THE TESTING PYRAMID:
FROM ONE END TO THE OTHER;
HOW TO TEST EFFECTIVELY

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EXPERIENCE LEVELS

• Acceptance tests
• Integration tests
• Unit tests

• Regression tests
• Mocking frameworks
• Services

• Which describes you?
  • I need more information
  • I know what some of these are
  • I know what all of these are
BEFORE WE GET GOING

Do you do a job role that can’t be described (broadly) by any of these column headings?

| BUSINESS ANALYST (BA) | TESTER/QUALITY ANALYST (QA) | PROJECT MANAGER (PM) | DEVELOPER (DEV) | USER EXPERIENCE (UX) |
ICE BREAKER

- On a post-it, write:
  - The name of a pet you have owned
  - ... or the name of a cartoon character
- Stick your post-it in the column that most closely describes your job role.
ICE BREAKER

- If you are called up to the front...
- Create a balanced team by taking 3 post-its
- Find the other members of your team
- Tell each other about your post-its
INTRODUCTION

- Who I am
- What’s out of scope
  - No individual tools or technologies
  - Many different test types
    - I’m not covering them all!
- !! People can disagree about definitions
OUR EXAMPLE

- Harvester restaurants:  
  https://www.harvester.co.uk/tablebooking

- Select a restaurant
- Select num people, date, meal time
- Click “Choose Your time”
  - List of times, greyed if unavailable (e.g. large party)
THE ARCHITECTURE

BROWSER

BOOKING
- JavaScript component

EMAIL VALIDITY
- JavaScript component

EMAIL SENDING
- Service
  Third Party

AVAILABILITY
- Service
  Ours

DATE
- Service
  Ours

FRONT END CODE BASE

Ours
1-2-4-ALL => 1-2-10-ALL

- 1 minute: on your own
- 2 minutes: in a pair
- 5 minutes: as a group on your table
- 7 minutes: whole room
EXERCISE 1 – WHAT TO TEST

- What do you want to test?
- Write on post-its
- 1 min alone, 2 mins pair, 5 mins table
- ONLY 5 THINGS PER GROUP
- Bring to the front at end of time

https://www.harvester.co.uk/tablebooking
OUR TEST TYPES FOR THIS WORKSHOP

- Acceptance Tests
- Integration Tests
- Unit Tests
ACCEPTANCE TESTS

- Given I am on the home page
- When I click on Menus navbar item
- Then I should see all menus
- and they should all be collapsed
Given I am the booking component
When I make a request to the availability service about a date and mealtime
Then I receive an accurate response
INTEGRATION TESTS

BROWSER

FRONT END CODE BASE

BOOKING
- JavaScript component

EMAIL VALIDITY
- JavaScript component

EMAIL SENDING
- Service

AVAILABILITY
- Service

DATE
- Service

Third Party
Ours

Ours

DATE
- Service

Ours

Third Party

BROWSER

FRONT END CODE BASE

BOOKING
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DATE
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Ours

Ours

Ours
UNIT TESTS

- Given there are seven available slots for breakfast on a particular date
- When I request availability for breakfast on that date
- Then I receive those slots in chronological order
- Mocking frameworks
- Edge cases
- Different paths through code

**Mocking frameworks**

- **EMAIL VALIDITY**
  - JavaScript component
- **EMAIL SENDING**
  - Service
- **DATE**
  - Service
- **AVAILABILITY**
  - Service

**Front End Code Base**

- **BOOKING**
  - JavaScript component
- **BROWSER**

**Third Party**

- **FRONT END CODE BASE**

**UNIT TESTS**

- **Ours**
- **Our**

**BROWSER**

- **BOOKING**
  - JavaScript component
  - **EMAIL VALIDITY**
    - JavaScript component
  - **EMAIL SENDING**
    - Service
  - **DATE**
    - Service
  - **AVAILABILITY**
    - Service
THE TESTING “PYRAMID”
EXERCISE 2 – HOW TESTS WORK

Use the black cards to fill in the blanks in the blue statements

The same answer might fit several different blanks
EXERCISE 2 – PLENARY

- Your results

WHEN WE RUN TESTS:
- Pipelines
- Environments (UAT, prod, pre-prod etc)
- Local vs remote
- Full-team involvement
EXERCISE 3 – WHY ARE WE TESTING??

For each type of test...

- Why do you run these tests? What value do they bring?
EXERCISE 3 – PLENARY

WHY WE TEST

- Your results
- TDD
- Trade-offs
- Documentation
- Code and implementation can change to aid testability
- Identify the questions rather than the answers
- What value does this give us? Why are we testing it?
What have you learnt?
- 1 min – alone
- 2 mins – in a pair
- 4 mins – whole room
BLATANT PLUG

- My talk tomorrow afternoon, 2pm
- San Diego C
- “Let’s Stop Making People Feel Stupid”
- Make me popular!
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THANK YOU

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