

Testing Pyramid

Gemma

hello world!

Gemma (Co-op Digital)

The plan

(“Manchester”)+
(“Digital”)>

Today

- Theory

Tomorrow

- Practical

But I’m a developer...?

Why do I need to know about testing?

(“Manchester”)+
(“Digital”)>

- The sooner bugs are found the cheaper they are to fix
- Stop faults recurring
- Make sure your code does what the customer wants
- Boundaries between developer and QA/Tester are more blurred

What testing do I need to do?

- Many different kinds of testing
- Lots of different tools and frameworks
- Not all will suit all projects/teams
- Pick what works for you

Manual Testing

Exercise in pairs

Gemma (Co-op Digital)

- Code review
- Running by hand and checking it does what it should
- Time-consuming if you need to do it more than once
- May not pick up knock-on effects in complex systems
- Maybe we should look at automated testing...

- Analyse code for errors or code standards violations
- Done without running the code
- Catch well-known gotchas
- Helps keep code consistent and readable
- Won't make sure your code works to spec

Unit Testing

Exercise in pairs

What is a “Unit”?

- Exercise small section of code
- Fast to run
- Gives us confidence to refactor code
- To TDD or not TDD

Testing the Bigger Picture

Gemma (Co-op Digital)

What is an Integration Test?

Integration Testing

(“Manchester”)+
(“Digital”)>

- Slower to run
- Use real objects not mocks

- Mocks vs. Stubs vs. Fakes

Contract Testing

(“Manchester”)+
(“Digital”)>



Gemma (Co-op Digital)

Mocking at home

(“Manchester”)+
(“Digital”)>

- How does your organisation use mocking?
- What framework?
- How do you do contract testing?

Ensuring Tests meet the specification

- Black box testing
- White box testing

White / Black box testing

Exercise in pairs

BDD?

(“Manchester”)+
(“Digital”)>

Behaviour

Driven

Development

docs.cucumber.io/guides

- Can catch embarrassing errors
- Often fragile, expensive to maintain
- Tend to be slow
- Hard to run in automated CI

HackManchester video

(“Manchester”)+
(“Digital”)>

Gemma (Co-op Digital)

Other kinds of testing

- Code Coverage
- Performance Testing
- Stress Testing
- Load Testing
- Accessibility Testing
- Usability Testing
- Compatibility Testing (cross device, browsers)

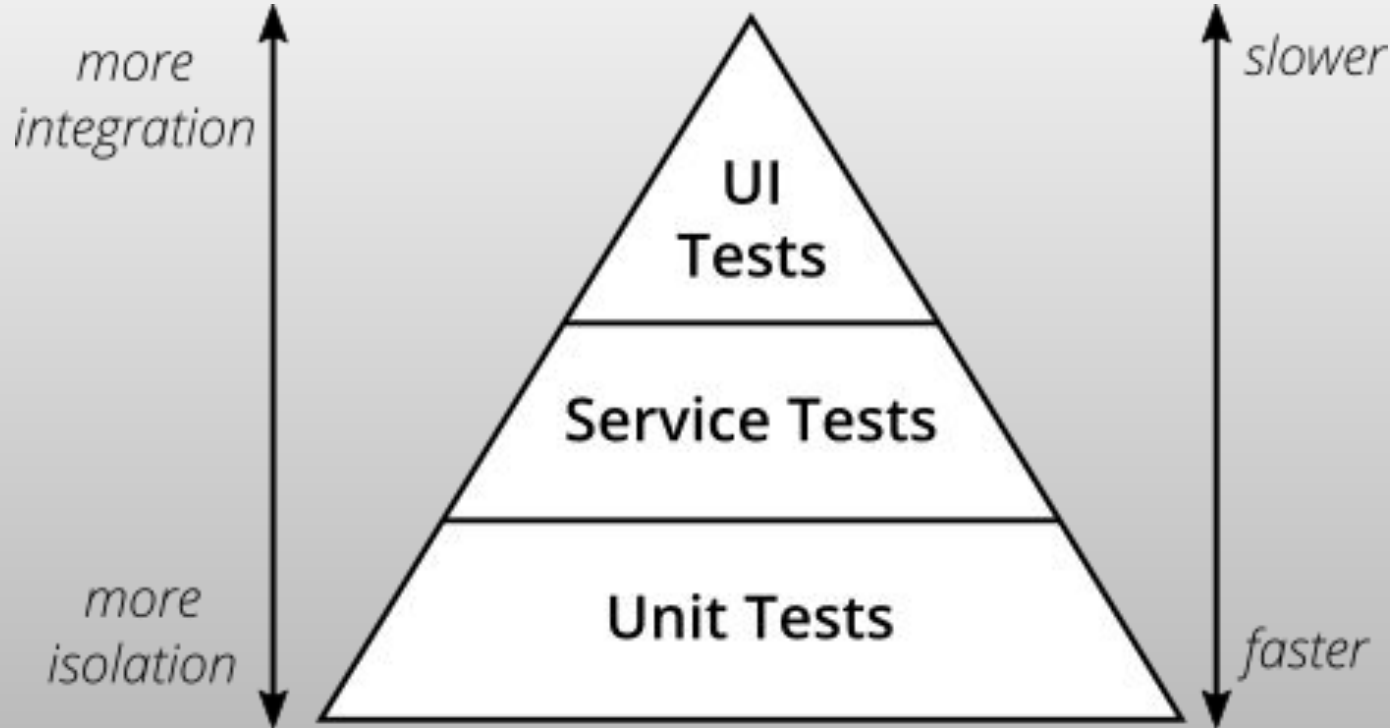
- How do you know which browsers or platforms to test for?
- Target audience
- Google Analytics
- i.e. Browserstack - shows you what it looks like on different browsers

Who's responsible for testing?

YOU

The testing pyramid

(“Manchester”)+
(“Digital”)>



Succeeding with Agile
- Mike Cohn

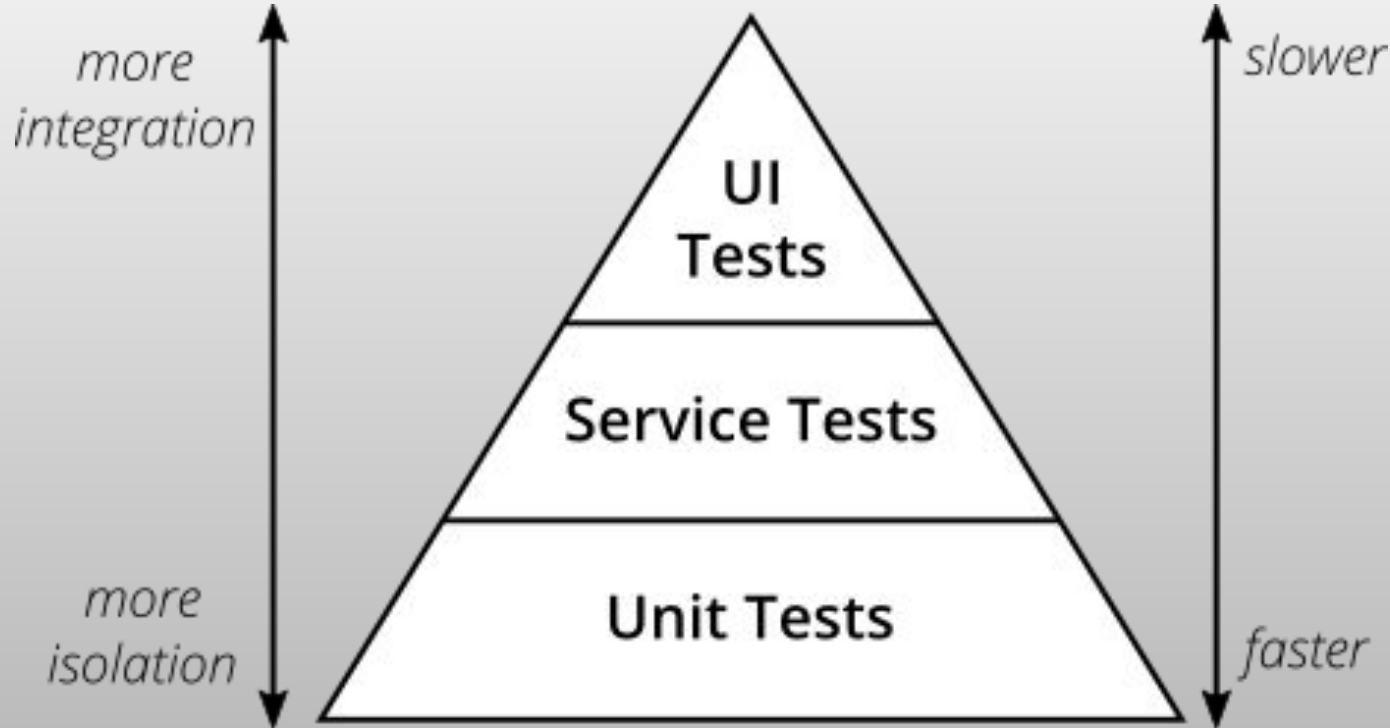
Gemma (Co-op Digital)

Day 2

Gemma (Co-op Digital)

The testing pyramid

(“Manchester”)+
(“Digital”)>



Succeeding with Agile
- Mike Cohn

Gemma (Co-op Digital)

RECAP WITH MARTIN

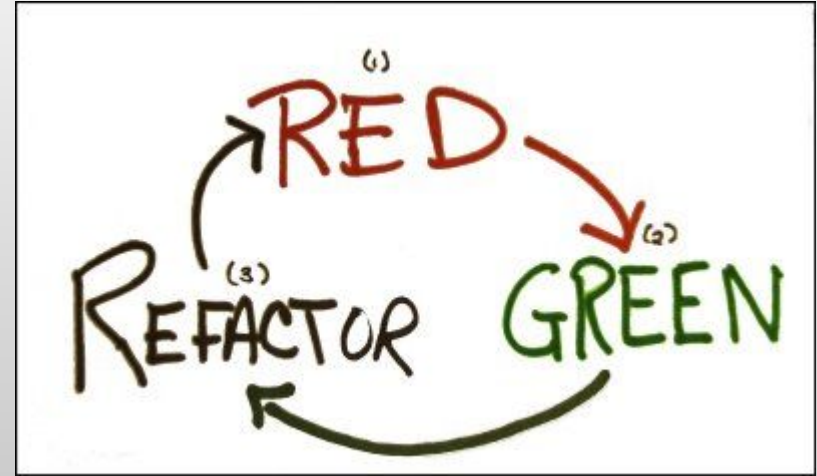
<https://martinfowler.com/articles/practical-test-pyramid.html>

1. Read article
2. Checkout example code for Github and run each test (pair up!)

Have a go!

(“Manchester”)+
(“Digital”)>

1. Write tests with different granularity
2. The more high-level you get the fewer tests you should have



github.com/coopdigital/frontend-dev-test

RECAP

- In your company
 - How do you mock objects?
 - How do you do compatibility testing?
 - How do you work out which browsers or mobile devices to be compatible for?
 - How do tests fit into Continuous Integration / Delivery?