

# BEHAVIOUR-DRIVEN DEVELOPMENT AND TEST AUTOMATION WITH CUCUMBER

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# About the speaker

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# Topics

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- Behaviour-Driven Development (BDD)
- Cucumber and friends
- Test automation with Cucumber
- How we use BDD
- Let's create something!



# Behaviour-Driven Development

# What is BDD

- BDD is an “outside-in” methodology. It starts at the outside by identifying business outcomes, and then drills down into the feature set that will achieve those outcomes
- BDD is a second-generation, outside-in, pull-based, multiple-stakeholder, multiple-scale, high-automation, agile methodology. It describes a cycle of interactions with well-defined outputs, resulting in the delivery of working, tested software that matters.

# What is BDD

- Describe how our software should behave
- Concentrate on the “Why” instead of the “How”
- You Ain’t Gonna Need It
- DRY your code
- Start red, get green, refactor
- End up with exactly what we wanted



Cucumber

# Cucumber

- Describe how software should behave... in plain text
- Execute these functional descriptions as automated tests
- Write features and scenarios before anything else
- Code outside-in to make your scenarios pass
- Features and scenarios are the documentation
- Write better, less coupled (and less) code

# Cucumber

- Pop the “why” stack – do you deliver value?
- Value is not what you put into the system, it’s what you can get out of it
- Build your scenarios from bottom-up:
  - ▣ formulate the desired outcome
  - ▣ discover the action/operation
  - ▣ define context so the actions and outcomes make sense



# Test automation with Cucumber

# Test automation with Cucumber

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- Cucumber as a tool to automate existing tests
- How well does it work out?
- Should you do it?

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# How we use BDD

# How we use BDD

- We have an existing application, but...
  - It's old
  - It's not doing what we want it to do
- We want the same application, but better, so...
  - We take the good bits
  - Throw out the bad bits
  - Add some better bits
- Profit!?

# How we use BDD

- Web front-end for our internal library
- We use:
  - ▣ Cucumber – the requirements
  - ▣ Ruby on Rails – the language and framework
  - ▣ Capybara – the acceptance test framework
  - ▣ Selenium – the browser driver



Let's create something!

# Let's create something!

- Our goal
  - ▣ Learn how to apply BDD methodologies
  - ▣ Create a small but working application from scratch
- Our tools
  - ▣ Ruby
  - ▣ Cucumber
  - ▣ RSpec
  - ▣ a text editor

# Recommended reading

The Pragmatic Programmers

## The Cucumber Book

Behaviour-Driven Development for Testers and Developers

Matt Wynne  
and Aslak Hellesøy

edited by Jacquelyn Carter



The Pragmatic Programmers

## The RSpec Book

Behaviour-Driven Development with RSpec, Cucumber, and Friends

David Chelimsky  
with Dave Astels,  
Zach Dennis,  
Aslak Hellesøy,  
Bryan Helmkamp,  
and Dan North

Foreword by Robert C. Martin  
(Uncle Bob)

Edited by Jacquelyn Carter





# Questions

