

Umfassendes automatisiertes Code Testing

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Vorstellung

- Co-Founder Nektoon
- Frontend Lead local.ch
- Memonic ist Ihr digitales Notizbuch
- www.memonic.com

The screenshot shows the Memonic application interface. At the top, there's a navigation bar with 'memonic' logo, 'Home', 'New Item ▾', 'My Collection', and user info 'patrice@nektoon.net Help Account Logout'. Below the navigation is a search bar 'Search your items'. The main area has a sidebar with 'Inbox' (highlighted in red) and 'All Items' (selected). Under 'Your Sets', there are categories: Computing, Holiday, Politics, Science, and Sport. A large red arrow points from the 'Inbox' link in the sidebar to the 'Inbox' link in the header of the main content area. The main content area displays a list of items:

- Simple (isolated) Feature Branch Continuous** (Sep 3, 2009)
FeatureBranch design 3 September 2009 Reactions With the rise of Distributed Version Control Systems (DVCS) such as git and Mercurial, I've seen more conversations about strategies for branching and merging and how to do them. I'm going to discuss here some simple strategies for branching and merging in a DVCS.
- N. Korean Delegation Arrives in South Multimedia** (Aug 21, 2009)
Sign in to Recommend E-Mail Print Reprints Share Close LinkedIn Digg Facebook Mixx MySpace Yahoo! Buzz Permalink By MARK McDONALD Published: August 21, 2009 HONG KONG — A high-level North Korean
- Bolts Wunderlauf stoppt Friedrichs Höhenflug** (Aug 21, 2009)
Von Susanne Röhlifing, Berlin zur Fotostrecke dpa Ariane Friedrich träumte von Gold im Hochsprung, doch dann kam Usain Bolt: Der neue Fabelweltrekord des Superstars über 200 Meter brachte die Deutsche

Each item has a thumbnail image, a title, a date, and a 'Details' link. The bottom right corner of the screenshot features the Memonic logo.



Übersicht

- Motivation
- Unit Testing
- Functional Testing
- JavaScript Testing
- Automatisierung
- Legacy Projekte



Umfrage

- Wer programmiert selber?
- Wer schreibt Tests?
- Wer managt Programmierer?



Motivation



<http://www.flickr.com/photos/cote/94256599/>

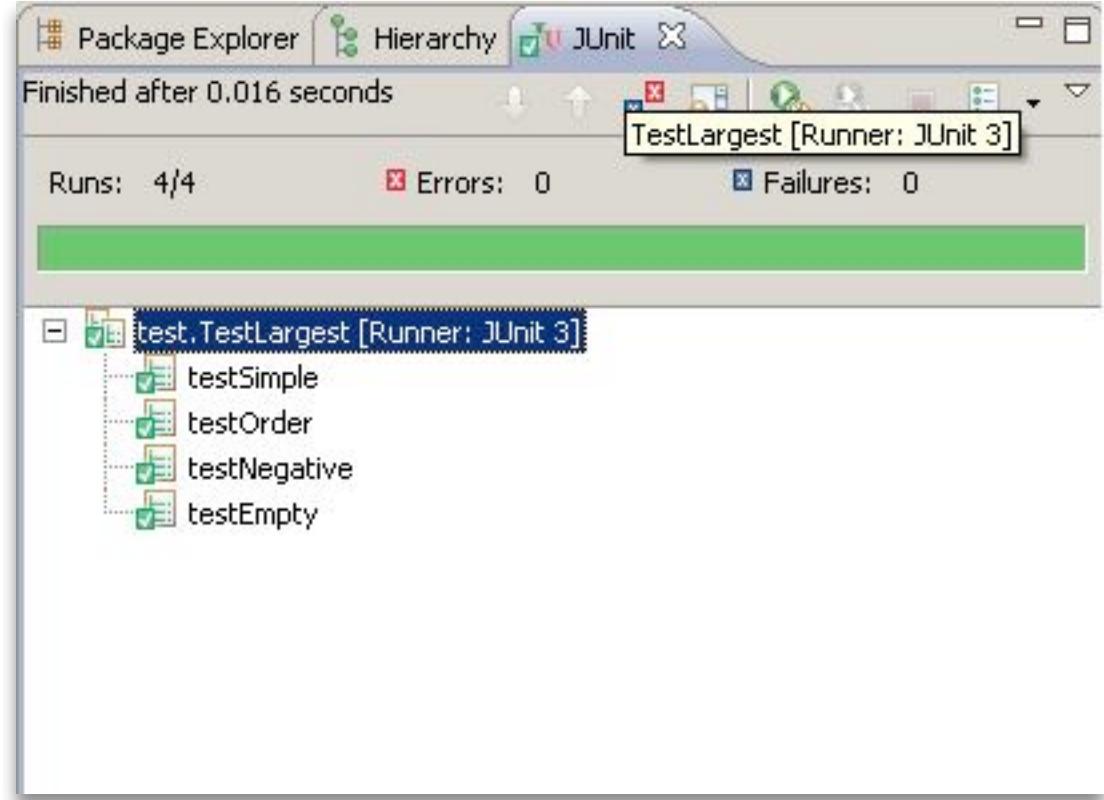


Motivation

- Tests sind akzeptiert
- Einstieg in Testen ist schwer
- Ausbildung fehlt



Unit Testing



Einführung

- Tests für die Komponenten
- Abhängigkeiten vermeiden
- Sehr schnell, sehr zuverlässig



Demo: hello



Demo: unit



Regeln

- Don't repeat yourself (DRY)
- Tests kommentieren
- Kleine Tests
- Tests isolieren



Tools

- **.net**: NUnit, xUnit.net
- **Java**: JUnit, TestNG
- **PHP**: PHPUnit, SimpleTest
- **Python**: unittest (built-in), nose
- **Ruby**: test/unit (built-in)



Functional Testing

Elapsed: 02:11

<u>Tests</u>	<u>Commands</u>
7 run	126 passed
0 failed	0 failed
	0 incomplete



Einführung

- System oder Blackbox testing
- Verwende HTTP



Demo: functional



Regeln

- Applikation isolieren
- Keine Mocks
- Page Objects



Tools

- **Frameworks:** Django, Okapi, Pylons, Ruby on Rails, ...
- **.net:** nHttpUnit, CSHttpUnit
- **Java:** HttpUnit
- **PHP:** SimpleTest Web tester
- **Python:** Paste WebTest



JavaScript Testing



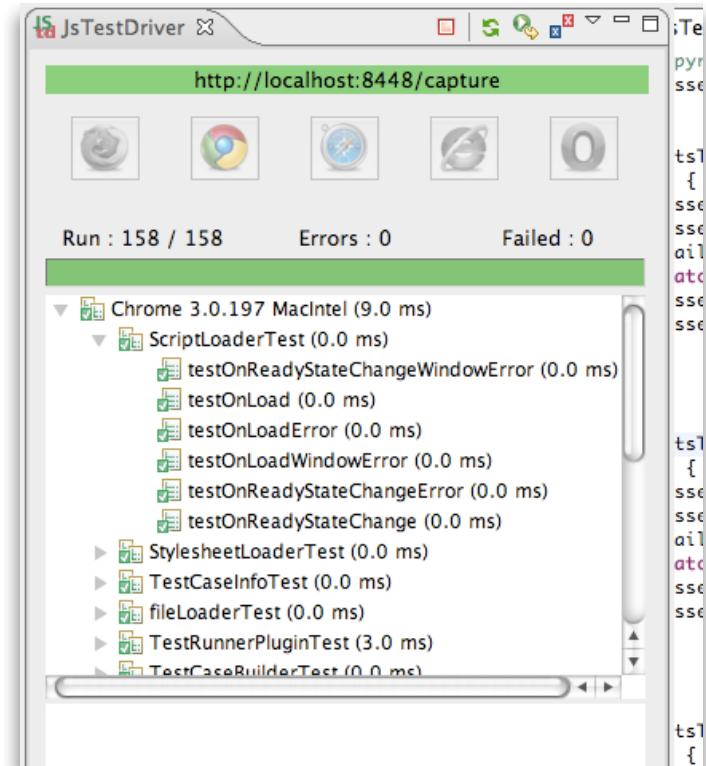
Einführung

- Herausforderungen: Schwierig, langsam, fragil
- Split in Unit und Functional testing



jsTestDriver

- Einfache und schnelle **Unit Tests** von JavaScript
- Funktioniert mit den meisten Browsern
- Kommandozeile, Eclipse, IntelliJ IDEA



Demo: jstestdriver



Selenium

- Grossartig für **Functional Tests** von JavaScript
- Fernsteuerung des Browsers
- Selenium Core, IDE, RC
- Sprachneutral
- Verwendung zusammen mit Test Framework



Selenium



<http://www.flickr.com/photos/jchetan/3961530349/>



Demo: selenium



Automatisierung

"Works on my machine"?!

This is Phyllis and she doesn't care if the build works on your machine. As you can see, she's a busy woman with a jam-packed social calendar. She doesn't have time for brittle builds from the likes of you; she needs a build that just plain works. You hear?!



If you start using continuous integration, Phyllis can get back to gettin' her groove-thing on.
www.BuildsOnMyMachine.com

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



Automatisierung

- Entwickler führen die Tests nicht selber aus
- Lösung: Continuous Integration



Tools

- Hudson
- CruiseControl
- Atlassian Bamboo

local.ch

[Collapse](#)

[Frontend > LCL-FRONT-1074](#) ▶

Ran: 2 hours ago | Updated by [Patrice Neff](#) | Duration: 9 seconds | Tests: 26 passed

[Integration > LCL-INT-463](#) ▶

Ran: 19 minutes ago | Manual build | Duration: 30 minutes | Tests: 145 passed



Legacy Projekte



Problem

- Sisyphus-Arbeit



Ansatz

- Kein Bugfix ohne Test
- Tests für alle neuen Features (test-driven)



Danke

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