

EASY ACCEPTANCE TESTING

Cecil G. Williams

What I Plan To Cover

- Different Types of Testing
- Disadvantages of Acceptance Testing
- Advantages of Acceptance Testing
- Tools for Acceptance Testing
- Demonstration using Groovy and Selenium
- Q & A

Why Listen To Me

BSNE, MBA, MSIT



Wrote my first computer program on a Commodore VIC-20 in 1982

Practicing Agile Software Development since 2004

Nuclear Engineer, Software Developer, Technical Lead, System Administrator, Development Manager, Agile Coach, IT Consultant



source allies, inc.

Growing Businesses Through Creative
and Open Technology Solutions

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Why Listen To Me

Technical Lead on project featured in Chapter 14

Specification by Example

How Successful Teams Deliver the Right Software

Gojko Adzic

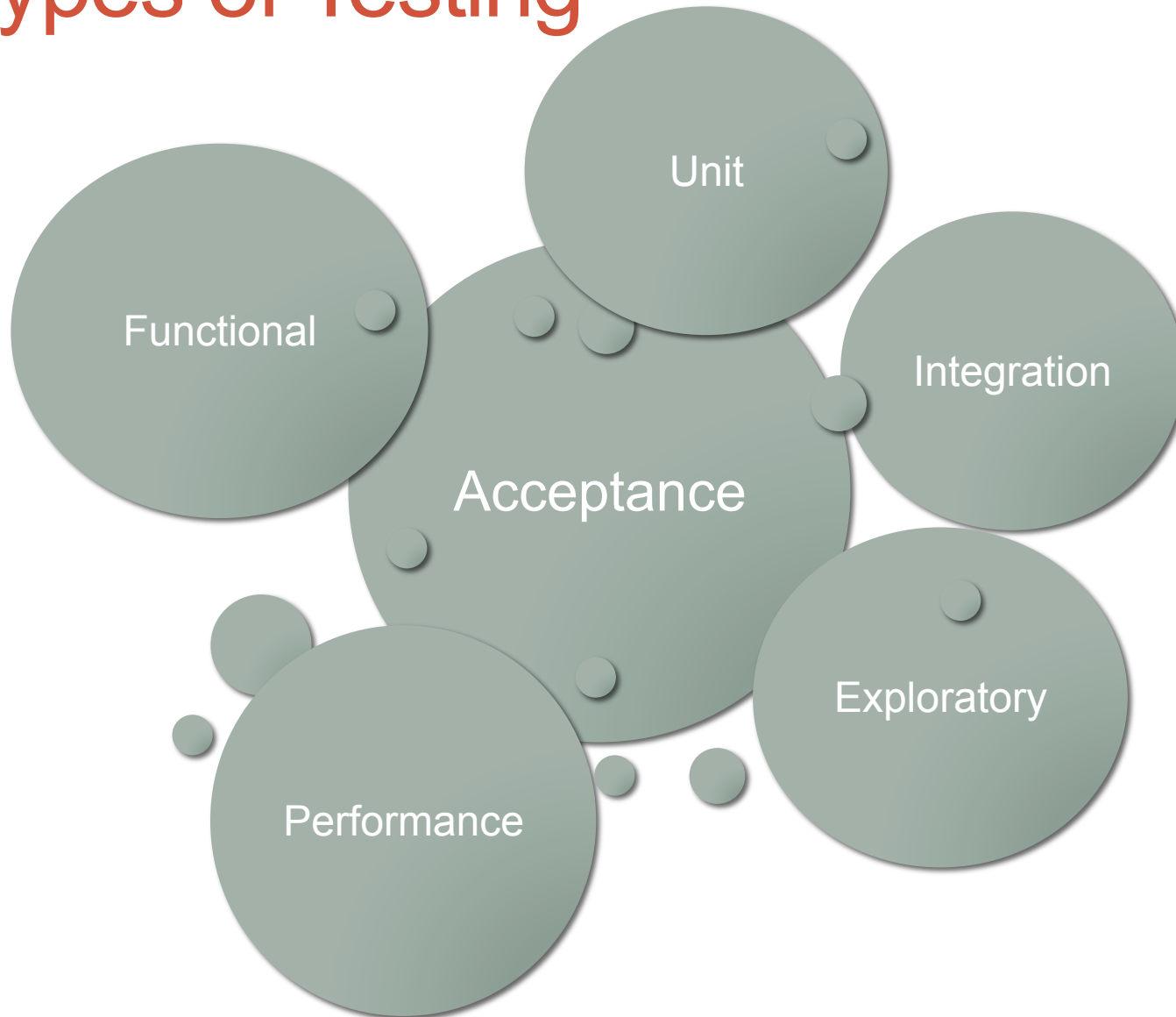
June, 2011 | 296 pages

ISBN 9781617290084

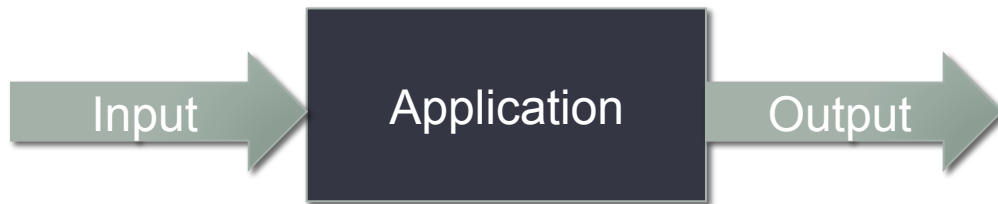


<http://specificationbyexample.com>

Types of Testing



Acceptance Testing



“An acceptance test is a formal description of the behaviour of a software product, generally expressed as an example or a usage scenario.”

- Black Box or End to End Testing
- Exercises the Real System
- Manual or Automated

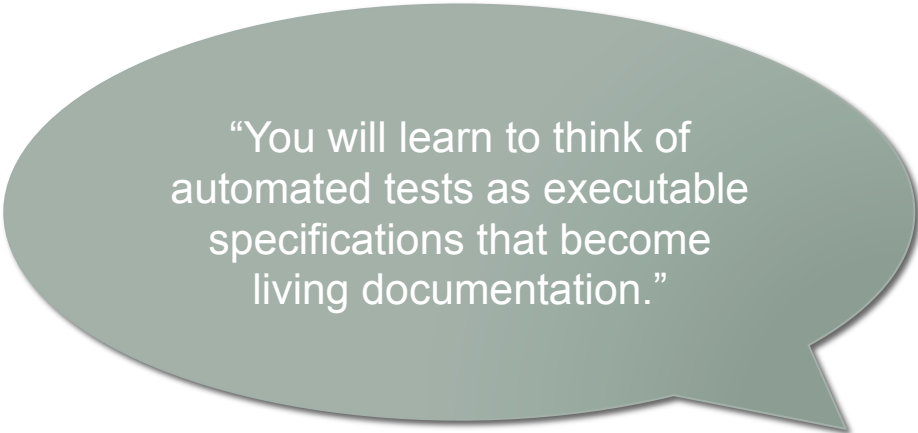
Automated Acceptance Testing



“...Acceptance should be a conversation...”

– James Shore | 08 Sep 2012

<http://www.jamesshore.com/Blog/Acceptance-Testing-Revisited.html>



“You will learn to think of automated tests as executable specifications that become living documentation.”

– Mary Poppendieck
<http://manning.com/adzic/>

Disadvantages of Acceptance Testing

Very Slow To Run



Brittle

Duplication

Test 1	Test 2	Test 3
-----	-----	-----
Step 1	Step 1	Step 1
Step 2	Step 2	Step 2
Step 3	Step 3	Step 3
	Step 4	Step 4
		Step 5

Disadvantages of Acceptance Testing

Burden to Maintain

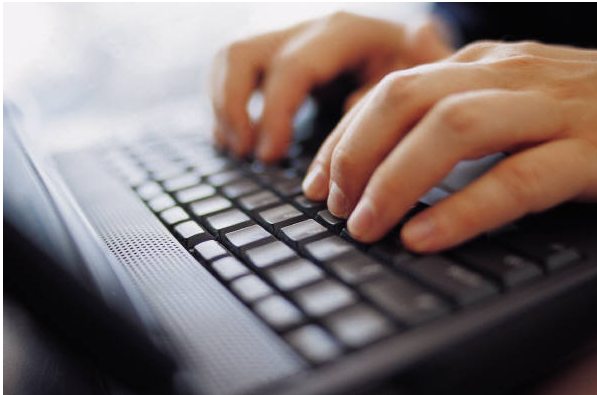


Resistance



Advantages of Acceptance Testing

Complete Integration



<http://www.allvectors.com/puzzle-vector/>

Exercise the System
like a User

Advantages of Acceptance Testing



Legacy Systems



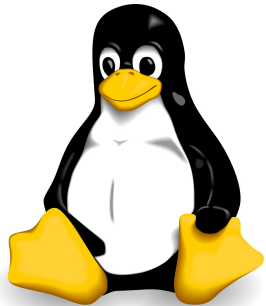
Safety Net
for Refactoring

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9  Google Chrome Framework 0x0010abb ChromeMain + 1584651
10 Google Chrome Framework 0x001ee47c ChromeMain + 1358722
11 Google Chrome Framework 0x001f25d8 ChromeMain + 1275464
12 Google Chrome Framework 0x001e771f ChromeMain + 1255211
13 Google Chrome Framework 0x001ef22b ChromeMain + 1362225
14 Google Chrome Framework 0x02ace867 ChromeMain + 43827863
15 Google Chrome Framework 0x02a78d02 ChromeMain + 4334538
16 Google Chrome Framework 0x02a18497 ChromeMain + 43473811
17 Google Chrome Framework 0x02a1b97b ChromeMain + 44488227
18 Google Chrome Framework 0x02a11768 ChromeMain + 44445088
19 Google Chrome Framework 0x02a11bcb ChromeMain + 43447883
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23 Google Chrome Framework 0x08ca656d ChromeMain + 12573821
24 Google Chrome Framework 0x06c73865 ChromeMain + 12398369
25 CoreFoundation 0x0f946c6f _CFRunLoop__15__call__INL_OUT_TO_A_SOURCE__PERFORM_FUNCTION__ + 15
26 CoreFoundation 0x058a8039 _CFRunLoopDoSources0 + 233
27 CoreFoundation 0x058c5e46 _CFRunLoopRun + 934
28 CoreFoundation 0x058c563a _CFRunLoopRunSpecific + 378
29 CoreFoundation 0x058c54ab _CFRunLoopRunInMode + 123
30 HIToolbox 0x06e7215a RunCurrentEventLoopInMode + 242
31 HIToolbox 0x06c71ec9 ReceiveNextEventCommon + 374
32 HIToolbox 0x06e71d44 BlockUntilNextEventMatchingListInMode + 88
33 AppKit 0x04118a3a _DPSNextEvent + 724
34 AppKit 0x0411826c -[NSApplication nextEventMatchingMask:untilDate:inMode:dequeue:] + 1
35 AppKit 0x041666cc -[NSApplication run] + 855
36 Google Chrome Framework 0x08c732c1 ChromeMain + 12381345
37 Google Chrome Framework 0x08c737dc ChromeMain + 12386124
38 Google Chrome Framework 0x08c9f8e0 ChromeMain + 12571376
39 Google Chrome Framework 0x08cc2451 ChromeMain + 12647245
40 Google Chrome Framework 0x031c3d1 ChromeMain + 2726627
41 Google Chrome Framework 0x02932aa0 ChromeMain + 42533296
42 Google Chrome Framework 0x02933183 ChromeMain + 42535859
43 Google Chrome Framework 0x02931b61 ChromeMain + 42535933
44 Google Chrome Framework 0x08c87efb ChromeMain + 11945979
45 Google Chrome Framework 0x08c87220 ChromeMain + 11946288
46 Google Chrome Framework 0x08c82919 ChromeMain + 41
47 Google Chrome 0x0000c478 main + 24
48 Google Chrome 0x0000c453 Google Chrome + 1915
```

Advantages of Acceptance Testing

Run Against Different Environments

- Operating Systems
- Browsers
- Mobile Platforms



Tools for Acceptance Testing



<http://cukes.info/>



<http://docs.seleniumhq.org/>



<http://watir.com/>



<http://www.specflow.org/>



<https://code.google.com/p/robotium/>



<http://www.testingwithfrank.com/>



<http://fitnesse.org/>

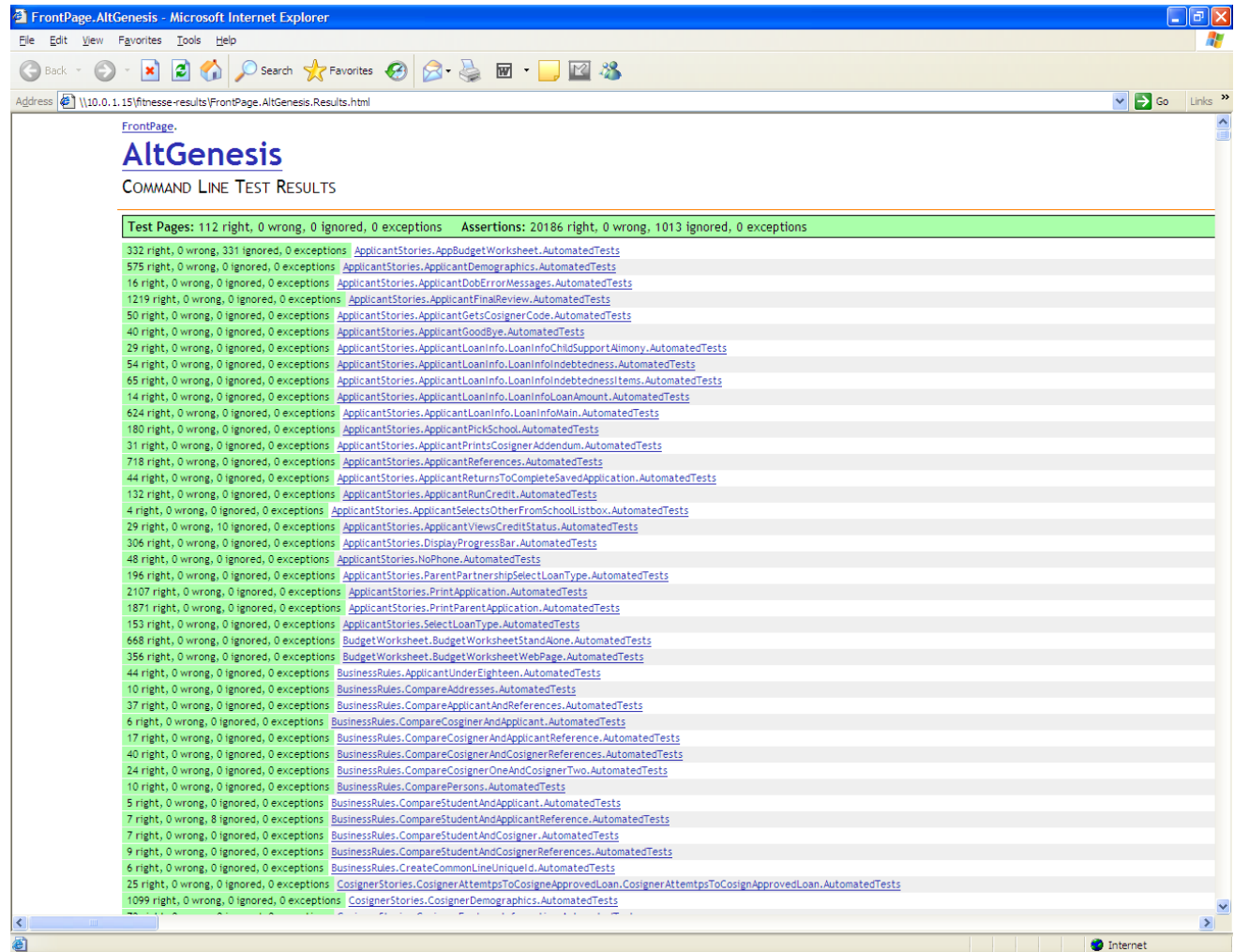


<http://fest.easytesting.org/>

Tools for Acceptance Testing



Wiki based
Acceptance
Testing
Framework



Tools for Acceptance Testing



Behavior Driven
Development Tool
From The
Ruby Community

Feature: Addition

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 **<input_1>** into the calculator

And I have entered **<input_2>** into the calculator

When I press **<button>**

Then the result should be **<output>** on the screen

Examples:

input_1	input_2	button	output
20	30	add	50
2	5	add	7
0	40	add	40

Tools for Acceptance Testing



Selenium: Web Browser Automation Tool

- IDE: Firefox plugin for record-and-playback
- WebDriver: Language specific bindings to drive a browser
- API: W3C Working Draft 27 January 2013
<http://www.w3.org/TR/2013/WD-webdriver-20130117/>

Demonstration

- Written in Groovy
- Uses Selenium
- Scenarios in XML



Summary

- Different Types of Testing
- Advantages of Acceptance Testing
- Disadvantages of Acceptance Testing
- Tools for Acceptance Testing
- Example of Simple Framework

<https://github.com/cecilgwilliams/EasyAT>



Q & A

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source allies, inc.

Growing Businesses Through Creative
and Open Technology Solutions



Easy Acceptance Testing Links

- <http://www.sourceallies.com>
- <http://blogs.sourceallies.com>
- <https://github.com/cecilgwilliams/EasyAT>
- <http://specificationbyexample.com>
- <http://docs.seleniumhq.org/>
- <http://cukes.info/>
- <http://watir.com/>
- <http://www.specflow.org/>
- <https://code.google.com/p/robotium>
- <http://www.testingwithfrank.com>
- <http://fitnesse.org>
- <http://fest.easytesting.org>