

Reliable end to end tests with Selenium WebDriver

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My definition of end to end (e2e) tests

- Automated
- Often start at the UI
- Same as user acceptance test
- Often used to test user stories
- Often expressed using Given/When/Then
- Can describe what the system does
- Often slower than unit/integration tests

Reliable e2e tests provide a lot of value

- Assure the code is shippable
- Provide solid safety net and in this way encourage constant refactoring
- Let QA focus on creative, exploratory testing

Unreliable e2e tests are harmful

- Take a lot of time to investigate
- Make the development process slower than **if there were no e2e tests at all**
- Are extremely frustrating for all team members

How to write reliable e2e tests 1/2

- Do NOT use Thread.Sleep. It is NEVER a good idea
- ALWAYS start with unit tests and fall back to e2e tests only when unit testing is not the right tool
- Focus on the happy path
- Treat test code as if it was Production code
- Do NOT share state between tests
- Do NOT use test recorders

How to write reliable e2e tests 2/2

- Navigate directly to the screen under test
- Test only code you own, eg. all external systems are mocked
- Create a separate set of tests for integration with live external systems
- Always make sure the system is in a known initial state
- Test only one scenario at a time

Demo

Summary

If you can't make it reliable do
NOT write it at all. You will
regret it.

Links:

Code: <https://github.com/pawelpabich/Reliable-e2e-tests-with-Selenium-Webdriver>

Selenium: <http://code.google.com/p/selenium/>

Our own James Crisp : <http://jamescrisp.org/2011/05/30/automated-testing-and-the-test-pyramid/>