	@AfterMethod
	public void closeBrowser()
	{
		driver.close();
	}
}
```

PriorityTest Class

```
package TestCases;

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

import Base.TestBase;
import Pages.LoginPage;

public class PriorityTest extends TestBase {

	LoginPage login;// = new LoginPage();

	@BeforeMethod (alwaysRun = true)
	public void setup() throws Exception
	{
```

```
		initalization();
		login = new LoginPage();
}

@Test  (priority = 0, groups = "Sanity")
public void verifyTitleTest1() throws Exception
{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
}

// 0 1 -1 -200 -1000 12 34 = -1000 -200 -1 0 1 12 34

@Test  (priority = -122)
public void verifyTitleTest2() throws Exception
{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
}

@Test  (priority = -122)
public void verifyTitleTest3() throws Exception
{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
}

@Test  (priority = 2)
public void verifyTitleTest4() throws Exception
{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
}

@Test  (priority = 1)
public void verifyTitleTest5() throws Exception
{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
```

```
	}


	@AfterMethod (alwaysRun = true)
	public void closeBrowser()
	{
		driver.close();
	}

}
```

GroupTest Class

```
package TestCases;

import org.testng.annotations.Test;
import org.testng.AssertJUnit;
import org.testng.Assert;
import org.testng.Reporter;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.Test;

import Base.TestBase;
import Pages.LoginPage;

public class GroupTest extends TestBase {

	LoginPage login;// = new LoginPage();

	@BeforeMethod (alwaysRun = true)
	public void setup() throws Exception
	{
		initalization();
		login = new LoginPage();
	}

	@Test (groups = {"Sanity","Regression"})
	public void Test1() throws Exception
	{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		AssertJUnit.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
```

```
	}

	@Test (groups = "Smoke")
	public void Test2() throws Exception
	{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		AssertJUnit.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}

	@Test (groups = {"Smoke","Regression"})
	public void Test3() throws Exception
	{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		AssertJUnit.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}

	@Test (groups = "Sanity")
	public void Test4() throws Exception
	{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		AssertJUnit.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}

	@AfterMethod (alwaysRun = true)
	public void closeBrowser()
	{
		driver.close();
	}

}
```

DemoTest Class (Hard Assertion)

```
package TestCases;

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

import Base.TestBase;
import Pages.LoginPage;
```

```
public class DemoTest extends TestBase {

LoginPage login;// = new LoginPage();

	@BeforeMethod
	public void setup() throws Exception
	{
		initalization();
		login = new LoginPage();
	}

	@Test (invocationCount = 1, enabled = false)
	public void verifyTitleTest() throws Exception
	{
		String expTitle = "Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}

	@Test (timeOut = 2000)
	public void verifyTitleTest1() throws Exception
	{
		String expTitle = "1Swag Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle,"Test case fail zali ka");
		System.out.println("This is test case of title");
		Reporter.log("Title of web application :- " + actTitle);
		Assert.assertTrue(true);
	}

	@AfterMethod
	public void closeBrowser()
	{
		driver.close();
	}

}
```

SoftAssertionTest Class

```
package TestCases;

import org.testng.Assert;
import org.testng.Reporter;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.Test;
```

```
import org.testng.asserts.SoftAssert;

import Base.TestBase;
import Pages.InventoryPage;
import Pages.LoginPage;

public class SoftAssertion extends TestBase {

	LoginPage login;
	InventoryPage invent;

	@BeforeMethod
	public void setup() throws Exception
	{
		initalization();
		login = new LoginPage();
		invent = new InventoryPage();
		login.loginToApp();
	}

	@Test (enabled = true)
	public void verifyPeekLogoTest()
	{
		System.out.println("Execution started");
		SoftAssert soft = new SoftAssert();
		boolean result = invent.verifyPeekLogo();
		soft.assertEquals(result, false);
//		Assert.assertEquals(result, false);
		System.out.println("Execution ended");
		soft.assertAll();
	}

	@AfterMethod
	public void closeBrowser()
	{
		driver.close();
	}
}
```

FailedTest Class

```
package TestCases;

import org.testng.Assert;
import org.testng.Reporter;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.Test;
```

```
import Base.TestBase;
import Pages.InventoryPage;
import Pages.LoginPage;

public class FailedTest extends TestBase {

	LoginPage login;
	InventoryPage invent;

	@BeforeMethod
	public void setup() throws Exception
	{
		initalization();
		login = new LoginPage();
		invent = new InventoryPage();
		login.loginToApp();
	}

	@Test
	public void Test1()
	{
		boolean result = invent.verifyPeekLogo();
		Assert.assertEquals(result, true);
	}

	@Test
	public void Test2()
	{
		boolean result = invent.verifyPeekLogo();
		Assert.assertEquals(result, true);
	}


	@Test
	public void Test3()
	{
		boolean result = invent.verifyPeekLogo();
		Assert.assertEquals(result, true);
	}

	@Test
	public void Test4()
	{
		boolean result = invent.verifyPeekLogo();
		Assert.assertEquals(result, true);
	}

	@Test
	public void Test5()
```

```
	{
		boolean result = invent.verifyPeekLogo();
		Assert.assertEquals(result, false);
	}

	@AfterMethod
	public void closeBrowser()
	{
		driver.close();
	}

	//5 -- 3F 2P => 3F
}
```

CaptureScreenshotforFailed Class

```
package TestCases;

import org.testng.Assert;
import org.testng.AssertJUnit;
import org.testng.ITestResult;
import org.testng.Reporter;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.Test;

import Base.TestBase;
import Pages.LoginPage;
import Utility.UtilityMethod;

public class CaptureScreenshotforFailed extends TestBase {

	LoginPage login;// = new LoginPage();

	@BeforeMethod (alwaysRun = true)
	public void setup() throws Exception
	{
		initalization();
		login = new LoginPage();
	}

	@Test (enabled = true, groups = "Regression")
	public void verifyTitleTest() throws Exception
	{
		String expTitle = "Swag. Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}
```

```
	@Test (enabled = false)
	public void verifyUrlTest1() throws Exception
	{
		String expTitle = "Swag „Labs";
		String actTitle = login.verifyTitle();
		Assert.assertEquals(expTitle, actTitle);
		Reporter.log("Title of web application :- " + actTitle);
	}

	@Test (enabled = false)
	public void loginToAppTest() throws Exception
	{
		String expRes = "https://www.saucedemo.com/inventory.html";
		String actRes = login.loginToApp();
		Assert.assertEquals(expRes, actRes);
		Reporter.log("URL of web application :- " + actRes);
	}

	@Test (enabled = false)
	public void verifyLabelofInventoryTest() throws Exception
	{
		String expRes = "PRODUCTS";
		String actRes = login.verifyLabelofInventory();
		Assert.assertEquals(expRes, actRes);
		Reporter.log("Label Title :- " + actRes);
	}

	@AfterMethod (alwaysRun = true)
	public void closeBrowser(ITestResult a) throws Exception
	{
		if(ITestResult.FAILURE == a.getStatus())
		{
//			System.out.println(ITestResult.FAILURE);
//			System.out.println(a.getStatus());
			UtilityMethod.captureScreenshot(a.getName());
		}
		driver.close();
	}
}
```

Test Resources

testng.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "https://testng.org/testng-1.0.dtd">
<suite name="Suite">
  <test thread-count="5" name="Test">
```

```
 <groups>
 <run>
 <include name = "Regression"></include>
 <exclude name = "Smoke"></exclude>
 </run>
 </groups>


  <classes>
   <class name="TestCases.GroupTest"/>
   <class name="TestCases.PriorityTest"/>
  </classes>
 </test> <!-- Test -->
</suite> <!-- Suite -->
```

TestData Folder

Pom.xml

```
url = https://www.saucedemo.com/
username = standard_user
password = secret_sauce
browser = chrome
```

Pom.xml

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
 <modelVersion>4.0.0</modelVersion>
 <groupId>Project17Sep</groupId>
 <artifactId>Project17Sep</artifactId>
 <version>0.0.1-SNAPSHOT</version>

 <dependencies>

 <dependency>
  <groupId>org.seleniumhq.selenium</groupId>
  <artifactId>selenium-java</artifactId>
  <version>4.0.0</version>
</dependency>

 <dependency>
  <groupId>org.testng</groupId>
  <artifactId>testng</artifactId>
  <version>7.0.0</version>
```

```
   <scope>test</scope>
</dependency>

<dependency>
   <groupId>io.github.bonigarcia</groupId>
   <artifactId>webdrivermanager</artifactId>
   <version>5.0.3</version>
</dependency>

<dependency>
   <groupId>org.apache.poi</groupId>
   <artifactId>poi</artifactId>
   <version>5.2.3</version>
</dependency>

<dependency>
   <groupId>org.apache.poi</groupId>
   <artifactId>poi-ooxml</artifactId>
   <version>5.2.3</version>
</dependency>

<dependency>
   <groupId>org.apache.poi</groupId>
   <artifactId>poi-ooxml-schemas</artifactId>
   <version>4.1.2</version>
</dependency>
 </dependencies>

</project>
```