e2e Automation

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Quality from Requirement to Deployment

Gherkin Syntax

Gherkin is a Business Readable, Domain Specific Language created especially for behavior descriptions. It gives you the ability to remove logic details from behavior tests.

Gherkin serves two purposes…

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serving as your project’s documentation and automated tests.

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it talks back to you using real, human language telling you what code you should write.

Gherkin is the language used to write features, scenarios, and steps

The purpose of the language is to help us write concrete requirements

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Gherkin files are plain-text and have the extension .feature

Keywords:

Feature

Background

Scenario

Scenario Outline

Examples

Given

When

Then

And

But

Example..

Feature: Feedback when entering invalid credit card details

In user testing, we've seen a lot of people who make mistakes...

Background: **(**True for all scenarios below **)**

Given I have chosen an item to buy

And I am about to enter my credit card number

Scenario: Credit card number too short

When I enter a card number that is less than 16 digits long

And all the other details are correct

Steps

And I submit the form

Then the form should be redisplayed

And I should see a message advising me of the correct number of digits

Creating Test data and Acceptance Criteria using Gherkin….

In agile , user specification are in user stories , so user story for Login should be,

Story: As User, I want to login into the system so that I can view main dashboard

Acceptance Criteria will be

Login with valid credentials

User must now be able to login with invalid credentials

User must be displayed error message if he / she add in valid data

Feature: As User, I want to login into the system so that I can view main dashboard

Scenario: Login with Valid credentials (happy flow)
Given I am on login page
When I enter Valid login credentials
And I click login
Then I am logged in
And I am navigated to dashboard

Scenario: Login with in valid credentials (unhappy flow)
Given i am on login page
When I enter invalid login credentials
And I click login
Then I am not logged in
And I displayed an error message saying "Please enter valid login credentials"

Scenario Outline: Login with in valid credentials

Given I am login page

When I enter <invalid_username >

And I enter <invalid_password >

And I click login

Then I am not logged in

And I displayed an <error_message>

Examples:

|invalid_username|invalid_username|error_message|

|not registered username|izbc123|Seems like you are not registered with Us, Please sign Up first.|

|#^%$%^$%$|abc123|Please enter valid username|

|user_009|Blank field | Please enter valid password|

Tables in Gherkin Syntax

Tables as arguments to steps are handy for specifying a larger data set - usually as input to a Given or as expected output from a **Then**.

Used for creating Test Sets

Scenario:

Given the following people exist:

name	email	phone
Aslak	aslak@email.com	123
Joe	joe@email.com	234
Bryan	bryan@email.org	456

```
public function thePeopleExist(TableNode $table)
{
    $hash = $table->getHash();
    foreach ($hash as $row) {
        // $row['name'], $row['email'], $row['phone']
    }
}
```

A good requirement should be ….

Unambiguous

Testable (verifiable)

Clear (concise, precise)

Understandable


specflow

Set up

To set up your specification project:

- Add “Unit Test Project” to your solution **(e.g. “MyProject.Specs”).**
  - **Note**: Creating a “Unit Test Project” is the recommended procedure, as it reduces the number of steps required to set up your project.
- You can choose to remove the UnitTestX.cs file, as it is not required.
- Add SpecFlow+ Runner to your specification project using NuGet:
  - Right-click on your specification project (e.g. “MyProject.Specs”) and select Manage NuGet Packages for Solution.
  - Search for “SpecRun” and install SpecRun.SpecFlow.Alternatively, you can install the package from NuGet’s console **(Tools | NuGet Package Manager | Package Manager Console)** as follows:PM> **Install-Package SpecRun.SpecFlow**

Adding feature

Feature: Calculator

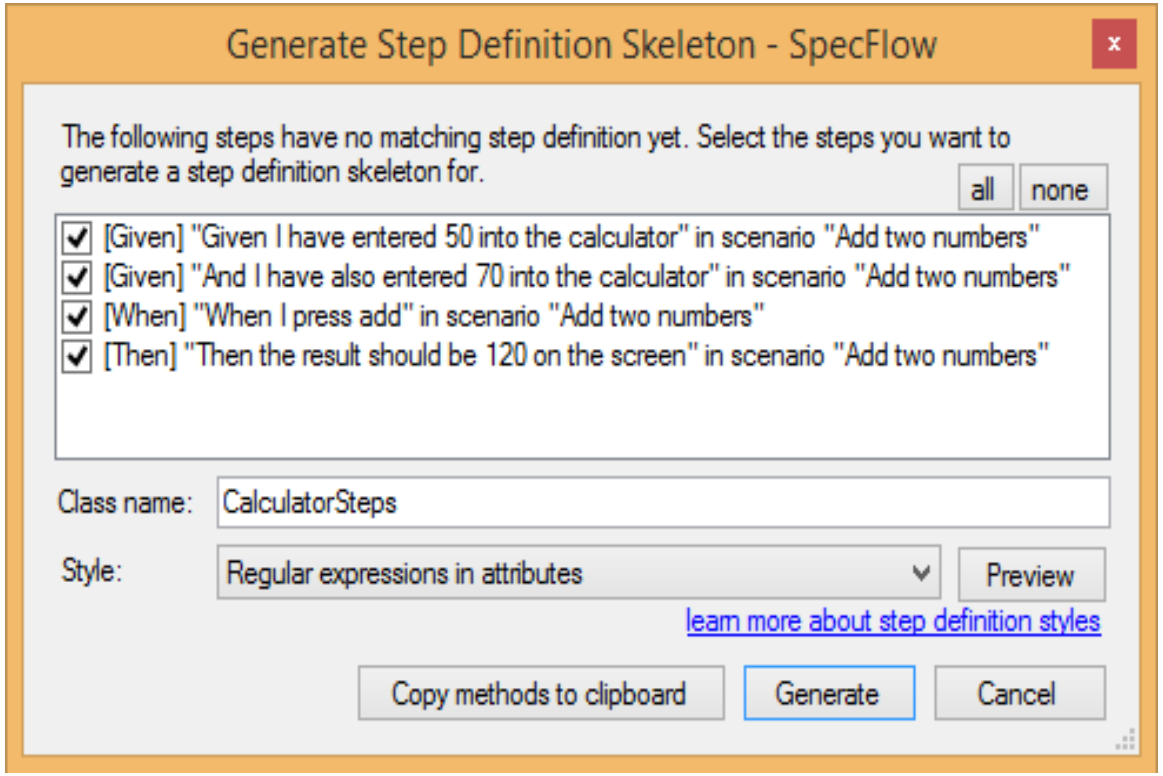
In order to avoid silly mistakes
As a math idiot
I want to be told the sum of two numbers

Scenario: Add two numbers

Given I have entered 50 into the calculator
And I have also entered 70 into the calculator
When I press add
Then the result should be 120 on the screen

Generating Step Definitions

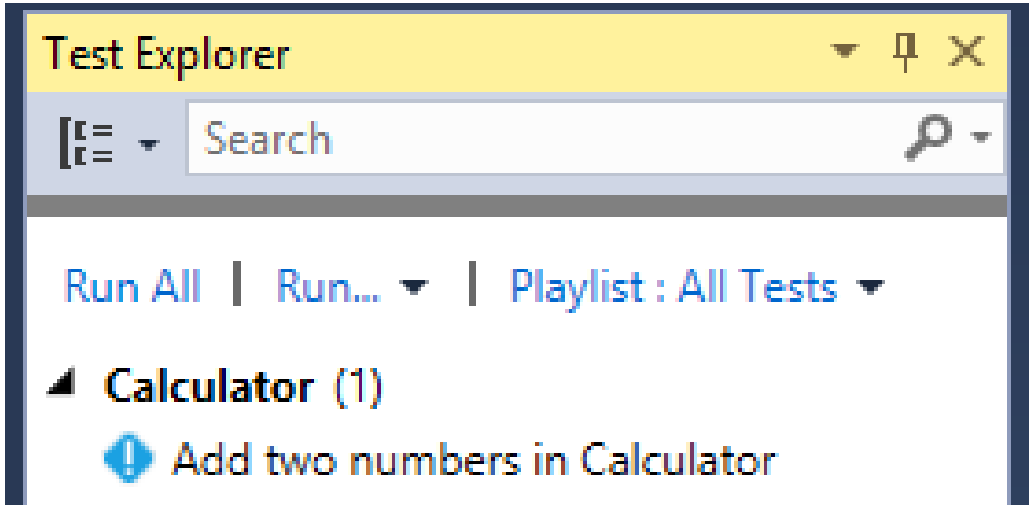
- Right-click on your feature file in the code editor and select Generate Step Definitions from the popup menu. A dialogue is displayed.
- Enter a name for the class, e.g. “CalculatorSteps”.
- Click on Generate and save the file. A new skeleton class is added to your project with steps for each of the steps in the scenario:



```
using System;
using TechTalk.SpecFlow;

namespace MyProject.Specs
{
    [Binding]
    public class CalculatorSteps
    {
        [Given(@"I have entered (.*) into the calculator")]
        public void GivenIHaveEnteredIntoTheCalculator(int p0)
        {
            ScenarioContext.Current.Pending();
        }

        [Given(@"I have also entered (.*) into the calculator")]
        public void GivenIHaveAlsoEnteredIntoTheCalculator(int p0)
        {
            ScenarioContext.Current.Pending();
        }

        [When(@"I press add")]
        public void WhenIPressAdd()
        {
            ScenarioContext.Current.Pending();
        }

        [Then(@"the result should be (.*) on the screen")]
        public void ThenTheResultShouldBeOnTheScreen(int p0)
        {
            ScenarioContext.Current.Pending();
        }
    }
}
```

Executing…

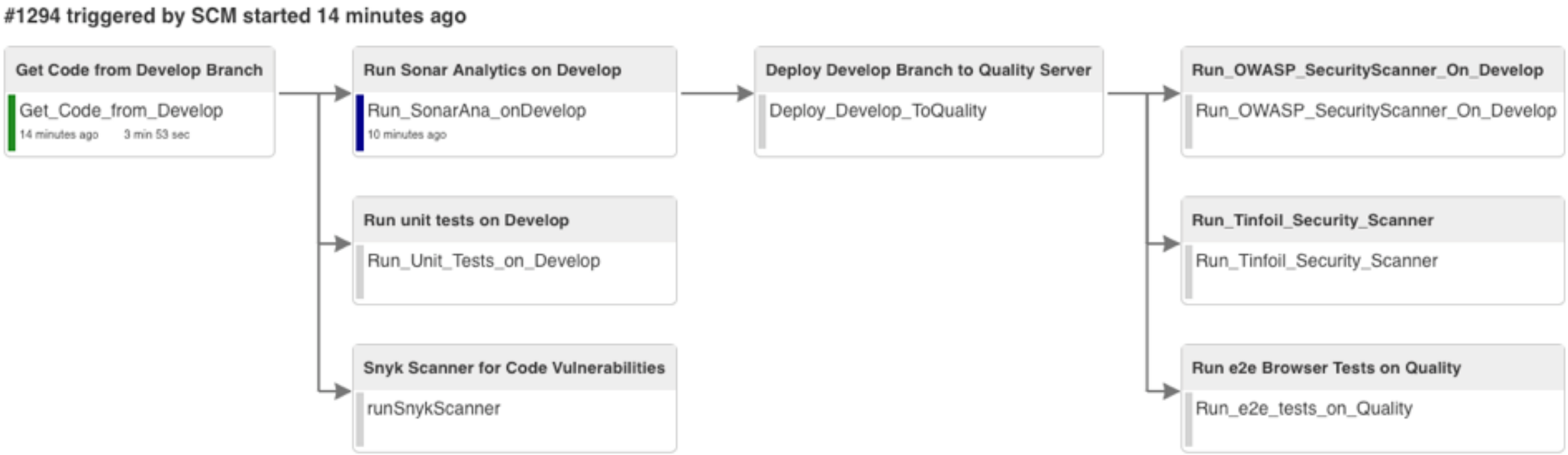
- Build your solution.
- Select Test | Windows | Test Explorer to open the Test Explorer:
- Click on Run All to run your test. As the automation and application code has not yet been implemented, the test will not pass successfully.



So with Gherkin…

- In code documentation
- We have Dev/QA/PO all on one page
- We are automating our requirements
- Our requirements are easy to understands
- Our requirements are testable and complete

We have quality gates every where …



Thanks for listening

Trust me its a lot to know

Contact Me

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