

What is a unit test?

“Unit testing is a method by which individual units of source code, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures are tested to determine if they are fit for use.”

Wikipedia, from a book on tests

Um... what?

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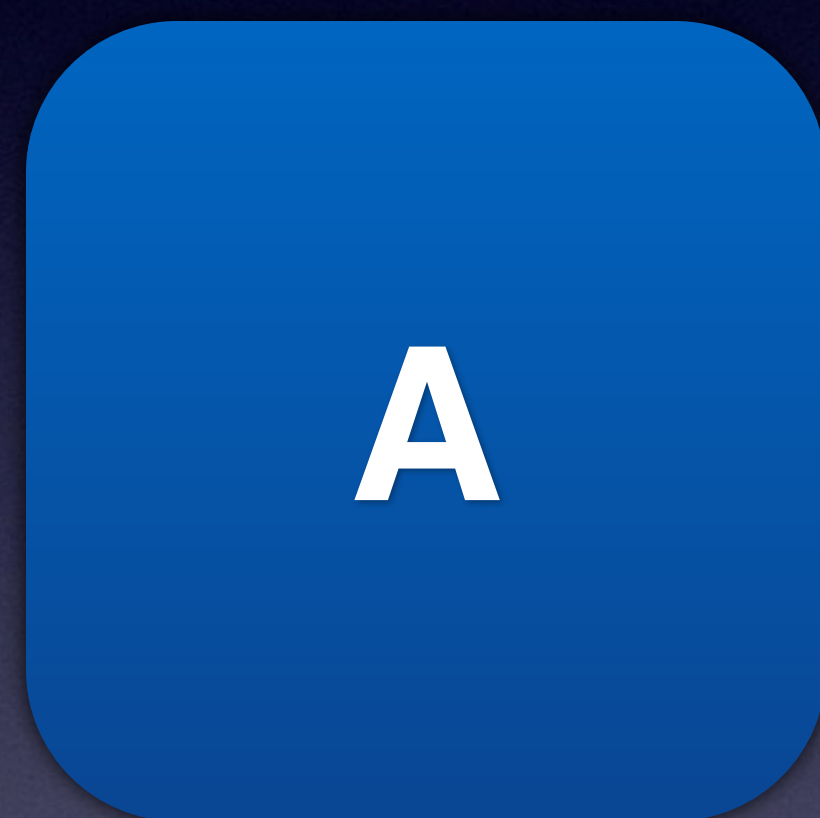
What is an app?

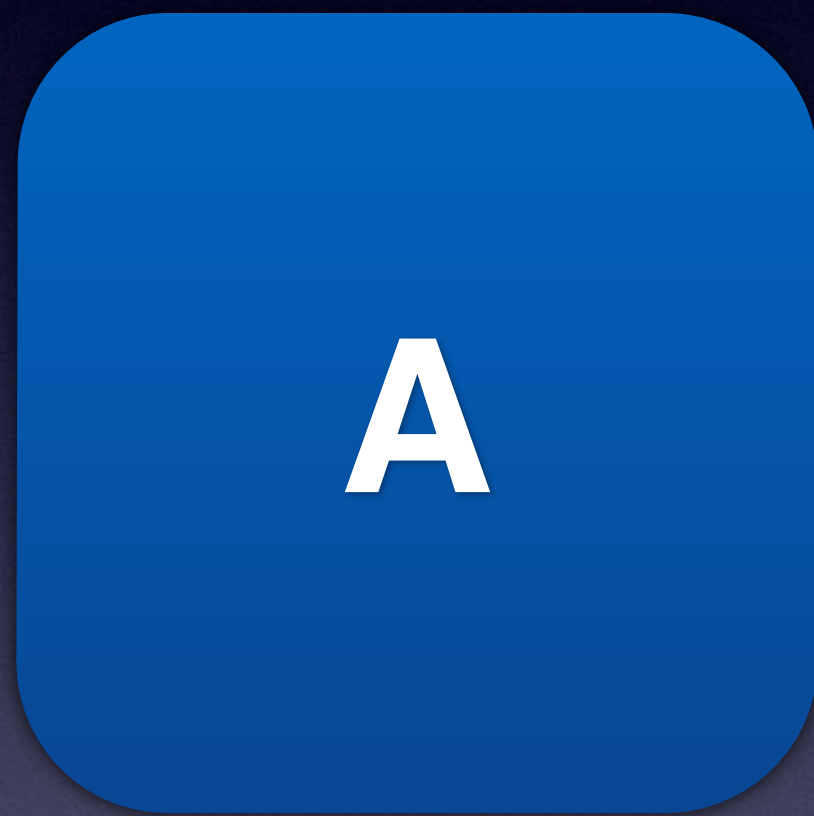
An app is a set of behaviours created by programmer and expected by user.

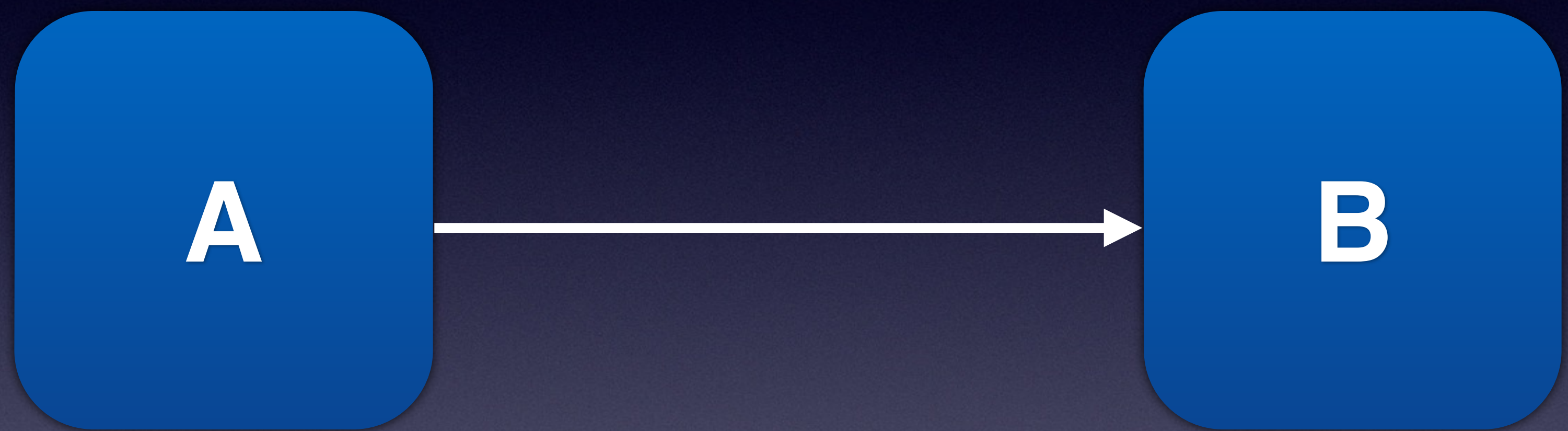
We, programmers, have
a limited cognition. As
all humans do.

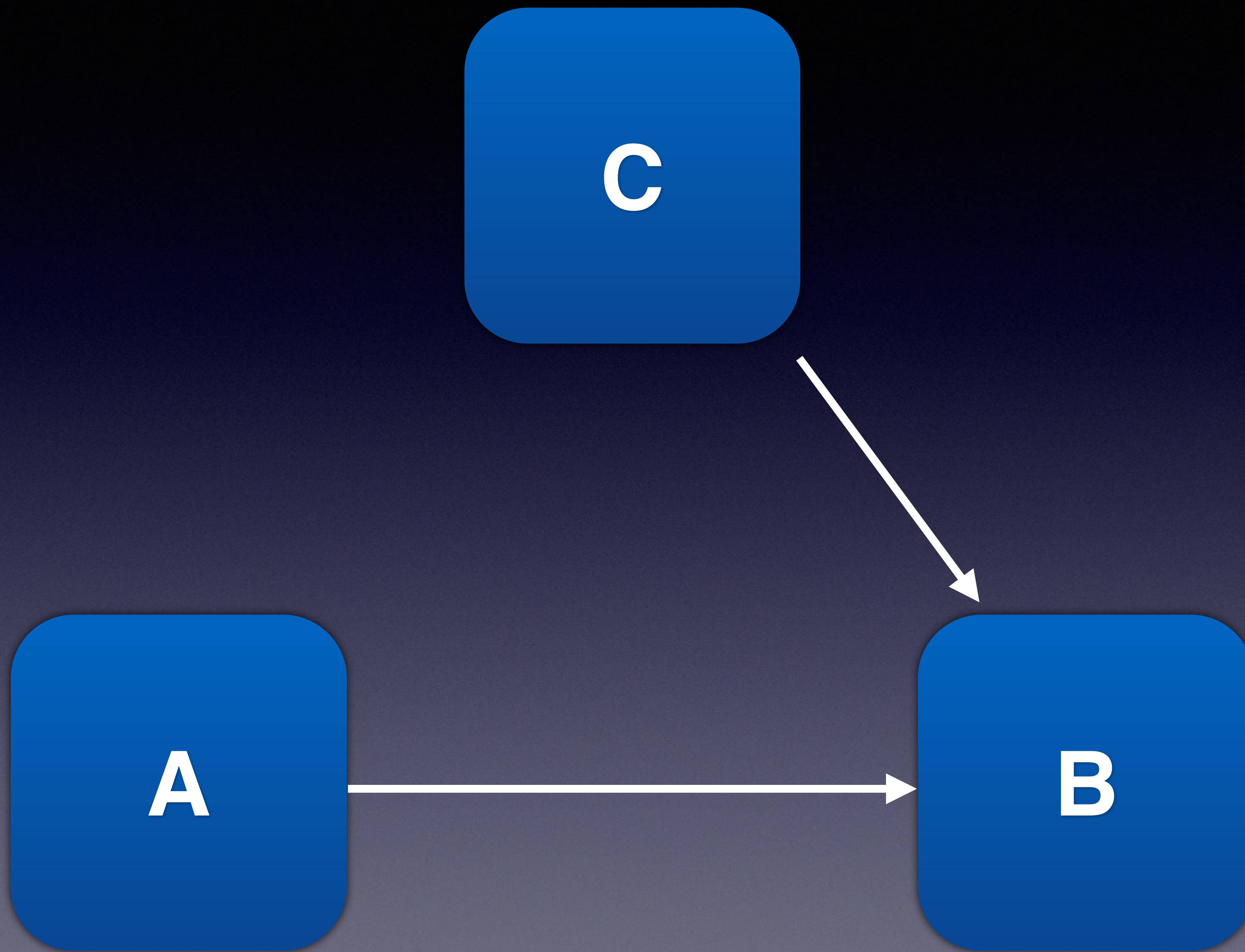
We can't always 'load'
all of the code of our
app into our memory.

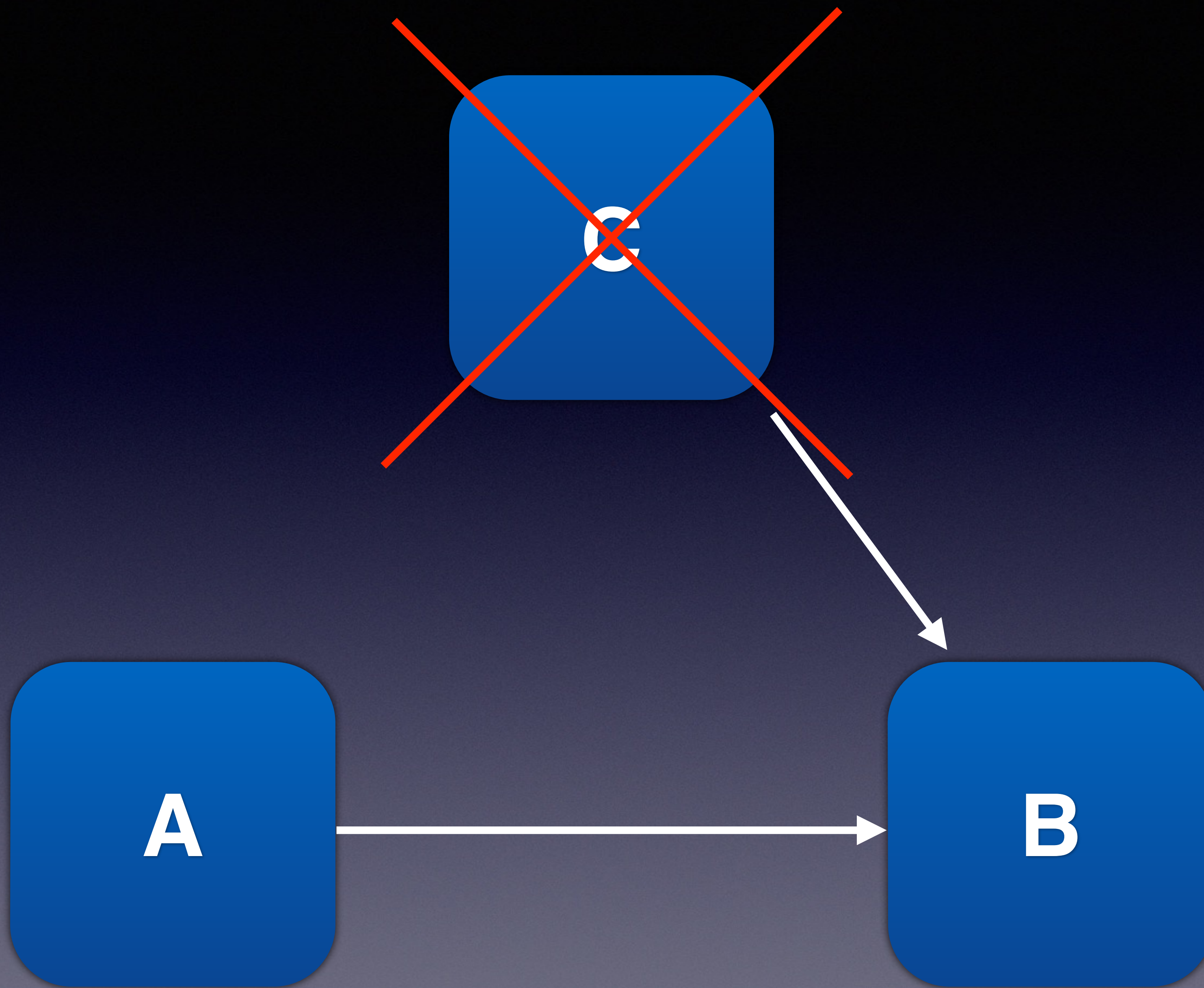
This means that we can,
by accident, change the
behaviour of the app.











Preserving behaviour of
complex systems is
hard. In fact, of any
system at all.

Enter unit tests.

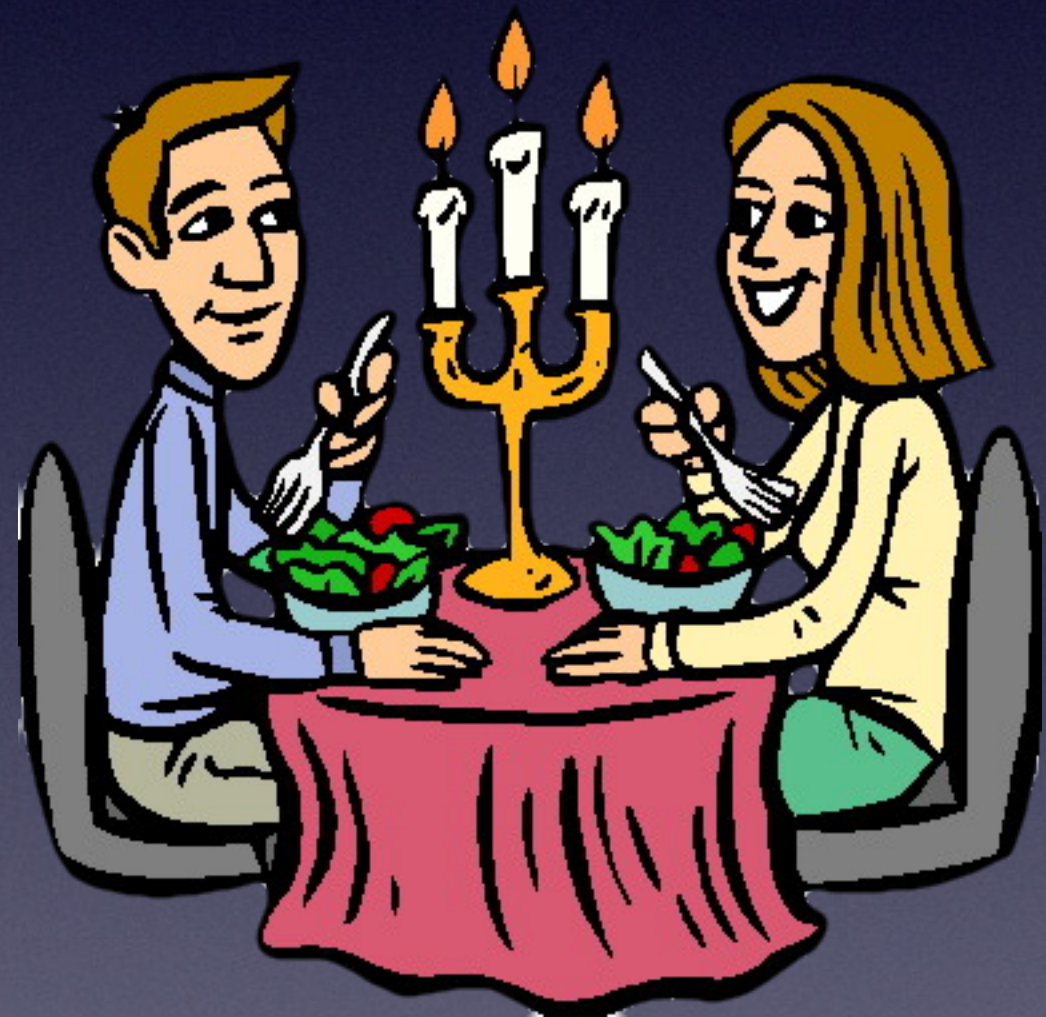
Unit test is a failsafe to
make sure app
behaviour is preserved.

What is a unit test?

Unit tests test smallest
parts of your code in
isolation with test code

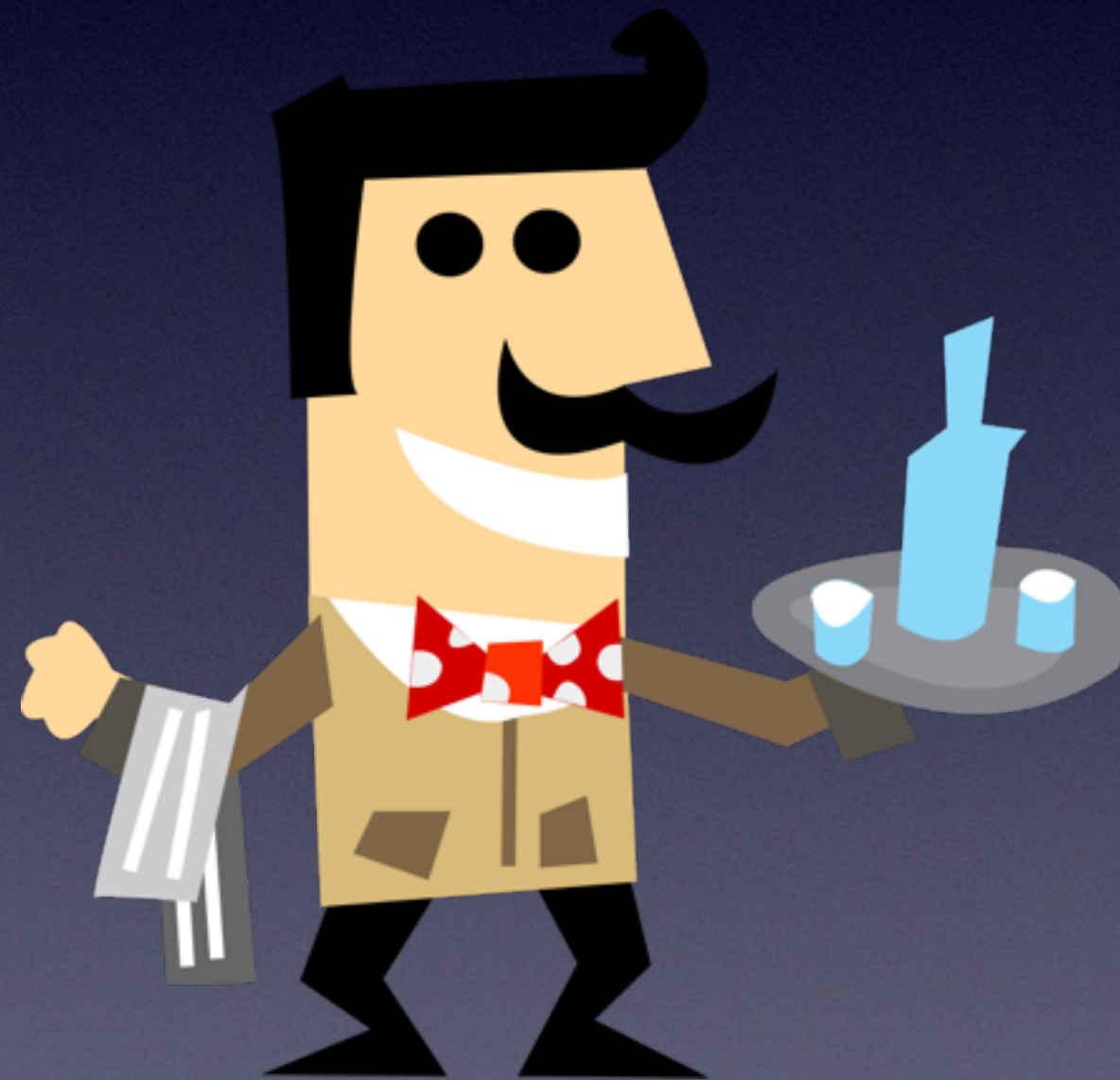
Unit tests test smallest
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Test isolation



Table

processOrder

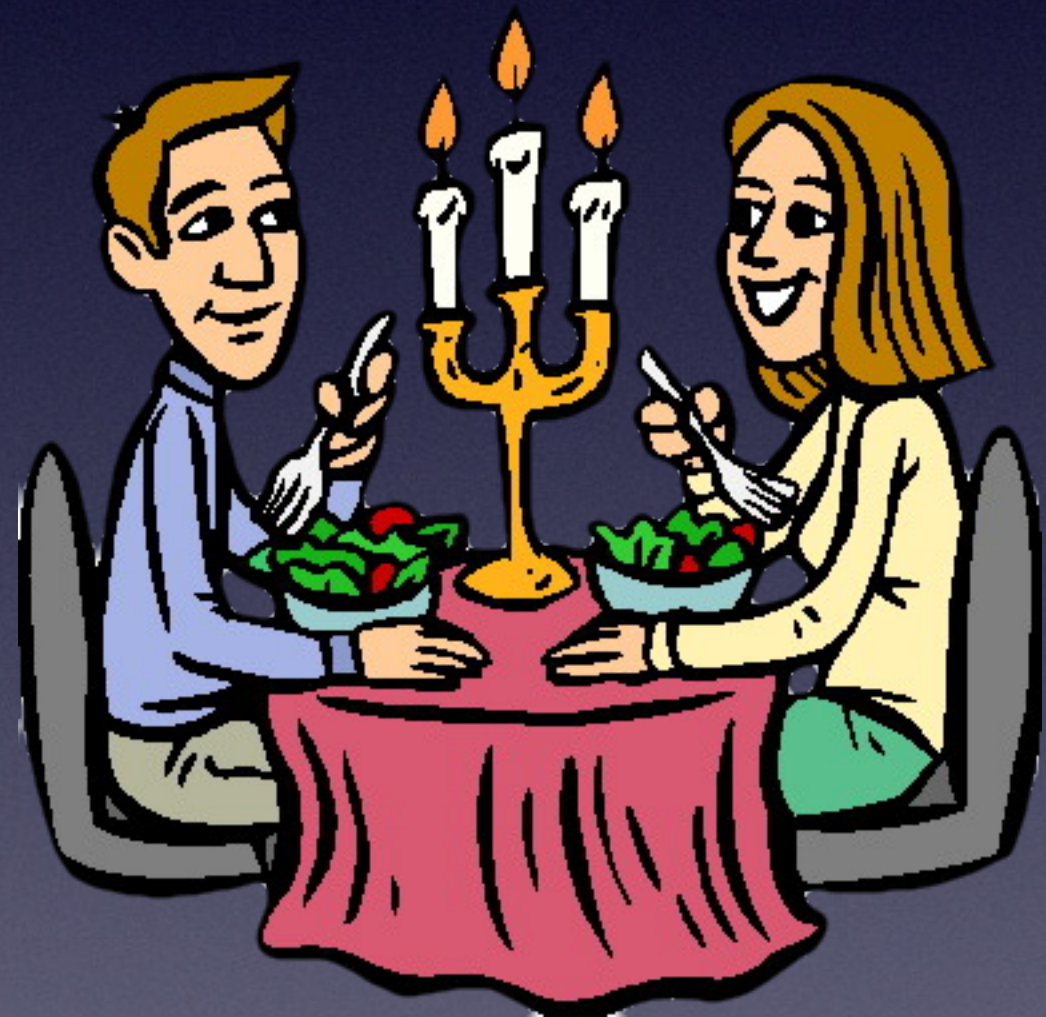


Waiter

getDishes



Cook



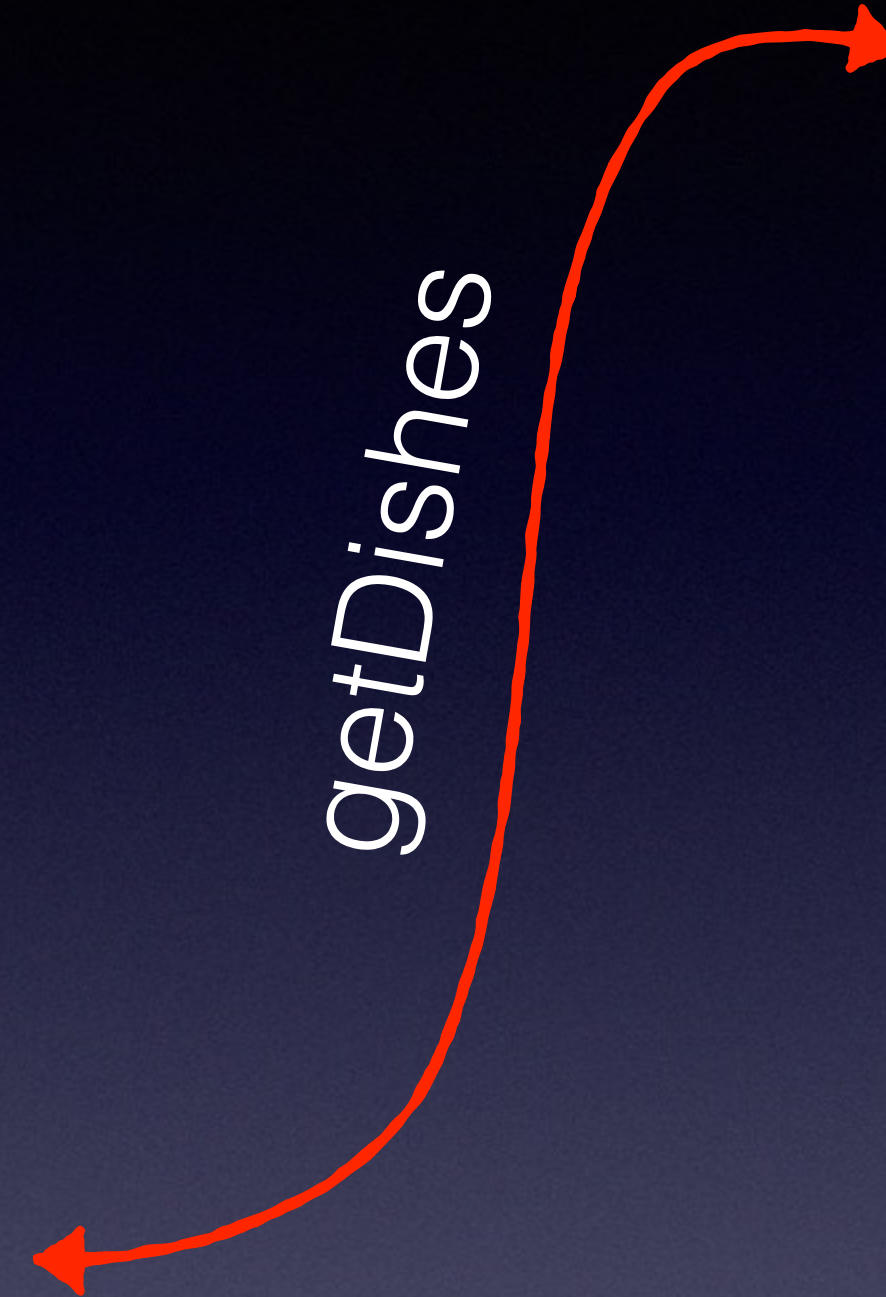
Table

processOrder



Waiter

getDishes



Fake cook



Cook

Why isolate?

Unit test lifecycle

Unit test lifecycle

- Arrange
- Act
- Assert

When a unit test is not
a unit test?

When a unit test is not a unit test?

by Michael Feathers

A test is not a unit test if...

- It talks to a database
- It communicates across network
- It touches the file system
- You have to do special things to your environment to run it (edit config files etc)

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A 100 ms tests is a
very slow test.

1500 tests each running 100
ms. That's 150 seconds. Two
and a half minutes.

Where does TDD fit in
all this?

In TDD you always
write test first. Always.

TDD is not “just adding tests first”. It’s a complete workflow.

TDD is a great way to
“start” when you’re not
in the zone...

... and way to remind
yourself what you've been
working on yesterday!

TDD is a great way to
determine how complex your
code has become.

You just have to listen.

Have to fake seven
objects to isolate test?

Have to inject a fake
into a fake into a fake?



This always points to an
overcomplicated design.

And your tests are here to point
that out. Very clearly.

By writing test first you're becoming a consumer of your upcoming API.

Is that API hard to test?

That means it will probably
be hard to consume too.

Or it will be really hard to
maintain.

What unit tests
can't do?

Unit tests are never a
guarantee that you
won't ship a bug.

But they're damn good at
greatly reducing amount
of bugs. And time spent
on QA.

Are unit tests an invaluable tool for writing great software? Heck yes.
Am I going to produce a poor product if I can't unit test? Hell no.

Jonathan Rasmusson

<http://agilewarrior.wordpress.com/2012/10/06/its-not-about-the-unit-tests/>

Specta

Specta

BDD Testing Framework

Wait what? BDD?

Wait what? BDD?

Weren't we supposed to do TDD?

BDD builds upon TDD by formalising
the good habits of the best TDD
practitioners.

Matt Wynne,
XP Evangelist

<http://blog.mattwynne.net/2012/11/20/tdd-vs-bdd/>

Good habits

- Work outside-in
- Use examples to clarify requirements
- Use ubiquitous language

Thanks Matt!!

Resources & Contact

Code Examples

github.com/mobile-academy/ios-tdd-gdansk

Contact

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