

iOS Unit Testing with Kiwi

[zorn **currentStatus**]

Definitions

Unit Testing

Unit Testing

OCUnit, GHUnit, Cedar, Kiwi

Functional Testing

Functional Testing

KIF, Frank w/ iCuke, Zucchini, UIAutomation

Why should I test?

Confidence

Stability

Documentation

Better Code

Better Code

More on this later.

“The reason you Ruby guys like testing so much is because you don’t have a debugger. I have a debugger, I don’t need to test.”

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~ C. Floyd

“The reason you Ruby guys like testing so much is because you don’t have a debugger. I have a debugger, I don’t need to test.”

~ Corey F.

Positive Assets

What is **Kiwi**?

Rspec-style, OCUnit-based, Xcode friendly

Rspec-style?

Fuck Assert(), This is poetry.

Ode to a Calculator Stack

When the stack is created, it:

is not nil

is empty

returns 0 for top, and

throws an exception when I pop an empty stack

After pushing 4.7 on an empty stack, it:

has exactly one element

has 4.7 as top and,

returns 4.7 from pop and then is empty

Examples

Person

firstName, lastName, birthday, yearsOld, displayName

```
// PersonSpec.m  
#import "Kiwi.h"
```

```
SPEC_BEGIN(PersonSpec)
```

```
SPEC_END
```

```
// PersonSpec.m
#import "Kiwi.h"

SPEC_BEGIN(PersonSpec)

describe(@"The Person class", ^{

});

SPEC_END
```



```
// PersonSpec.m
#import "Kiwi.h"

SPEC_BEGIN(PersonSpec)

describe(@"The Person class", ^{

    context(@"when first created", ^{

    });

    context(@"with a birthdate of nil", ^{

    });

});

SPEC_END
```

```
describe(@"The Person class", ^{

    context(@"when first created", ^{
        pending(@"has an readwrite NSString attribute called firstName", ^{
        });
        pending(@"has an readwrite BOOL attribute called enjoysTesting
which defaults to YES", ^{
        });
        pending(@"has an readwrite NSDate attribute called birthdate", ^{
        });
    });

    context(@"with a birthdate of nil", ^{
        pending(@"returns -1 for yearsOld", ^{
        });
    });

});
```

```
describe(@"The Person class", ^{  
    context(@"when first created", ^{  
        it(@"has an readwrite NSString attribute called firstName", ^{  
            });  
        });  
    });  
});
```

```
describe(@"The Person class", ^{

    beforeEach(^{ // Occurs once
    });

    afterEach(^{ // Occurs once
    });

    beforeEach(^{ // Occurs before each enclosed "it"
    });

    afterEach(^{ // Occurs after each enclosed "it"
    });

    context(@"when first created", ^{
        it(@"has an readwrite NSString attribute called firstName", ^{
        });
    });

});
```

```
describe(@"The Person class", ^{

    beforeAll(^{ // Occurs once
    });

    afterAll(^{ // Occurs once
    });

    beforeEach(^{ // Occurs before each enclosed "it"
        Person *person = [[Person alloc] init];
    });

    afterEach(^{ // Occurs after each enclosed "it"
        person = nil;
    });

    context(@"when first created", ^{
        it(@"has an readwrite NSString attribute called firstName", ^{
        });
    });

});
```

```
describe(@"The Person class", ^{

    __block Person *person = nil;

    beforeEach(^{ // Occurs before each enclosed "it"
        person = [[Person alloc] init];
    });

    afterEach(^{ // Occurs after each enclosed "it"
        person = nil;
    });

    context(@"when first created", ^{
        it(@"has an readwrite NSString attribute called firstName", ^{
        });
    });

});
```

```
describe(@"The Person class", ^{

    __block Person *person = nil;

    beforeEach(^{ // Occurs before each enclosed "it"
        person = [[Person alloc] init];
    });

    afterEach(^{ // Occurs after each enclosed "it"
        person = nil;
    });

    context(@"when first created", ^{
        it(@"has an readwrite NSString attribute called firstName", ^{
            NSString *newStringValue = @"Some cool string.";
            person.firstName = newStringValue;
            [ [person.firstName should] equal:newStringValue];
        });
    });

});
```

```
[ [person.firstName should] equal:newStringValue];
```


Expectations

```
// objects
id car = [Car car];
[car shouldNotBeNil];
[ [car should] beKindOfClass:[Car class]];
[ [car.name should] equal:@"Herbie"];
[ [ [car should] have:4] wheels];

// wrapping scalars
[ [theValue(1 + 1) should] equal:theValue(2)];
[ [theValue(YES) shouldNot] equal:theValue(NO)];
[ [theValue(20u) should] beBetween:theValue(1) and:theValue(30.0)];
[ [theValue(animal.mass) should] beGreaterThan:theValue(42.0f)];

// methods
[ [ [cruiser should] receive] jumpToStarSystemWithIndex:3];
[cruiser jumpToStarSystemWithIndex:3];

// protocols
[ [car shouldNot] conformToProtocol:@protocol(FlyingMachine)];

// exceptions
[ [theBlock(^{
    [NSException raise:@"FooException" reason:@"Bar-ed"];
}) should] raiseWithName:@"FooException" reason:@"Bar-ed"];
```

<https://github.com/allending/Kiwi/wiki/Expectations>

Xcode Demo

Tips

Build Phase Run Scripts

```
osascript -e 'tell app "iPhone Simulator" to quit'
```

```
cd ~/Library/Application\ Support/  
rm -Rf iPhone\ Simulator/
```

References

zorn/KiwiPersonDemo

GitHub, Inc. [US] <https://github.com/zorn/KiwiPersonDemo>

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Latest commit to the master branch

Better date tests.

zorn authored just now commit b5123d0f5b

KiwiPersonDemo /

name	age	message	history
 KiwiPersonDemo.xcodeproj	an hour ago	Making progress implementing tests. Added DateProvider to handle test... [zorn]	
 KiwiPersonDemo.xcworkspace	4 hours ago	Added Kiwi to the project, now a workspace. Added basic MathSpec to t... [zorn]	
 KiwiPersonDemo	just now	Better date tests. [zorn]	
 KiwiPersonDemoTests	just now	Better date tests. [zorn]	
 Vendor	4 hours ago	Added Kiwi to the project, now a workspace. Added basic MathSpec to t... [zorn]	
 .gitignore	4 hours ago	adding .gitignore [zorn]	
 .gitmodules	4 hours ago	Added Kiwi to the project, now a workspace. Added basic MathSpec to t... [zorn]	

We recommend adding a README to this repository. Visit [github/markup](https://github.com/markup) for details on what formats we support.

<https://github.com/zorn/KiwiPersonDemo>

allending/Kiwi

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Simple BDD for iOS - Docs @ Wiki — [Read more](#)

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Merge pull request #114 from nheagy/master

allending authored 13 days ago commit 67d5de8df3

Kiwi /

name	age	message	history
Classes	16 days ago	Spies and Stubs now work on singletons [zumobile]	
Examples	a month ago	Added support for any() argument matcher (for pointers and scalars) [MattesGroeger]	
Kiwi.xcodeproj	16 days ago	Spies and Stubs now work on singletons [zumobile]	
Kiwi	16 days ago	Spies and Stubs now work on singletons [zumobile]	
Other Sources	2 years ago	First release. [Allen Ding]	
Resources	2 years ago	First release. [Allen Ding]	
Templates	2 months ago	Added Xcode 4 template for Kiwi spec [SevInf]	
Tests	16 days ago	Spies and Stubs now work on singletons [zumobile]	
.gitignore	11 months ago	Ignore .localized, *.xcworkspace/ & xcuserdata/. [mattdipasquale]	

<https://github.com/allending/Kiwi>

Quick Start



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<http://itunes.apple.com/us/book/test-driving-ios-development/id502345143?mt=11>

Graham Lee

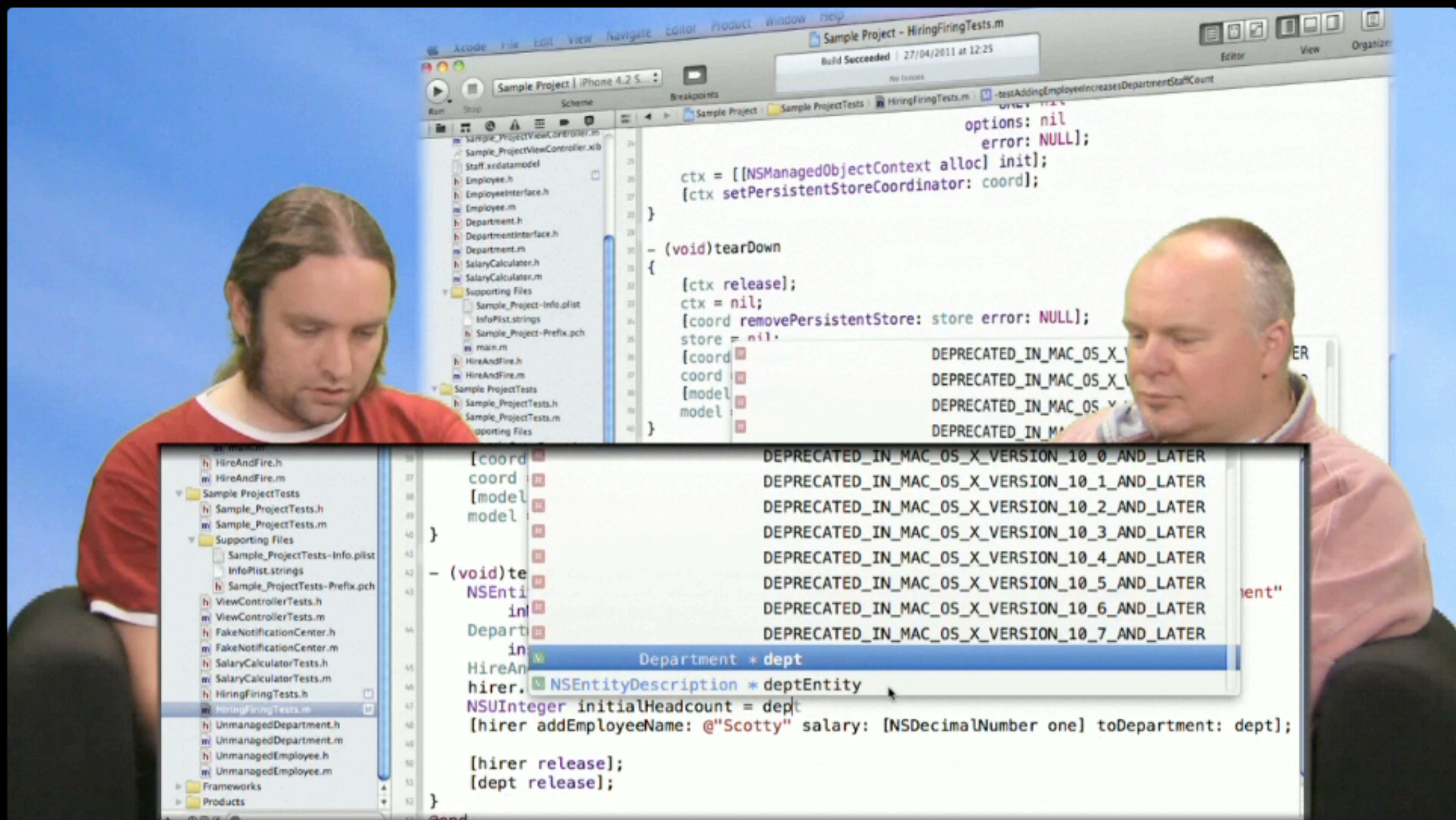


Test-Driven iOS Development

Developer's Library



<https://github.com/allending/Kiwi>



<http://ideveloper.tv/video/unittestingcourse.html>

Thanks