



Andrew Bolin

SOFTWARE TESTING

An Interactive Introduction

Software testing is

an investigation conducted to provide stakeholders with information about the quality of the software product or service under test

Ken Camer, via

https://en.wikipedia.org/wiki/Software_testing



Jargon

(just a little)

Unit Testing

Testing small chunks of software

Test Case

Specification of a test to execute, including input data and expected output

Coverage

How much of the source code has been exercised by the test suite, usually measured as a percentage

Happy Path

Following a desired sequence of events - no errors

Test-Driven Development (TDD)

- ◆ The ~~religious doctrine~~ practice of writing tests before the software itself
- ◆ So we know that the tests work!
e.g. prevents accidentally writing a test that always passes
- ◆ And we catch bugs introduced in the future
more jargon: "Regression Testing"





Let's Try TDD

Interactive Exercise

Write a function that, given an integer, tells us some "interesting" facts about it

- Is it prime?
- Its factors (if composite)

WRITE
CODE

Summary

Quality is the
motivation for
testing

- ◆ There are many (many) types of testing - manual and automated
- ◆ Test-Driven Development gives us confidence in both the software under test and the tests themselves
- ◆ It's hard to test everything
- ◆ **Testing *something* is much better than testing *nothing*!**



Would you like to
know more?

Starship Troopers (1997)



S&A GitLab Workshop

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Andrew Bolin
Randika Hewage
Malte Marquarding