Integrate your Manual Test Cases and Java Test Automation. PlatformPoint's JTIP™ (Java Test Integration Platform) provides seamless integration of any test automation developed in java to Visual Studio Team Services [VSTS]/ Team Foundation Server [TFS]. .It enables java test automation mapping, reporting and traceability to test plans and test cases in VSTS/TFS.

JTIP User Guide

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Introduction

Integrate your Manual Test Cases and Java Test Automation

PlatformPoint's **JTIP™** (Java Test Integration Platform) provides seamless integration of any test automation developed in java to Visual Studio Team Services [VSTS]/ Team Foundation Server [TFS]. .
It enables java test automation mapping, reporting and traceability to test plans and test cases in VSTS/TFS.
It supports all java based test Automation framework based on:

1. **Junit**
2. **TestNG**
3. *Cucumber*

   you can now provide your test automations execution results running from anywhere including Jenkins, to TFS/VSTS and associate Manual test cases with automated tests.

JTIP™ itself is developed in pure Java and uses Rest API's and hence it is platform independent and totally lightweight.
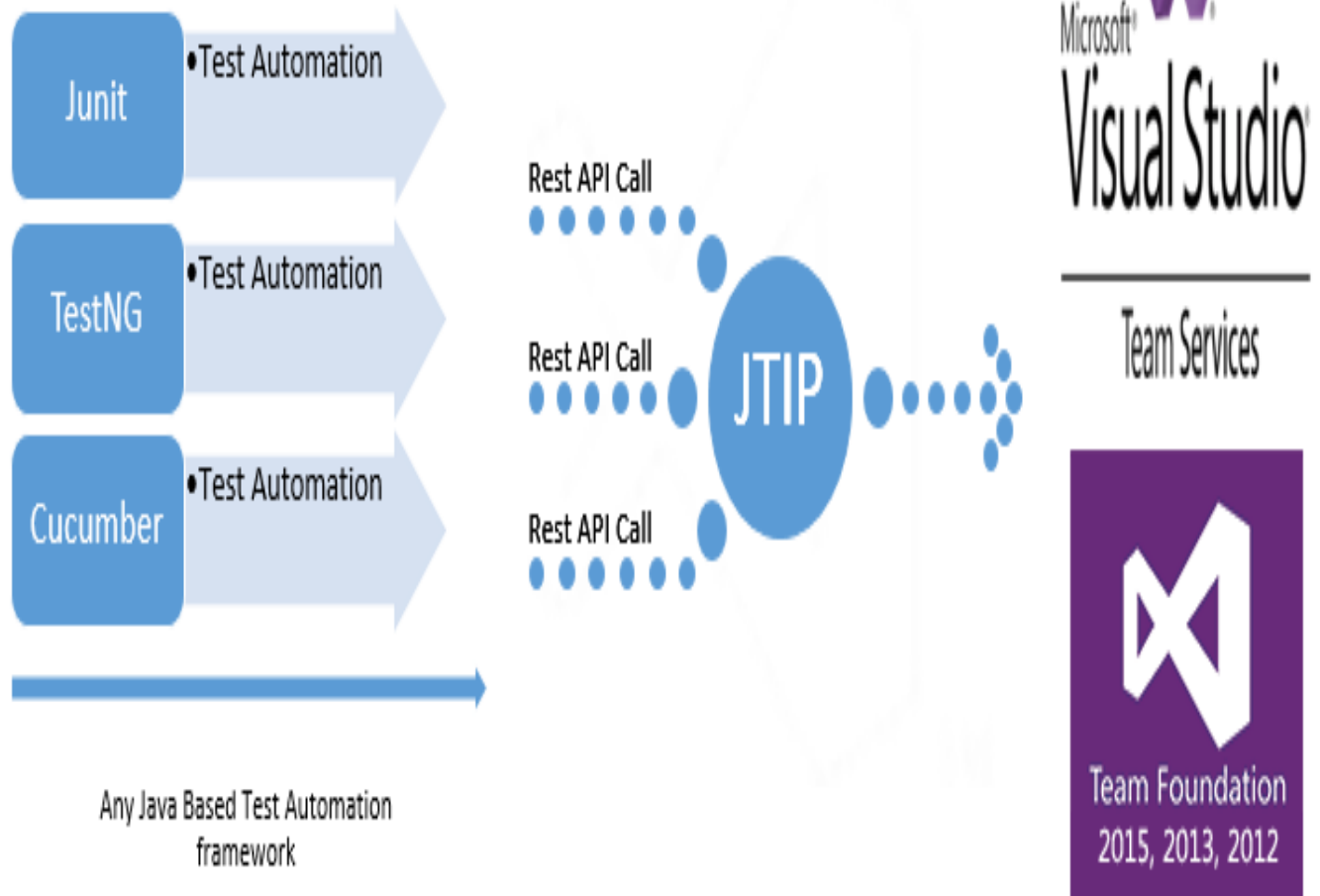
JTIP™ is available as a **MAVEN** dependency as well as a standalone Jar file

Overview of JTIP Integration

JTIP is based on REST, OAuth, Json and service hooks - all standard web technologies broadly supported in the industry.

Architectural Overview

JTIP Architecture supports the all Java based Test Automation.
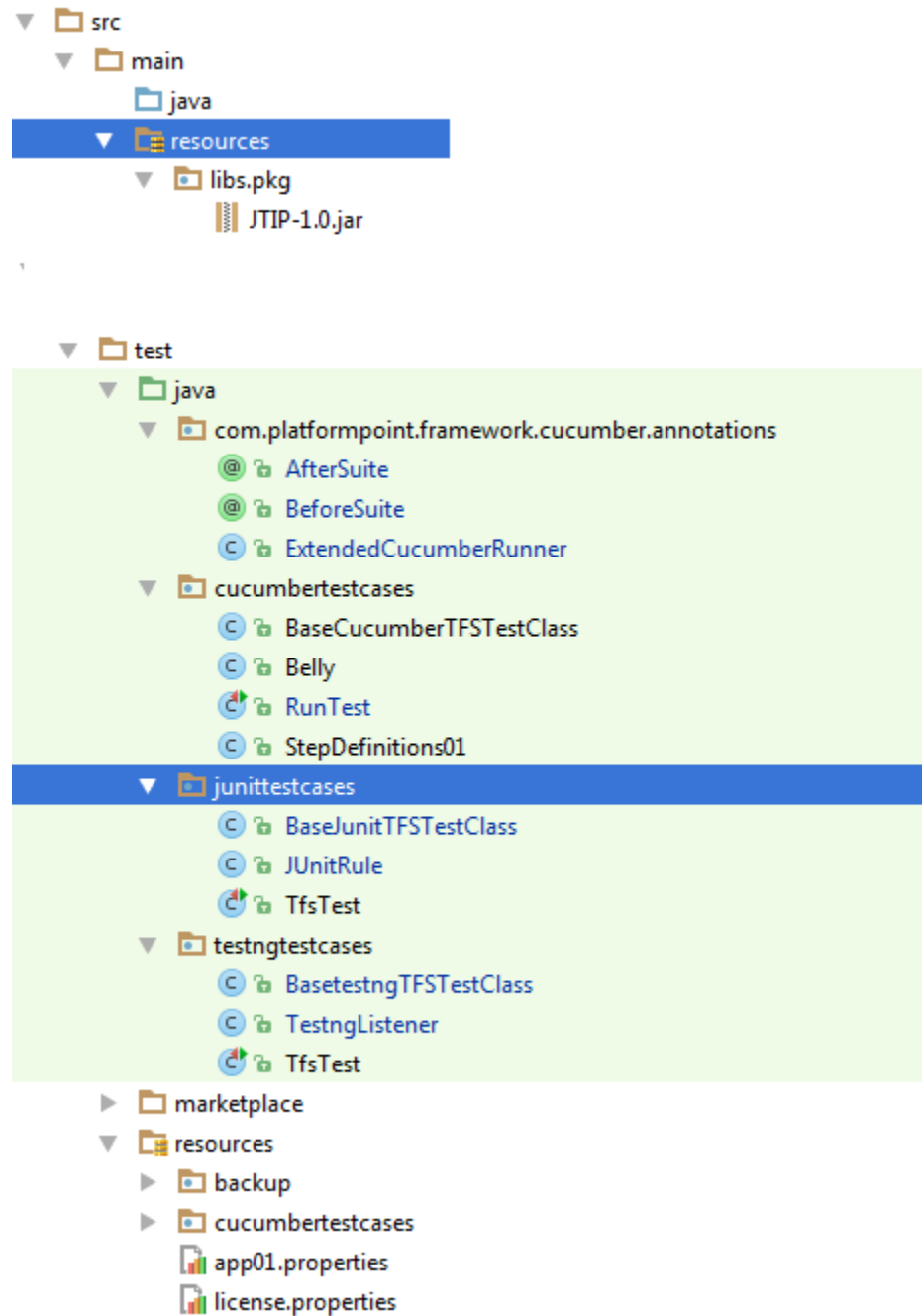

Junit •Test Automation

TestNG •Test Automation

Cucumber •Test Automation

Any Java Based Test Automation framework

Rest API Call

Rest API Call

Rest API Call

JTIP

Microsoft® Visual Studio®

Team Services

Team Foundation 2015, 2013, 2012

Security Requirement

To configure JTIP integration, first configure your Visual Studio Online /TFS account.

1. Go to *My profile* and then choose the *Security* tab.
2. Select *Alternate authentication credentials.*
3. Check the box next to *Enable alternate authentication credentials.*
4. Add a *User name (secondary)* and a *Password.* This credential will be used with JTIP (not your normal login credential).

Directory Structure

Test automation recommended directory structure for Maven:

▼ 📁 src
    ▼ 📁 main
        📁 java
        ▼ 📁 resources
            ▼ 📁 libs.pkg
                📦 JTIP-1.0.jar

    ▼ 📁 test
        ▼ 📁 java
            ▼ 📁 com.platformpoint.framework.cucumber.annotations
                @ AfterSuite
                @ BeforeSuite
                C ExtendedCucumberRunner
            ▼ 📁 cucumbertestcases
                C BaseCucumberTFSTestClass
                C Belly
                C RunTest
                C StepDefinitions01
            ▼ 📁 junittestcases
                C BaseJunitTFSTestClass
                C JUnitRule
                C TfsTest
            ▼ 📁 testngtestcases
                C BasetestngTFSTestClass
                C TestngListener
                C TfsTest
        ▶ 📁 marketplace
        ▼ 📁 resources
            ▶ 📁 backup
            ▶ 📁 cucumbertestcases
            📄 app01.properties
            📄 license.properties

Maven POM Dependency

Add the following dependency in your Maven POM file:

```
<dependency>
    <groupId>com.platformpoint.library</groupId>
    <artifactId>JTIP</artifactId>
    <version>1.0</version>
    <scope>system</scope>
    <systemPath>${basedir}/src/main/resources/libs/pkg/JTIP-1.0.jar</systemPath>
</dependency>
```

JTIP Jar File

JTIP Jar file can be downloaded from
https://github.com/PlatformPoint/JTIP/blob/master/src/main/resources/libs/pkg/JTIP-1.0.jar

Supported Framework

Junit

How to Integrate?

Required Java Files:

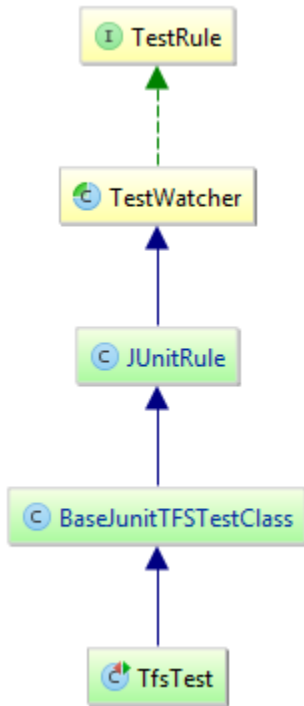Include the following files in your test folder:

Sample of above files can be found in the appendix section.

The relation and hierarchy between the required java files is illustrated by the following class definition

```
public class BaseJunitTFSTestClass extends JUnitRule
public class JUnitRule extends TestWatcher
public class TfsTest extends BaseJunitTFSTestClass
```
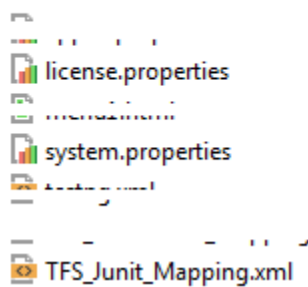
Note: class Names are just provided as sample and can be renamed as per your convenience following the junit class naming convention

Required non Java Files:

Include the following file in your test/resources folder

About Files:

1. License.properties: This is the JTIP license file
2. System.properties : This file contains authentication information about the VSTS/TFS .
3. TFS_Junit_Mapping.xml: This is the xml mapping file that establishes relation ship between automated test case and the manual Test Case in VSTS/TFS.

TFS_Junit_Mapping.xml explanation:

Following is the sample Junit Mapping file:

```xml
<?xml version="1.0" encoding="ISO-8859-1" ?>
<TFS>
    <!--set to true if you need to push results to TFS /VSTS -->
    <TestRun integrate="true" />

<!--TFS /VSTS Collection URL -->
    <Collection url="https://platformproducts.visualstudio.com" name=""/>

    <!--TFS /VSTS Project name -->
    <Project name="Demo"/>
    <!--Automated Test Log Directory -->
    <TestLog dir="\target\surefire-reports" filter="TEST-testcases.TfsTest.xml"/>

    <TestMappings>
      <TestMapping>
         <!--TFS /VSTS Test Plan ID -->
         <TestPlan testPlanID="4"/>
         <!--TFS /VSTS Test case id  : set automatedTest to the junit automated test having
@Test attribute-->
         <TestCase id="12" automatedTest="logjunitTFSResults_test_001"/>
         <TestCase id="13" automatedTest="logjunitTFSResults_test_002"/>
      </TestMapping>


<TestMapping>
         <!--TFS /VSTS Test Plan ID -->
         <TestPlan testPlanID="14"/>
         <!--TFS /VSTS Test case id  : set automatedTest to the junit automated test having
@Test attribute-->
         <TestCase id="112" automatedTest="logjunitTFSResults_test_2001"/>
         <TestCase id="213" automatedTest="logjunitTFSResults_test_2002"/>
      </TestMapping>
      </TestMappings>
</TFS>
```
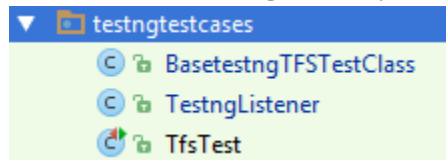
## TestNG

How to integrate?

Required Java Files:

Include the following files in your test folder:

Sample of above files can be found in the appendix section.

The relation and hierarchy between the required java files is illustrated by the following class definition

```java
public class BasetestngTFSTestClass extends TestngListener
public class TestngListener extends TestListenerAdapter
public class TfsTest extends BasetestngTFSTestClass
```
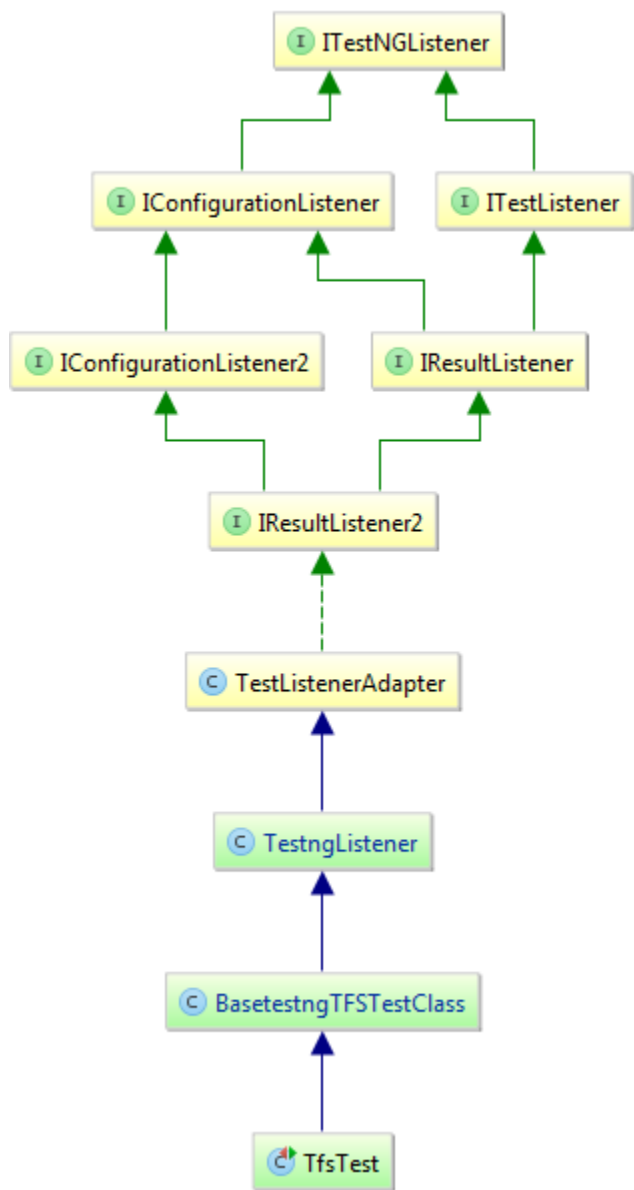
Note: class Names are just provided as sample and can be renamed as per your convenience following the junit class naming convention

Required non Java Files:
Include the following file in your test/resources folder
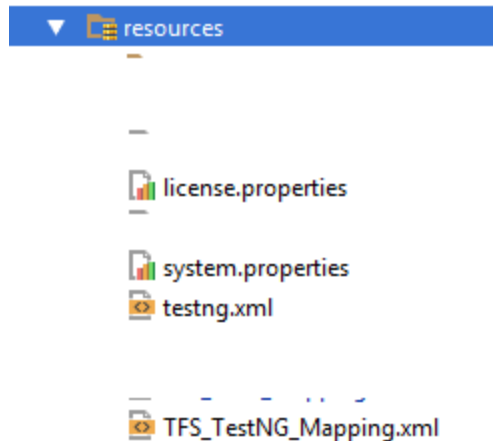
About Files:

1. **License.properties**: This is the JTIP license file
2. **System.properties** : This file contains authentication information about the VSTS/TFS.
3. **TFS_TestNG_Mapping.xml**: This is the xml mapping file that establishes relationship between automated test case and the manual Test Case in VSTS/TFS.

TFS_TestNG_Mapping.xml explanation:

Following is the sample Junit Mapping file:

```xml
<?xml version="1.0" encoding="ISO-8859-1" ?>
<TFS>
   <!--set to true if you need to push results to TFS /VSTS -->
   <TestRun integrate="true" />

<!--TFS /VSTS Collection URL -->
   <Collection url="https://platformproducts.visualstudio.com" name=""/>

   <!--TFS /VSTS Project name -->
   <Project name="Demo"/>
   <!--Automated Test Log Directory -->
   <TestLog dir="\target\surefire-reports" filter="TEST-testcases.TfsTest.xml"/>

   <TestMappings>
     <TestMapping>
        <!--TFS /VSTS Test Plan ID -->
        <TestPlan testPlanID="14"/>
        <!--TFS /VSTS Test case id  : set automatedTest to the TestNG automated test
having @Test attribute-->
        <TestCase id="32" automatedTest="logTestNGTFSResults_test_001"/>
        <TestCase id="53" automatedTest="logTestNGTFSResults_test_002"/>
     </TestMapping>
```

```xml
<TestMapping>
        <!--TFS /VSTS Test Plan ID -->
        <TestPlan testPlanID="464"/>
        <!--TFS /VSTS Test case id: set automatedTest to the TestNG automated test
having @Test attribute-->
        <TestCase id="312" automatedTest="logTestNGTFSResults_test_2001"/>
        <TestCase id="513" automatedTest="logTestNGTFSResults_test_2002"/>
    </TestMapping>
        </TestMappings>
</TFS>
```
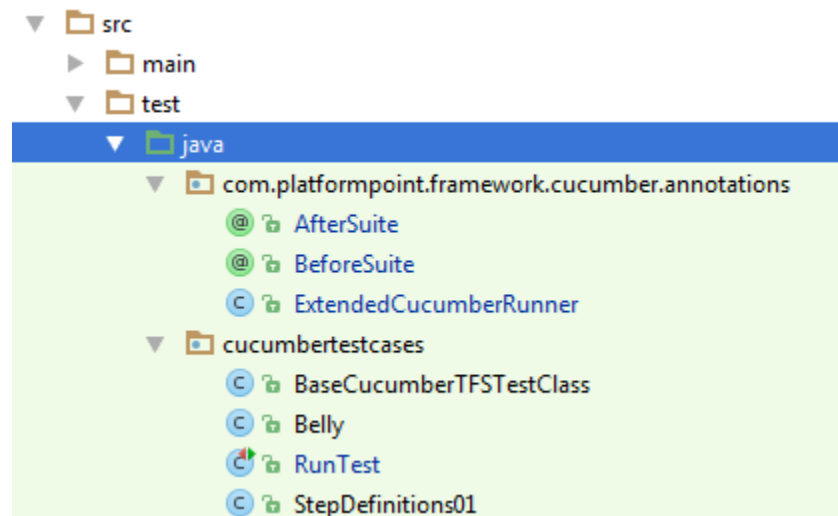
Cucumber

How to integrate?

Required Java Files:

Include the following files in your test folder:

Sample of above files can be found in the appendix section.

The relation and hierarchy between the required java files is illustrated by the following class definition

```java
public @interface AfterSuite
public @interface BeforeSuite
public class ExtendedCucumberRunner

public class BaseCucumberTFSTestClass
public class RunTest
public class StepDefinitions01
```
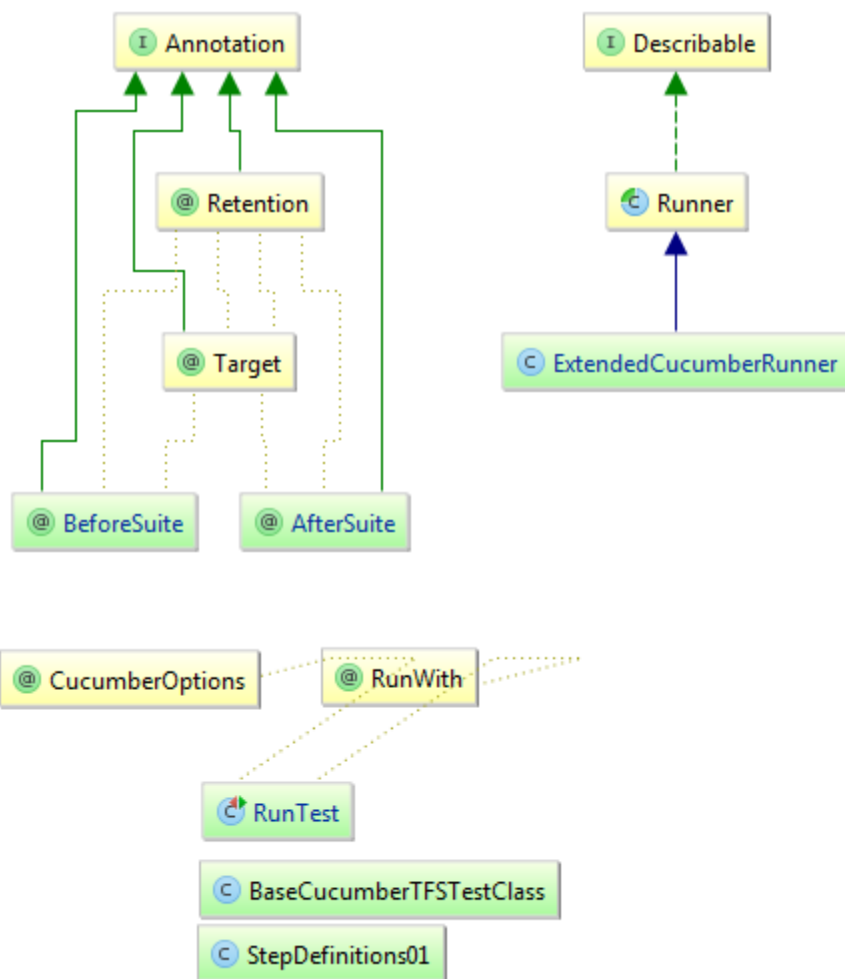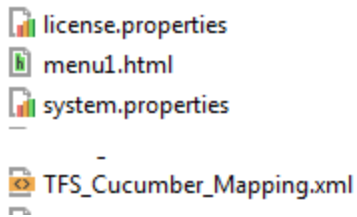
Note: class Names are just provided as sample and can be renamed as per your convenience following the junit class naming convention

<u>Required non Java Files:</u>
Include the following file in your test/resources folder

resources

license.properties
menu1.html
system.properties

TFS_Cucumber_Mapping.xml

About Files:

1. **License.properties**: This is the JTIP license file
2. **System.properties** : This file contains authentication information about the VSTS/TFS.
3. **TFS_TestCucumber_Mapping.xml**: This is the xml mapping file that establishes relationship between automated test case and the manual Test Case in VSTS/TFS.

TFS_TestNG_Mapping.xml explanation:

Following is the sample Junit Mapping file:

```xml
<?xml version="1.0" encoding="ISO-8859-1" ?>
<TFS>
    <!--set to true if you need to push results to TFS /VSTS -->
    <TestRun integrate="true" />

<!--TFS /VSTS Collection URL -->
    <Collection url="https://platformproducts.visualstudio.com" name=""/>

    <!--TFS /VSTS Project name -->
    <Project name="Demo"/>
    <!--Automated Test Log Directory -->
    <TestLog dir="\target\surefire-reports" filter="TEST-testcases.TfsTest.xml"/>

    <TestMappings>
        <TestMapping>
            <!--TFS /VSTS Test Plan ID -->
            <TestPlan testPlanID="14"/>
            <!--TFS /VSTS Test case id  : set automatedTest to the Cucumber
automated test having @Test attribute-->
        <TestCase id="32" automatedTest="TFS_Cucumber Integration -Scenario01"/>
        <TestCase id="53" automatedTest="TFS_Cucumber Integration -Scenario02"/>
            </TestMapping>


<TestMapping>
        <!--TFS /VSTS Test Plan ID -->
        <TestPlan testPlanID="464"/>
        <!--TFS /VSTS Test case id  : set automatedTest to the Cucumber automated test
having @Test attribute-->
```

```xml
<TestCase id="132" automatedTest="TFS_Cucumber Integration –Scenario32"/>
<TestCase id="133" automatedTest="TFS_Cucumber Integration –Scenario33"/>
    </TestMapping>
        </TestMappings>
</TFS>
```

Results in TFS/VSTS:

Appendix

#	Framework	File Type	File Name	URL	Comments
1	Junit	Java	`BaseJunitTFSTestClass.java`	https://github.com/PlatformPoint/JTIP/blob/master/src/test/java/junittestcases/BaseJunitTFSTestClass.java	
2	Junit	Java	`JUnitRule.java`	https://github.com/PlatformPoint/JTIP/blob/master/src/test/java/junittestcases/JUnitRule.java	
3	Junit	Java	`TfsTest.java`	https://github.com/PlatformPoint/JTIP/blob/master/src/test/java/junittestcases/TfsTest.java	
4	Junit	xml	`TFS_Junit_Mapping.xml`	https://github.com/PlatformPoint/JTIP/blob/master/src/test/resources/TFS_Junit_Mapping.xml	
5	TestNG	Java	`BasetestngTFSTestClass.java`	https://github.com/PlatformPoint/JTIP/blob/master/src/test	

				/java/testngtestcases/Basetes tngTFSTestClass.java	
6	TestNG	Java	`TestngListener .java`	https://github.com/PlatformP oint/JTIP/blob/master/src/test /java/testngtestcases/TestngLi stener.java	
7	TestNG	Java	`TfsTest.java`	https://github.com/PlatformP oint/JTIP/blob/master/src/test /java/testngtestcases/TfsTest.j ava	
8	TestNG	xml	`TFS_TestNG_Map ping.xml`	https://github.com/PlatformP oint/JTIP/blob/master/src/test /resources/TFS_TestNG_Mapp ing.xml	
9	Cucumber	java	`AfterSuite.jav a`	https://github.com/PlatformP oint/JTIP/blob/master/src/test /java/com/platformpoint/fra mework/cucumber/annotatio ns/AfterSuite.java	
10	Cucumber	java	`BeforeSuite.ja va`	`https://github.com/Platfo rmPoint/JTIP/blob/master/ src/test/java/com/platfor mpoint/framework/cucumber /annotations/BeforeSuite. java`	
11	Cucumber	java	`ExtendedCucumb erRunner.java`	https://github.com/PlatformP oint/JTIP/blob/master/src/test /java/com/platformpoint/fra mework/cucumber/annotatio ns/ExtendedCucumberRunner .java	
12	Cucumber	java	`BaseCucumberTF STestClass.jav a`	https://github.com/PlatformP oint/JTIP/blob/master/src/test /java/cucumbertestcases/Bas eCucumberTFSTestClass.java	
13	Cucumber	java	`RunTest.java`	https://github.com/PlatformP oint/JTIP/blob/master/src/test /java/cucumbertestcases/Run Test.java	

14	Cucumber	java	`StepDefinitions01.java`	https://github.com/PlatformPoint/JTIP/blob/master/src/test/java/cucumbertestcases/StepDefinitions01.java	
15	Cucumber	java	`Belly.java`	https://github.com/PlatformPoint/JTIP/blob/master/src/test/java/cucumbertestcases/Belly.java	
16	JTIP	properties	`license.properties`	https://github.com/PlatformPoint/JTIP/blob/master/src/test/resources/license.properties	
17	VSTS/TFS	properties	`System.properties`	https://github.com/PlatformPoint/JTIP/blob/master/src/test/resources/system.properties	
18	JTIP Jar file	jar	`JTIP-1.0.jar`	https://github.com/PlatformPoint/JTIP/blob/master/src/main/resources/libs/pkg/JTIP-1.0.jar	