



Clean Cucumber

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Clean Code Days 21.06.2018

valtech_

Funkwerk

Passenger Information

Country wide

Customized

High Availability

High Reliability



Clean Code

Clean Test

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Clean Code

Clean Cucumber

>=

Clean Test

>=

Clean Code

What is Cucumber?

Given

When

Then

What is Cucumber?

Feature

Scenario /

Outline

Example

Given

When

Then

What is Cucumber?

Feature

Scenario /

Outline

Example

Given

When

Then

@skip, @wip

And / But

“”” ... “”” / Table

What is Cucumber?

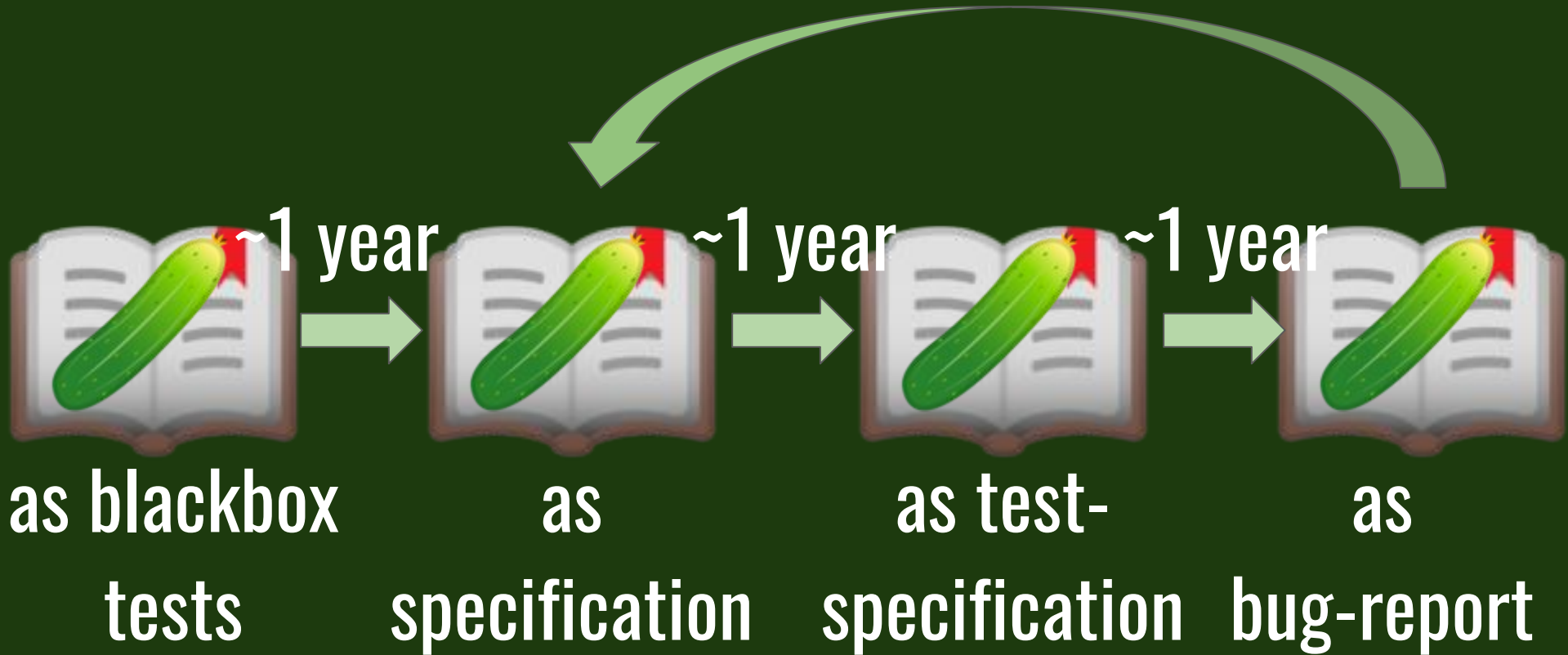
~~Tests~~

Specification in the domain language of the
stakeholder

Adoption process



Adoption process surprise





History

Tools mixed with some Guidelines



In General

All Clean Code guidelines apply as well to Cucumber

e.g.:

- Good names
- Concise
- DRY
- KISS
- ...



Simple Example

Feature: Announcements

Scenario: Journey Arrival

Given a journey is scheduled

When it arrives

Then I hear an arrival announcement

Guideline: Use Narratives

in order to understand decisions it is important to know
who wants what and why



As a ...

I want to ...

in order to ...

Simple Example with Narrative

Feature: Announcements

As a passenger,
I want to hear arrival announcements,
in order to know where to go after departing the train.

Scenario: Journey Arrival

Given a journey is scheduled

...

Version specification and code in same repository



usually:

/src contains source code

/features contains specification

Product Owner / Stakeholder usually do not use Source Code Version Control Systems

Simple Example with Narrative and link to User Story

Feature: Announcements

As a passenger, I want to hear arrival announcements, so that I know where to go after departing the train.

@DEFAS-123

Scenario: Journey Arrival

Given a journey is scheduled

When it arrives

Then I hear an arrival announcement

Involve Stakeholders

be as transparent as possible

ease access to specification

use specification wherever possible





GitHub

gherkin_format

github.com/funkwerk/gherkin_format/

Formats feature files using custom templates

- convert to markdown for usage in github/gitlab, confluence/wiki, jira, ...
- extract tags
- word/html5/...
- test reports

implemented in ruby.

available as gem package or as docker image.



gherkin_format - application



git



Jira



Confluence

Multiple Scenarios

Feature: Announcements

Scenario: Journey Arrival

Given a journey is scheduled

...

Scenario: Journey Delay

Given a journey is scheduled

...

Use Background

Do not repeat Given steps in Scenarios, use an background instead.



Multiple Scenarios

Feature: Announcements

Background: Setup

Given a journey is scheduled

Scenario: Journey Arrival

...

Scenario: Journey Delay

...



GitHub

github.com/funkwerk/gherkin_lint/

gherkin_lint

Tool to check Feature Files for static issues

- invalid step flow
- avoid scripting
- too long

~31 Guidelines implemented



Spellings happen

Feature: Announcements

Scenario: Joureny Arrival

Given a journey is scheduled

When it arrives

Then I hear an arrival announcement



GitHub

gherkin_language

github.com/funkwerk/gherkin_language/

Tool to check for spelling and grammar issues

Specific for feature files. (Multiple Sentences starting with “Given” are good in Cucumber)

Allows usage of a glossary



Write steps as a subject-predicate action phrase



Use “Given” like the German “Angenommen” and not like the German “Gegeben sei”.

Bad: Given a journey

Good: Given a journey has been scheduled

Trend towards longer and longer specifications

Feature: Announcements

Scenario: Journey Arrival

Given a daily journey from Berlin to Munich over Frankfurt at 10:00 o'clock is scheduled

When it arrives

Then I hear an arrival announcement

Be Concise



In order to be read, write as concise as possible.

Flesch Reading Ease Readability Formula (from <http://www.readabilityformulas.com>)

Readability Ease = $206.835 - (1.015 * \text{Average Sentence Length}) - (84.6 * \text{Average number of Syllables})$

Scores between 90.0 and 100.0 are considered easily understandable by an average 5th grader.

Scores between 60.0 and 70.0 are considered easily understood by 8th and 9th graders.

Scores between 0.0 and 30.0 are considered easily understood by college graduates.

gherkin_readability

Tool to check Feature Files for readability ease



GitHub

github.com/funkwerk/gherkin_readability/





GitHub

github.com/funkwerk/gherkin_*/



gherkin
format



gherkin
lint



gherkin
language



gherkin
readability



Guidelines

Three Bonus Guidelines

talk to the stakeholders

Involve stakeholders in discussions as early as possible

use domain language

establish Three-Amigo-workshops



be declarative

Given I open <http://www.db.de>

And I enter 4711 in the search field

When I press the search button

Then I see it is operating on 01.04.2018

vs.

When I search train 4711

Then I see it is operating every monday

focuses on business
requirements and
implementation details

focuses on business
requirements



use established placeholders

trains 101, 102, ...

stations A, B, C

Avoid metasyntactic variable names “foo”, “bar”, “baz”, ...



Clean Cucumber

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Clean Test

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Clean Code