

## Java Cucumber and Gherkin for Testing

**Gherkin:** Business readable notation for executable specifications

**Cucumber:** Software you use to run executable specification written in gherkin

- 1) **Features:** Define Requirement
- 2) **Scenario:** Describe the business context or situation/ What does user want to do?/what business rule are you illustrating.
- 3) **Given:** State of the system/ define pre-condition, Setting the stage for next condition to be played out
- 4) **When:** What is the scenario/User action
- 5) **Then:** Describe the result

### Dependency required :

1. cucumber-java
2. cucumber-j unit / serenity-core
3. ham-crest - library / assertj - core

(For serenity we additionally have to use the serenity-cucumber and serenity plugin in maven)

@RunWith(Cucumber.class) / @RunWith(CucumberWithSerenity.class)

### Project Structure:

Main

Test:

1. java: Step defining and test code
2. Resources:
  - a. features:
    - test.feature file
    - test2.feature file

### Format:

1. Simple scenario
  - Scenario : order food
  - Given : is Fitness member
  - When : order an "smoothie"
  - Then : order confirmed
2. Little complex structure
  - Scenario : On diet
  - Given : Fitness member
  - And : low-sugar diet plan
  - When : order an "smoothie"
  - Then : reply that order is high in sugar
  - And/But : able to modify his order before confirming

**Features file:**

Each feature file has a title and at least one scenario and description

Eg:

1. *Feature*: Ordering smoothies

(description)

*Scenario* : Order a smoothie

*Given* Fitness member

*When* order an “smoothie”

*Then* order should go through queue

*Scenario* : On diet

*Given* Fitness member

*And* low-sugar diet plan

*When* order an “smoothie”

*Then* reply that order is high in sugar

or. *Feature*: Ordering smoothies

(description)

*Background*: (background run for each scenario given)

*Given* Fitness member

*Scenario* : Order a smoothie

*When* order an “smoothie”

*Then* order should go through queue

*Scenario* : On diet

*And* low-sugar diet plan

*When* order an “smoothie”

*Then* reply that order is high in sugar

**Data Table:**

*Scenario* : get daily health news update

*Given* Fitness member

*And* he is interested un Running

*And* he is interested in Gym

*And* he is interested in Dieting

*When* he receive his boring health news updates

*Then* The articles should only include things about Running, Gym, Dieting

Or. *Scenario* : get daily health news update

*Given* : Fitness member

*And* he is interested in the following areas:

	Running	
	Gym	
	Dieting	

*When* : he receive his boring health news updates  
*Then* :The articles should only include things about:

	Running	
	Gym	
	Dieting	

### Embedded tables:

*Scenario* :Order many things  
*Given* Fitness member  
*When* orders “Smoothie”  
*And* orders “cappuccino”  
*And* orders “fruits”  
*Then* order should go through queue

or. *Scenario* :Order many things  
*Given* Fitness member  
*And* orders following:

	product		Quantity	
	Smoothie		1	
	cappuccino		1	
	fruits		1	

*When* he view calories overview  
*Then* see the following counts

	Smoothie		180	
	cappuccino		100	
	fruits		120	
	Total		400 kcal	

or. *Scenario* :Order many things  
*Given* Fitness member  
*And* orders following:

	product		Quantity	
	Smoothie		1	
	cappuccino		1	
	fruits		1	

*When* he view calories overview  
*Then* see the following counts

	Smoothie		1		180		180	
	cappuccino		2		100		200	
	fruits		1		120		120	
	Total		4				400	

### Scenario outliers:

*Scenario* : Order Regular smoothie  
*Given* Fitness member  
*When* order 1 “ Banana smoothie”  
*Then* earns 15 points

*Scenario* : Order fancy smoothie

*Given* Fitness member

*When* order 1 “ Banana smoothie”

*Then* earns 20 points

*Scenario* : Order Tea

*Given* Fitness member

*When* order 1 “ tea ”

*Then* earns 10 points

*Scenario* : Order coffee

*Given* Fitness member

*When* order 1 “coffee”

*Then* earns 12 points

It has a lot of duplicate code

Solution

*Scenario* outlier: earning points

*Given* Fitness member

*When* order 1 <Sample Drink>

*Then* earns <points earned> points

Examples:

<b><i>Drink category</i></b>	<b><i>Sample Drink</i></b>	<b><i>points earned</i></b>
Regular smoothie	Banana smoothie	15
Regular smoothie	Banana smoothie	20
Tea	tea	10
coffee	coffee	12

Code Example Test Runner Class: