Specflow vs Cucumber

cucumber	specflow

Feature File

cucumber

```
File Name: loginToGmail.feature

Feature: Login to gmail Acccount
Scenario: Valid Users
Given: I am on gmail Login Page
When: Enter username and password
And: Click on Login button
Then: User should be redirected to HomePage
And: welcome message is displayed with first Name
```

specflow

```
File Name: loginToGmail.feature

Feature: Login to gmail Acccount
Scenario: Valid Users
Given I am on gmail Login Page
When Enter username and password
And Click on Login button
Then User should be redirected to Home Page
And welcome message is displayed with first Name
```

Step Definition File

cucumber

```java
File Name: loginTOGmail.java


public class loginToGmail {

@Given("^I am on gmail Login Page$")]
public void launchGmailLogin(){
//...
}

@When("^Enter username and password$")]
public void enterUserNamePassword(){
//...
}

@When("^Click on Login button$")]
public void clickOnLoginButton(){
//...
}

@Then("^User should be redirected to HomePage$")]
public void verifyHomepage(){
//...
}

@Then("^welcome message is displayed with first
Name$")]
public void verifyWelcomeMessage(){
}
//...

}
```

specflow

```csharp
File Name: loginTOGmail.cs

[Binding]

public class loginToGmail {

[Given(@"I am on gmail Login Page")]
public void launchGmailLogin(){
//...
}

[When(@"Enter username and password")]
public void enterUserNamePassword(){
//...
}

[When(@"Click on Login button")]
public void clickOnLoginButton(){
//...
}

[Then(@"User should be redirected to HomePage")]
public void verifyHomepage(){
//...
}

[Then(@"welcome message is displayed with first
Name")]
public void verifyWelcomeMessage(){
//...
}

}
```

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Parameterization - Feature File

Parameterization - Examples

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Scenario Outline: **Various** Valid Users **Given:** I am on gmail Login Page **When:** Enter “<username>” and “<password>” **And:** Click on Login button **Examples:** | username | password | | username1 | password1 | | username2 | password2 |	**Scenario Outline:** **Various** Valid Users **Given** I am on gmail Login Page **When** Enter <username> and <password> **And** Click on Login button **Examples:** | username | password | | username1 | password1 | | username2 | password2 |

@When("^Enter \\"(.*)\\" and \\"(.*)\\"$")]
public void enterUserNamePassword(String uName,
String passwd){
//...
}
	[When(@"Enter (.*) and (.*)")]
	public void enterUserNamePassword(String uName,
	String passwd){
	//...

Parameterization – Table

cucumber	specflow
Scenario: Various Valid Users **Given:** I am on gmail Login Page **When:** Enter the user name and password | Username | Password | | username1 | password1 | | username2 | password2 | **And:** Click on Login button	**Scenario:** Various Valid Users **Given** I am on gmail Login Page **When** Enter the user name and password | Username | Password | | username1 | password1 | | username2 | password2 | **And** Click on Login button

@When("^Enter the user name and password$")
public void enterUserNamePassword(DataTable
table){
-- 	
List<List<String>> data= table.row(0);
username = data.get(0).get(0)
passwd= data.get(0).get(1);
-- 	
List<List<String>> data= table.asList();
username = data.get(0).get(0)
passwd= data.get(0).get(1);
-- 	
List<Map<String,String>> data=
table.asMap(String.class, String.class);
username = data.get(0).get(‘userName’);
	[When(@"Enter the user name and password")]
	public void enterUserNamePassword(Table table)
	{
	-- 	
	foreach (var row in table.Rows){
	dictionary.Add(row[0], row[1]);
	}
	address.Line1 = table.Rows[0]["Username"];
	address.Line1 = table.Rows[0]["Password "];
	-- 	
	For(int i=0; i<table.RowCount;i++){
	String Text = table.Rows[i][“UserName”]
	String Text = table.Rows[i][“Password”]
	}
	-- 	

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cucumber	specflow

`passwd= data.get(1).get(‘password’);`
`-----------------`
 	
`}`
	`Table.ContainsColumn("Password")`
	`----------------------------------------`
	`SpecFlow Assist Helpers`
	`(techTalk.specflow.assit)`
	`var account = table.CreateInstance<Account>();`
	`var products = table.CreateSet<Product>();`
	`----------------------------------------`
	
	`IEnumerable <dynamic> credentials =`
	`table.CreateDynamicSet();`
	`foreach(var users in credentials){`
	`}`
	
	`IEnumerable <dynamic> credentials =`
	`table.CreateDynamicInstance();`
	`foreach(var users in credentials){`
	`}`
	`}`
	`----------------------------------------`
	Set
	`ScenarioContext.Current["UserName"] = UserName1`
	`ScenarioContext.Current.Add("UserName",UserName1)`
	`;`
	Get
	`Var uname= ScenarioContext.Current["UserName1"];`
	`Var uname=`
	`ScenarioContext.Current.Get<int>("UserName");`
	
	Data can be share between Steps by using Context Injection

Hooks	

`@Before(Order = 2)`
`public void Before2() {`
`Run before executing each scenario`
`}`
 	
`@Before(Order = 1)`
`public void Before1() {`
`Run before executing each scenario`
`}`
 	
`@After`
`public void After() {`
`Run after executing each scenario`
`}`
 	
`***Order can be used in the cook hook`
	`[BeforeTestRun(Order = 1)]`
	`public static void BeforeTestRun1(){ … }`
	
	`[BeforeTestRun(Order = 2)]`
	`public static void BeforeTestRun2(){ … }`
	
	`[AfterTestRun]`
	`public static void AfterTestRun(){ … }`
	
	`[BeforeFeature]`
	`public static void BeforeFeature(){ … }`
	
	`[AfterFeature]`
	`public static void AfterFeature(){ … }`
	
	`[BeforeScenario] | [Before]`
	`public void BeforeScenario(){ … }`
	
	`[AfterScenario] | [Before]`
	`public void AfterScenario(){ … }`

Specflow vs Cucumber

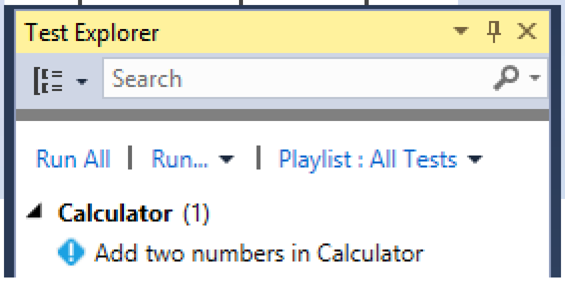
cucumber	specflow

	`[BeforeScenarioBlock]`
	`public void BeforeScenario(){ … }`
	
	`[AfterScenarioBlock]`
	`public void AfterScenario(){ … }`
	
	`[BeforeStep]`
	`public void BeforeStep(){ … }`
	
	`[AfterStep]`
	`public void AfterStep(){ … }`
	
	`***Order can be used in all the hook`

Tag	

`@SmokeTest @RegressionTest @DNA`
`Scenario: Successful Login`
`Given: This is a blank test`
 	
`@RegressionTest @DNA`
`Scenario: UnSuccessful Login`
`Given: This is a blank test`
 	
`@SmokeTest  @DNA`
`Scenario: Add a product to bag`
`Given: This is a blank test`
	`@SmokeTest @RegressionTest @DNA`
	`Scenario: Successful Login`
	`Given This is a blank test`
	
	`@RegressionTest @DNA`
	`Scenario: UnSuccessful Login`
	`Given This is a blank test`
	
	`@SmokeTest @DNA`
	`Scenario: Add a product to bag`
	`Given This is a blank test`

Run	

`package cucumberJava;`
`import org.junit.runner.RunWith;`
`import cucumber.junit.Cucumber;`
`@RunWith(Cucumber.class)`
`@Cucumber.Options(`
`plugin = {"pretty",`
`"html:Folder_Name" ,`
`"json:Folder_Name/cucumber.json" ,`
`"junit:Folder_Name/cucumber.xml"`
`},`
`features = {“src/test/features“},`
`glue = “src/test/stepDeinition“`
`tags = {"@SmokeTest"}`
`monochrome=true`
`strict=false`
`)`
 	
`public class runTest {`
	App.config
	
	`<specFlow>`
	`  <unitTestProvider name="MsTest" />`
	`</specFlow>`
	
	Test | Windows | Test Explorer
	 Test Explorer
	Search
	Run All | Run... | Playlist : All Tests
	Calculator (1)
	Add two numbers in Calculator

Specflow vs Cucumber

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cucumber

```
}
```

MonoChrome - readable console output

Strict-skip undefined steps from execution (default-false)

```
(Include plugin in POM.xml)
<plugin>
<groupId>org.apache.maven.plugins</groupId>
<artifactId>maven-compiler-plugin</artifactId>...
</plugin>
```

```
mvn clean install
mvn test
mvn test -Dcucumber.options=
”src/test/resources/functionalTests/End2End_Tests.
feature”

mvn test -Dcucumber.options='--tags "@smoke and
@fast"'
mvn -Dtest=RunnerTest test (running Junit class)
```

specflow

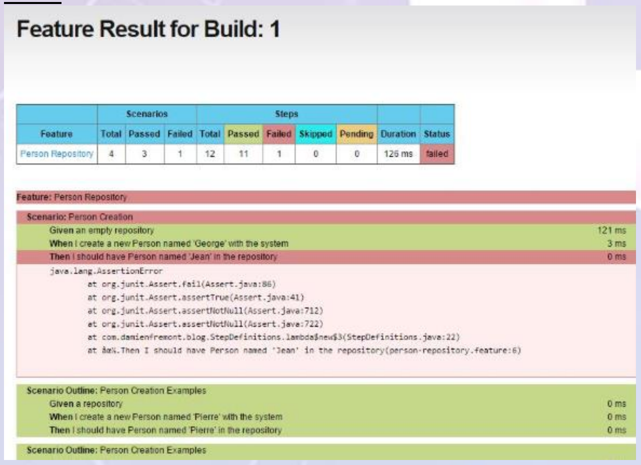
```
C:>> mstest.exe
/testcontainer:c:\test\test.UI.dll
/resultfile:c:\test\result.trx
```

trx >> xml format

Report

cucumber

HTML



Feature Result for Build: 1

	Scenarios			Steps						
Feature	Total	Passed	Failed	Total	Passed	Failed	Skipped	Pending	Duration	Status
Person Repository	4	3	1	12	11	1	0	0	126 ms	failed

```
Feature: Person Repository
  Scenario: Person Creation
      Given an empty repository                                   121 ms
      When I create a new Person named 'George' with the system     3 ms
      Then I should have Person named 'Jean' in the repository      0 ms
      java.lang.AssertionError
            at org.junit.Assert.fail(Assert.java:86)
            at org.junit.Assert.assertTrue(Assert.java:41)
            at org.junit.Assert.assertNotNull(Assert.java:712)
            at org.junit.Assert.assertNotNull(Assert.java:722)
            at com.damienfremont.blog.StepDefinitions.lambda$new$3(StepDefinitions.java:22)
            at âœ½.Then I should have Person named 'Jean' in the repository(person-repository.feature:6)

  Scenario Outline: Person Creation Examples
      Given a repository                                              0 ms
      When I create a new Person named 'Pierre' with the system       0 ms
      Then I should have Person named 'Pierre' in the repository      0 ms

  Scenario Outline: Person Creation Examples
```

JSON

specflow

HTML /XML

```
specflow.exe stepdefinitionreport SpecFlowTalk.csproj
/BinFolder:bin/debug /out:myTestResult.html

XML>>> /BinFolder:bin\debug /out:TestResult.xml
```

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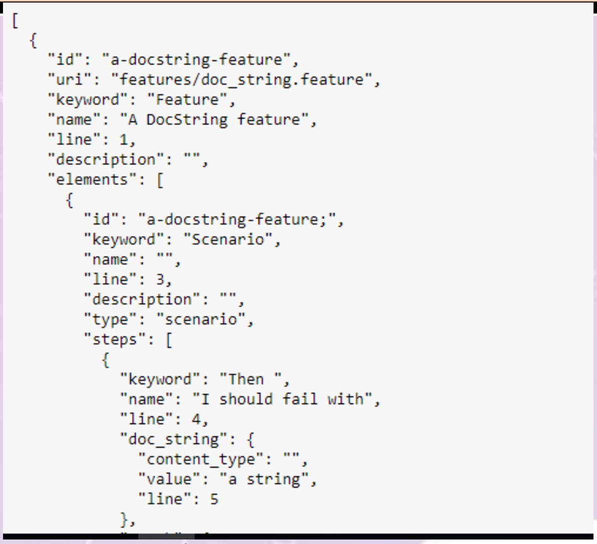
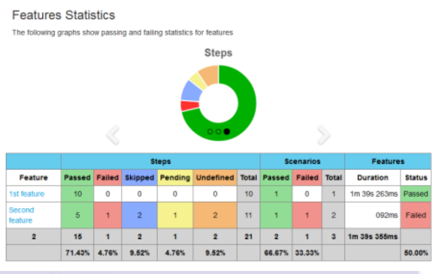


```
[
  {
    "id": "a-docstring-feature",
    "uri": "features/doc_string.feature",
    "keyword": "Feature",
    "name": "A DocString feature",
    "line": 1,
    "description": "",
    "elements": [
      {
        "id": "a-docstring-feature;",
        "keyword": "Scenario",
        "name": "",
        "line": 3,
        "description": "",
        "type": "scenario",
        "steps": [
          {
            "keyword": "Then ",
            "name": "I should fail with",
            "line": 4,
            "doc_string": {
              "content_type": "",
              "value": "a string",
              "line": 5
            },
```

```
cucumber-reporting
<groupId>net.masterthought</groupId>
<artifactId>cucumber-reporting</artifactId>
```

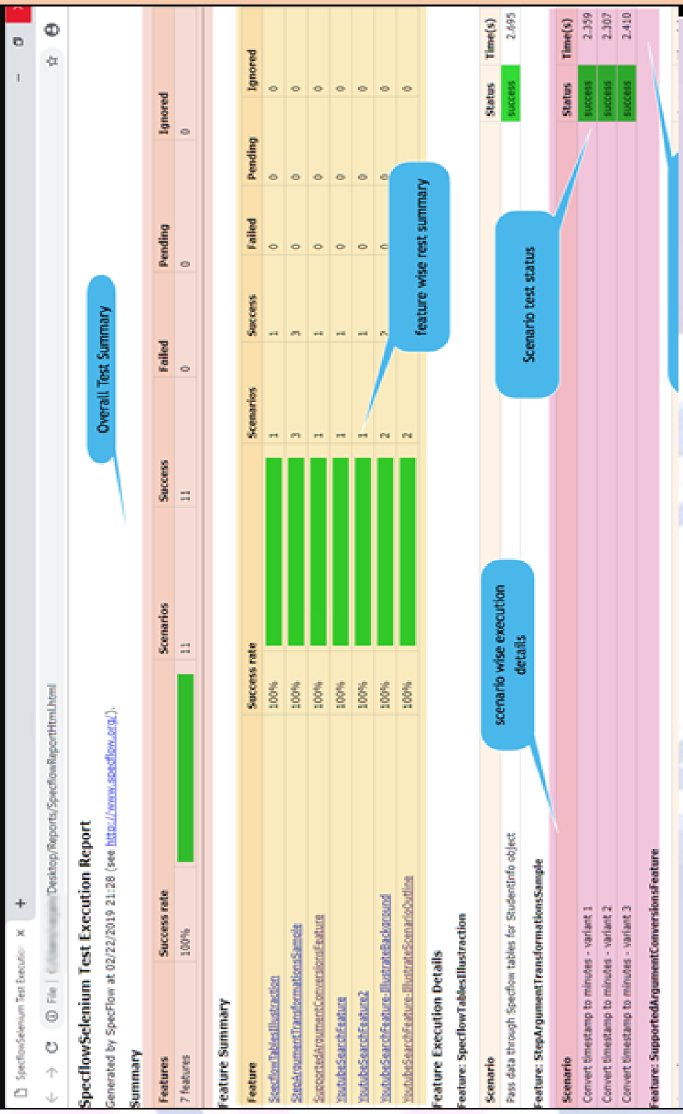


Features Statistics

The following graphs show passing and failing statistics for features

Steps

	Steps						Scenarios			Features	
Feature	Passed	Failed	Skipped	Pending	Undefined	Total	Passed	Failed	Total	Duration	Status
1st feature	10	0	0	0	0	10	1	0	1	1m 39s 263ms	Passed
Second feature	5	1	2	1	2	11	1	1	2	092ms	Failed
2	15	1	2	1	2	21	2	1	3	1m 39s 355ms	
	71.43%	4.76%	9.52%	4.76%	9.52%		66.67%	33.33%			50.00%



SpecflowSelenium Test Execution

File | C:/Users/[redacted]/Desktop/Reports/SpecflowReportHtml.html

SpecflowSelenium Test Execution Report

Generated by SpecFlow at 02/22/2019 21:28 (see http://www.specflow.org/).

Summary

Features	Success rate		Scenarios	Success	Failed	Pending	Ignored
7 features	100%	🟩	11	11	0	0	0

Feature Summary

Feature	Success rate		Scenarios	Success	Failed	Pending	Ignored
SpecflowTablesIllustraction	100%	🟩	1	1	0	0	0
StepArgumentTransformationsSample	100%	🟩	3	3	0	0	0
SupportedArgumentConversionsFeature	100%	🟩	1	1	0	0	0
YoutubeSearchFeature	100%	🟩	1	1	0	0	0
YoutubeSearchFeature2	100%	🟩	1	1	0	0	0
YoutubeSearchFeature-IllustrateBackground	100%	🟩	2	2	0	0	0
YoutubeSearchFeature-IllustrateScenarioOutline	100%	🟩	2				0

Feature Execution Details

Feature: SpecflowTablesIllustraction

Scenario	Status	Time(s)
Pass data through Specflow tables for StudentInfo object	success	2.695

Feature: StepArgumentTransformationsSample

Scenario	Status	Time(s)
Convert timestamp to minutes - variant 1	success	2.359
Convert timestamp to minutes - variant 2	success	2.307
Convert timestamp to minutes - variant 3	success	2.410

Feature: SupportedArgumentConversionsFeature

Specflow vs Cucumber

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Scope Binding	

	`[Scope(Tag = "mytag", Feature = "feature title", Scenario = "scenario title")]`
	`[When(@"I perform a simple search on '(.*)'", Scope(Tag = "controller"))]`
	`public void WhenIPerformASimpleSearchOn(string searchTerm)`
	`{`
	`var controller = new CatalogController();`
	`actionResult = controller.Search(searchTerm);`
	`}`
	
	`[When(@"I perform a simple search on '(.*)'"), Scope(Tag = "web")]`
	`public void PerformSimpleSearch(string title)`
	`{`
	`selenium.GoToThePage("Home");`
	`selenium.Type("searchTerm", title);`
	`selenium.Click("searchButton");`
	`}`