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# Test Driven Development

Dipping your toe into tests first

Sainsbury's Digital Graduates - 22nd September 2020

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**What?**

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# What is TDD?

Writing test before code

Using test to design the application

See your tests as the first consumer of your code

Not just unit tests

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# Other Tests

Acceptance Testing (Could be Gherkin Syntax)

Security

Performance

API Contract

Exploratory

....

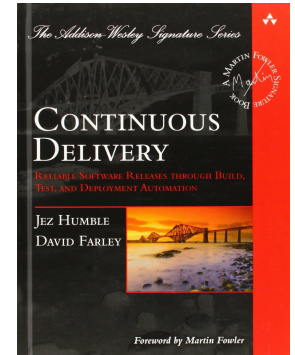
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**Why?**

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# Why I do use TDD?



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# Boring

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# Tests are hard to write



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# Easy to start skipping test



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Fun!

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# Easy to write

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# You ~~don't~~ can't skip tests

Rocket  
Baking Potatoes  
Broccoli  
Peas 24/5.  
Lemon  
Onions.

Cover

Milk  
cheese  
Ham.  
Quiche  
Salsa  
garlic.  
Sour cream.

} check d'notes.

Spagett.  
Beans  
falk bit

Nuts + fruit  
Juice  
Squash.

Shredded  
wheat bit

Cut food.

M+F

Quiche pot  
+ Carrots

Ham +  
Pea Risotto

Pasta w/  
Broccoli

Beans on  
toast

cheese on toast →

→ Beans on toast →

→ Cottage Pie →

M+M

Peas w/ rice + baked veg  
Ham +  
Pea Risotto  
Peas w/ rice + baked veg  
Sausage, eggs  
+ chips.

conform.

Baked potatoe  
w/ tuna.

tea lunch.

Spag bol

Sandwiches.

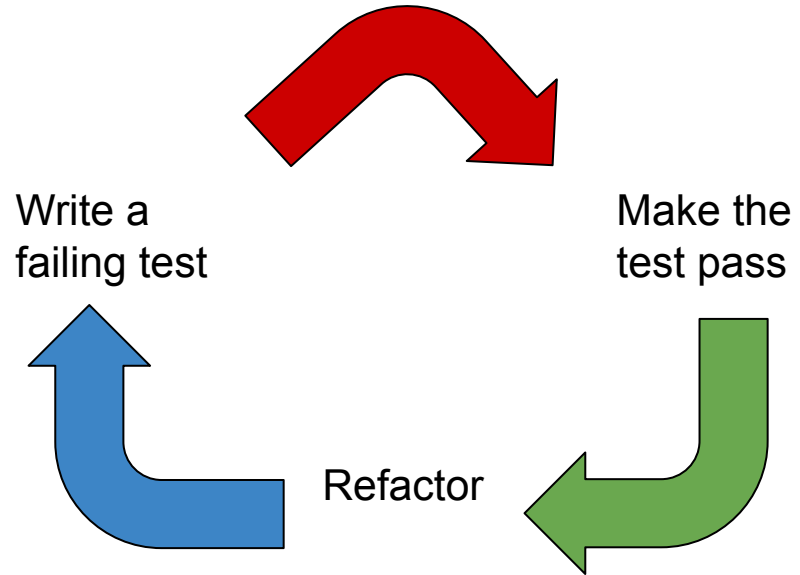
← Fajitas

Prawn w/ Pasta +  
Rocket

lollipop

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# TDD Cycle



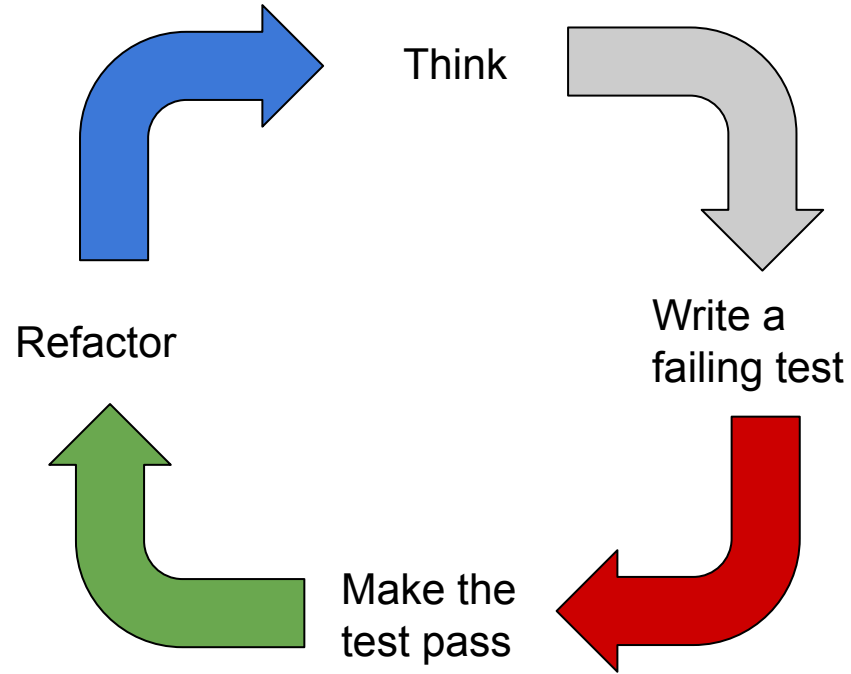
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# Does it slow down development?

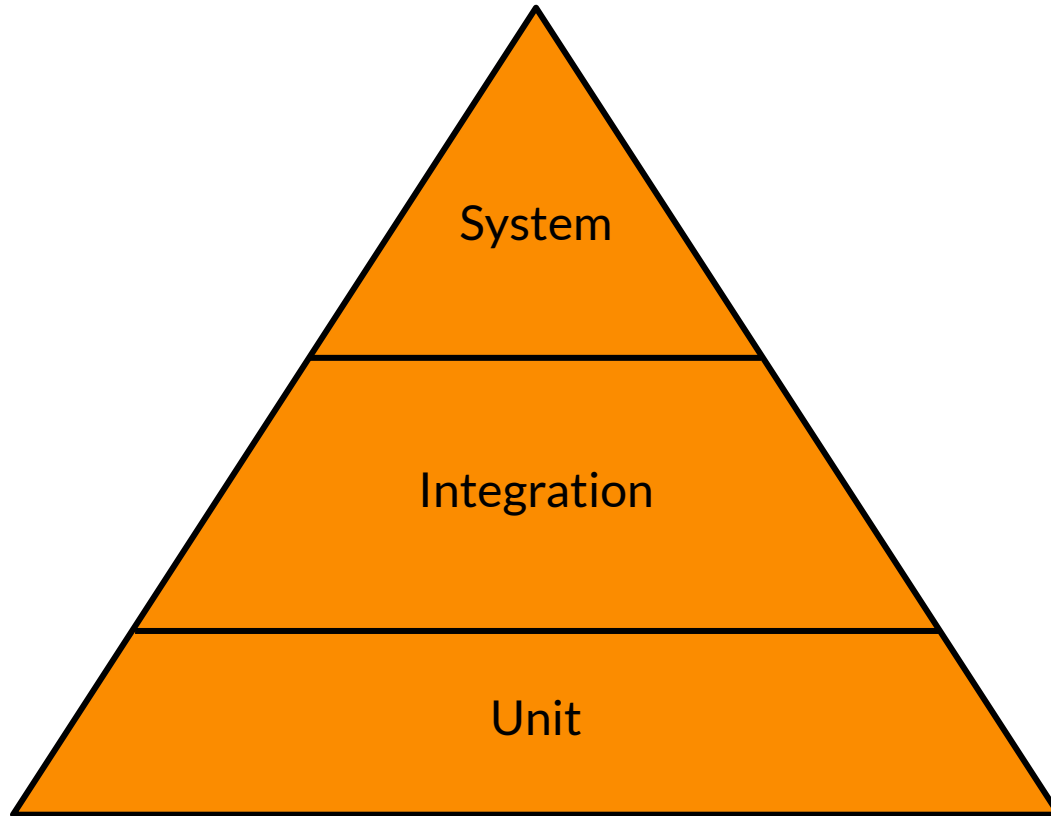


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# TDD Cycle



# Testing Pyramid



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# System Test

Flows through a system of your application, usually a few core journeys

Uses all really services (Database, Email, ...)

May require some seeding of external services

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# Unit Tests

Targeted

Isolated

Repeatable & predictable

Fast

100% Code Coverage

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# Integration Tests

Test the integration points of you application

Database

Queues

External APIs

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# Arrange - Act - Assert

```
public function testIsGreaterThan()
{
    // Arrange
    $five = new Integer(5);
    $four = new Integer(4);

    // Act
    $isGreaterThan = $five->isGreaterThan($four);
    $notGreaterThan = $four->isGreaterThan($five);

    // Assert
    $this->assertTrue($isGreaterThan);
    $this->assertFalse($notGreaterThan);
}
```

```
public function testIsGreaterThan()
{
    // Arrange
    $five = new Integer(5);
    $four = new Integer(4);

    // Act & Assert
    $this->assertTrue($five->isGreaterThan($four));
    $this->assertFalse($four->isGreaterThan($five));
}
```



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# Lets Mob Program

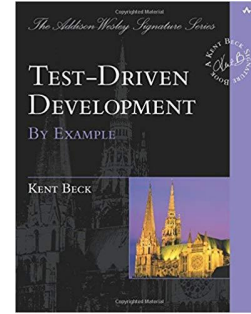
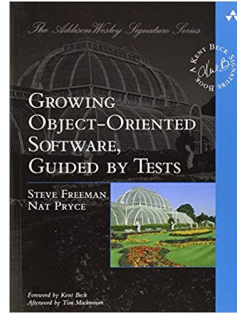
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# Practise Make Perfect

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# Resources



Testing All The Things  
[youtube.com/TestingAllTheThings](https://youtube.com/TestingAllTheThings)

Cyber Dojo  
[cyber-dojo.org](https://cyber-dojo.org)

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# Questions

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# Feedback

Twitter: @braddle

Email: [braddle@gmail.com](mailto:braddle@gmail.com)

Slide Deck: [Link]

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**Thank you**

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