

304: XCTest In Practice

Part 1: Overview

Misconceptions About Automated Testing

- ⚙ Takes a lot of time for little reward.
- ⚙ You have to test every last line of code.
- ⚙ It is a replacement for human testing.



Truths About Automated Testing

- ⚙ Takes time to set up, but saves way more in the long run.
- ⚙ You can be judicious about what you're testing.



How To Write A Useless Test

Class prefixes have been changed to CLT (for Client) to protect the guilty. All else is from the original.

*/

- (void)testShouldLogResponseOnSuccess

{

id<CLTServerDirectRequest> request = mockProtocol(@protocol(CLTServerDirectRequest));

id<CLTServerDirectResponse> response = mockProtocol(@protocol(CLTServerDirectResponse));

[given(request.debug) willReturnBool:YES]; // improve test coverage (logging line)

completion_block_t completionHandler = [self.dispatcher completionHandler:request];

completionHandler(response, nil);

// so yeah, we don't actually assert anything

// this is just to hit the success branch where we log the response for code coverage reports

}

Truths About Automated Testing

- ⚙ Takes time to set up, but saves way more in the long run.
- ⚙ You can be judicious about what you're testing.
- ⚙ Unit tests catch certain things much faster than humans.
Humans catch things unit tests will **never** catch.



4 Types Of Automated Testing

⚙ Unit Testing

⚙ "I want to test this thing completely in isolation."

⚙ Integration Testing

⚙ "I want to test this thing that depends on something else."



4 Types Of Automated Testing

⚙️ Asynchronous Testing

- ⚙️ “I want to test this thing that depends on something else, and that may take a random amount of time to respond.”

⚙️ UI Testing

- ⚙️ “I want to make my computer be a robot that goes through my UI for me and tells me what broke while I go do something else.”

4 Types Of Automated Testing

- ⚙ Unit Testing
- ⚙ Integration Testing
- ⚙ Asynchronous Testing
- ⚙ UI Testing (**not covered here** 😓)



Testing Strategy Abbreviations You've Heard

⚙️ **TDD (Test-Driven Development)**

- ⚙️ Write a failing test first
- ⚙️ Write code to pass that test

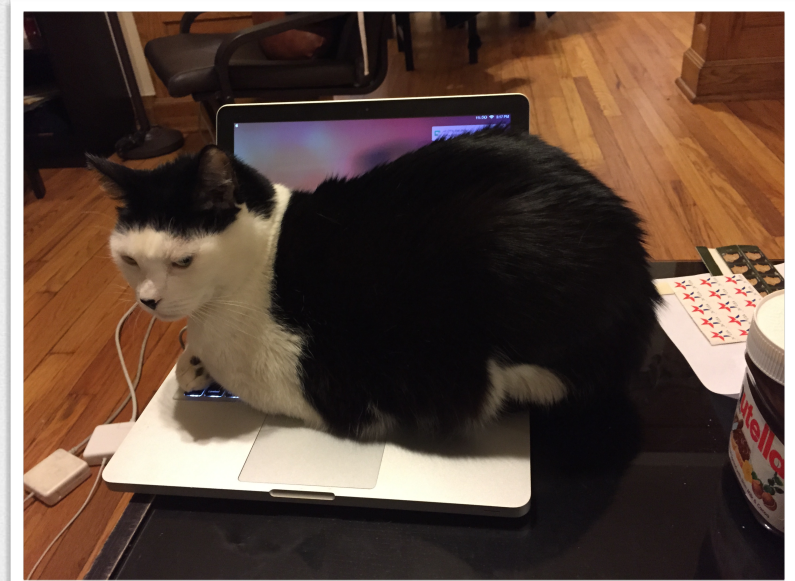
⚙️ **BDD (Behavior-Driven Development)**

- ⚙️ Write real-world requirements
- ⚙️ Test against those requirements



The Demo: Cats!

- ⚙ This is the internet. You knew there had to be cats.
- ⚙ Application that grabs the latest photos on Flickr tagged with “cats”.
- ⚙ Uses Core Data to facilitate saving favorites.



(my cat, Chaplin, aka Jerkface Kittah)

The Demo: What Will You Learn?

- ⚙ Async Testing: How does it work?
- ⚙ Testing Core Data In Isolation
- ⚙ How To See If The Problem is You Or Your API



Demo: Let's Break Some Stuff!



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