

UI Automation





@jonathanpenn



Navel Labs



COCOA MANIFEST

Slides n' Sample Code

cocoamanifest.net/features

The problem

Wash.
Rinse.
Repeat.



So...?



⏏

⏏

⏏

⏏

⏏

⏏

CoreDataBooks

⏏

⏏

⏏

00:05:00
Run 1 of 1

⏏

⏏

⏏

Message

StopTargetInspection RangeViewSearch

Instruments

Automation

Automation

Script

wip.js

Run on Record

Stop Script

Start Script

Script is stopped.

Screenshot

Take Screenshot Now

Logging

Continuously Log Results

Choose Location...

Export All Results Now...

Script Log

Index	Timestamp	Log Messages
3	11:48:14 PM EDT	2) UIApplication [name:CoreDataBooks value:(null) rect:{{x:0, y:0}, {width:320, height:480}}
4	11:48:14 PM EDT	3) UIWindow [name:(null) value:(null) rect:{{x:0, y:0}, {width:320, height:480}}
5	11:48:14 PM EDT	4) UINavigationController [name:Books value:(null) rect:{{x:0, y:0}, {width:320, height:480}}
6	11:48:14 PM EDT	5) UIButton [name>Edit value:(null) rect:{{x:5, y:27}, {width:100, height:30}}
7	11:48:14 PM EDT	5) UILabel [name:Books value:(null) rect:{{x:129, y:27}, {width:180, height:30}}
8	11:48:14 PM EDT	5) UIButton [name:Add value:(null) rect:{{x:282, y:27}, {width:100, height:30}}
9	11:48:14 PM EDT	4) UITableView [name:Empty list value:rows 1 to 7 of 11 rect:{{x:0, y:100}, {width:320, height:380}}
10	11:48:14 PM EDT	5) UITableViewGroup [name:Ben Elton value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
11	11:48:14 PM EDT	6) UILabel [name:Ben Elton value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
12	11:48:14 PM EDT	5) UITableViewCell [name:High Society value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
13	11:48:14 PM EDT	6) UILabel [name:High Society value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
14	11:48:14 PM EDT	5) UITableViewCell [name:Stark value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
15	11:48:14 PM EDT	6) UILabel [name:Stark value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
16	11:48:14 PM EDT	5) UITableViewGroup [name:Bill Boxson value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
17	11:48:14 PM EDT	6) UILabel [name:Stark value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
18	11:48:14 PM EDT	5) UITableViewCell [name:Stark value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
19	11:48:14 PM EDT	6) UILabel [name:High Society value:(null) rect:{{x:0, y:100}, {width:320, height:380}}
20	11:48:14 PM EDT	5) UITableViewCell [name:High Society value:(null) rect:{{x:0, y:100}, {width:320, height:380}}

Carrier

4:47 PM

Fri 9:00 AM

Advanced Behavior and Performance Testing With UI... > T 9AM

Jonathan Penn T 10AM

Keeping Secrets for iOS Developers > T 11AM

Randy Beller T 2PM

Mobile Movies with HTTP Live Streaming > T 3PM

Chris Adamson T 5PM

Fri 10:45 AM

Blocks > F 10AM

Jeff Biggs F 2PM

Core Audio in iOS 6

Schedule

Favorites

```
var target = UIATarget.localTarget();
```

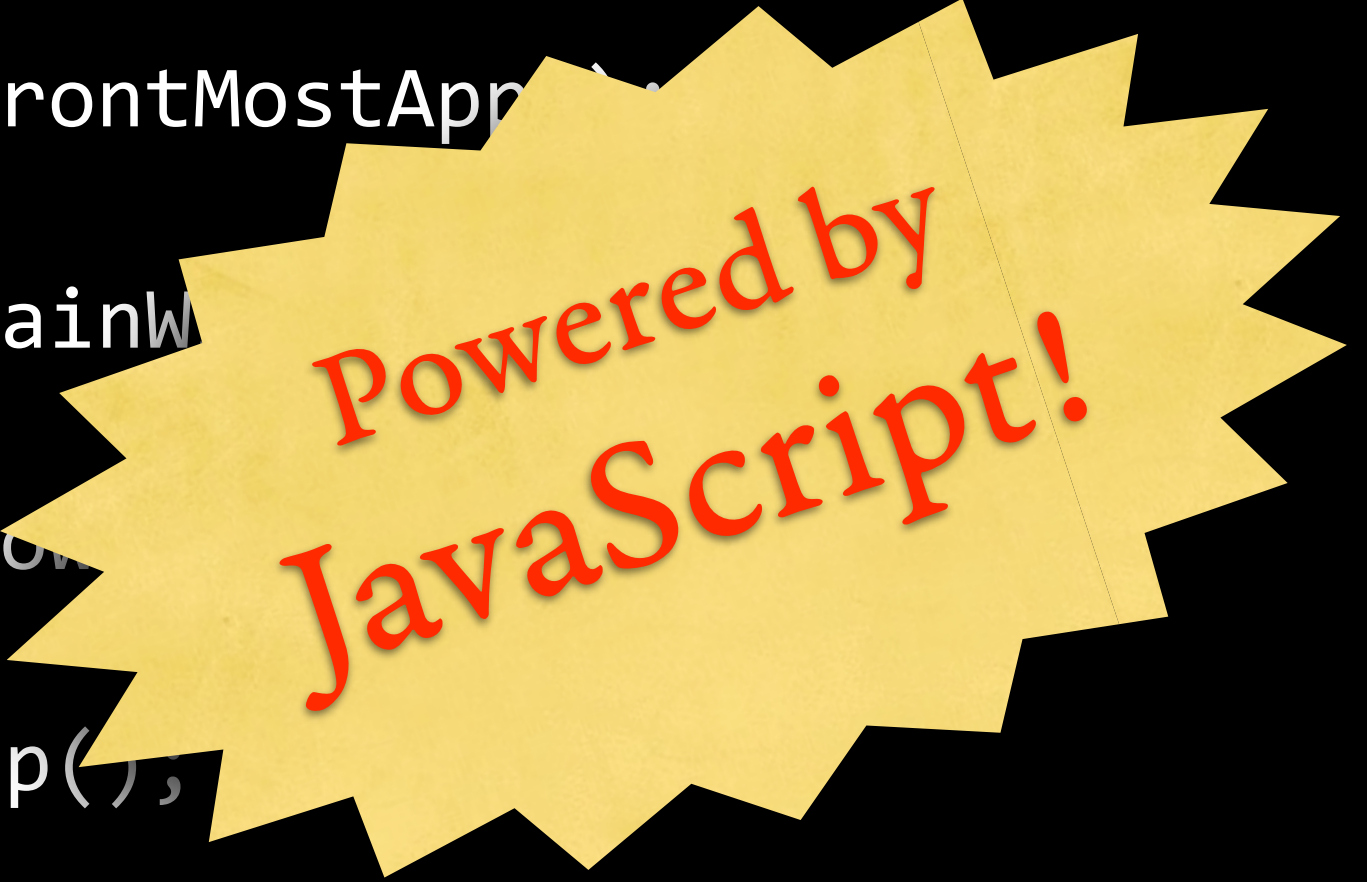
```
target.shake();
```

```
var app = target.frontMostApp();
```

```
var window = app.mainWindow();
```

```
var buttons = window.buttons();
```

```
buttons["Edit"].tap();
```



Powered by
JavaScript!

UI Automation JavaScript Reference

Note: This document was previously titled UI Automation Reference Collection.

Use the UI Automation JavaScript library to write test scripts that exercise your app's user interface elements while the app runs on a connected device. You write the tests in JavaScript, calling the UI Automation API to simulate user interaction. The system returns log information to the host computer.

Note: UI Automation simulates all user interface actions initiated by the script. For the sake of brevity and clarity, this document describes those actions in terms of a user's perspective.

[\[More\]](#)

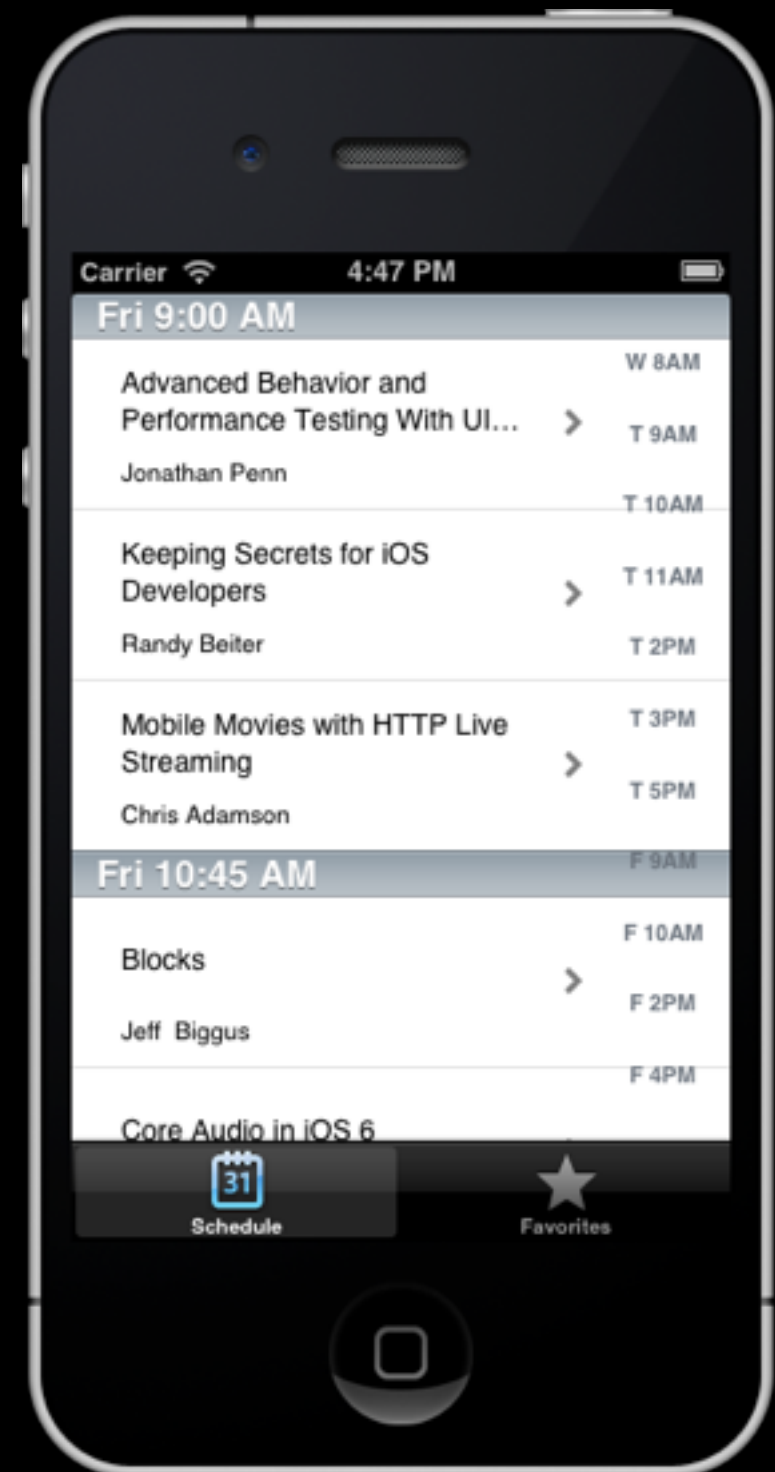
Class References

[UIActionSheet](#)
[UIActivityIndicator](#)
[UIActivityView](#)
[UIAlert](#)
[UIApplication](#)
[UIButton](#)
[UICollectionView](#)
[UIEditingMenu](#)
[UIElement](#)
[UIElementArray](#)
[UIHost](#)
[UIKey](#)
[UIKeyboard](#)
[UILink](#)
[UILogger](#)
[UINavigationController](#)
[UIPageIndicator](#)
[UIPicker](#)

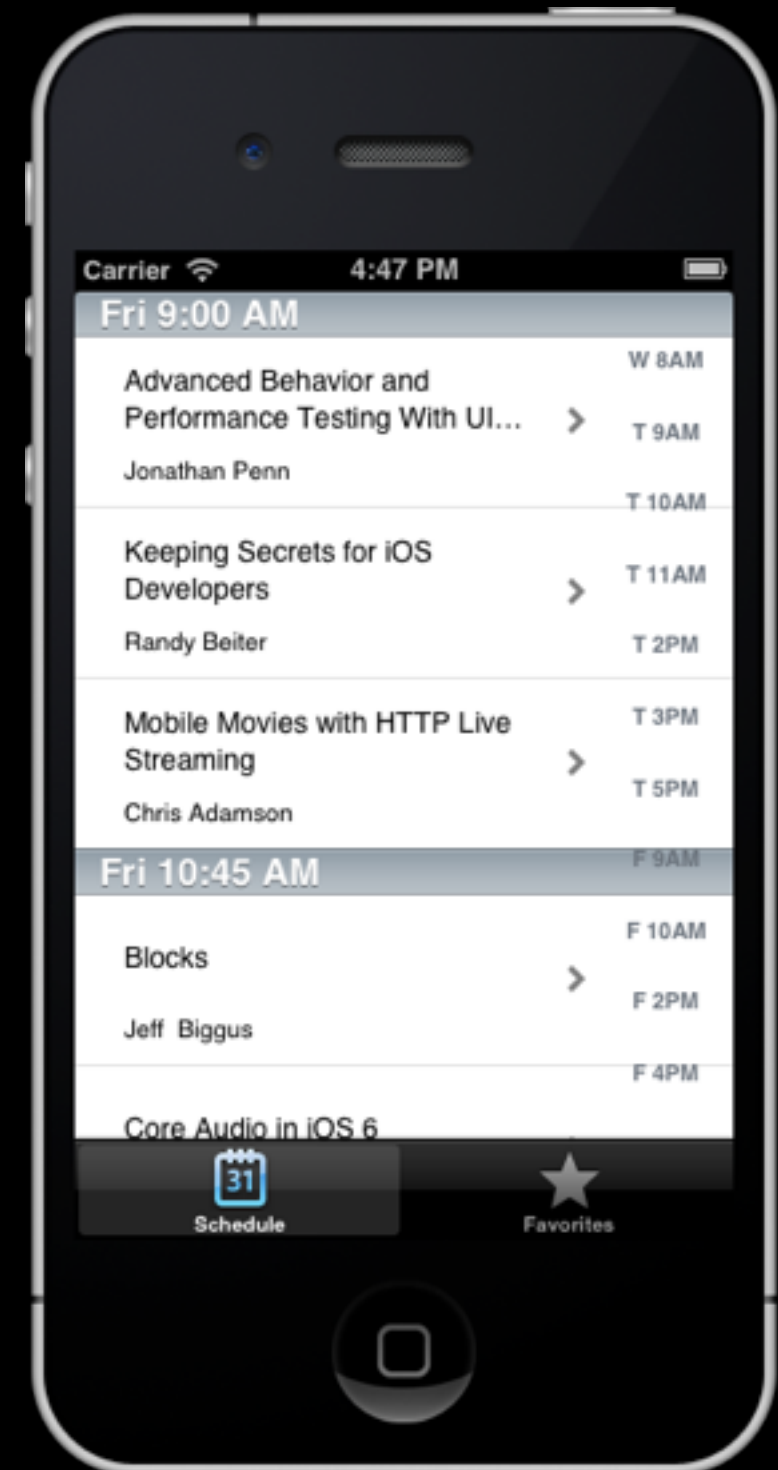
[Revision History](#)

First, some theory...

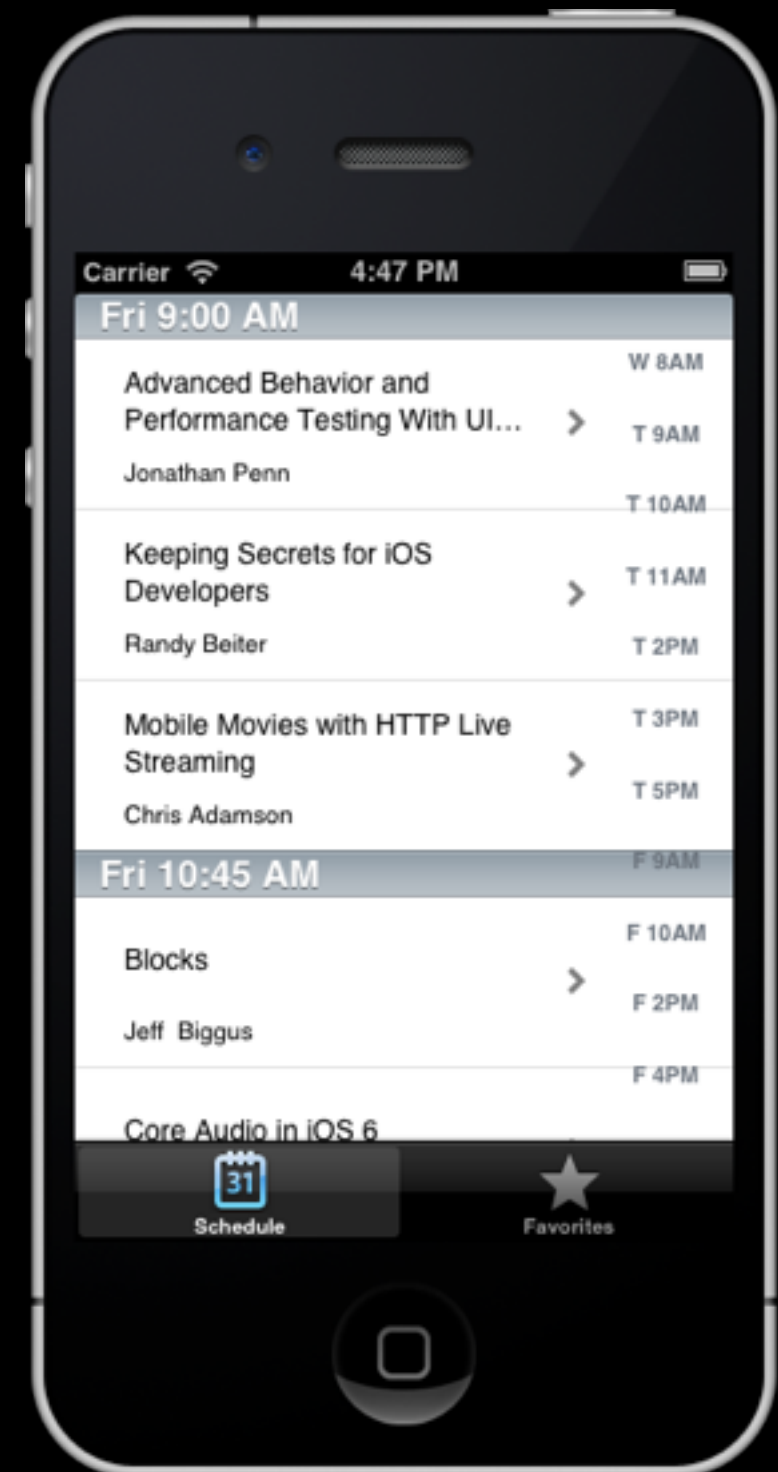
Edge Cases



Wired up right?



Custom controls



Think like a user



Show me the money!

(demo time)

Write Expressive Tests

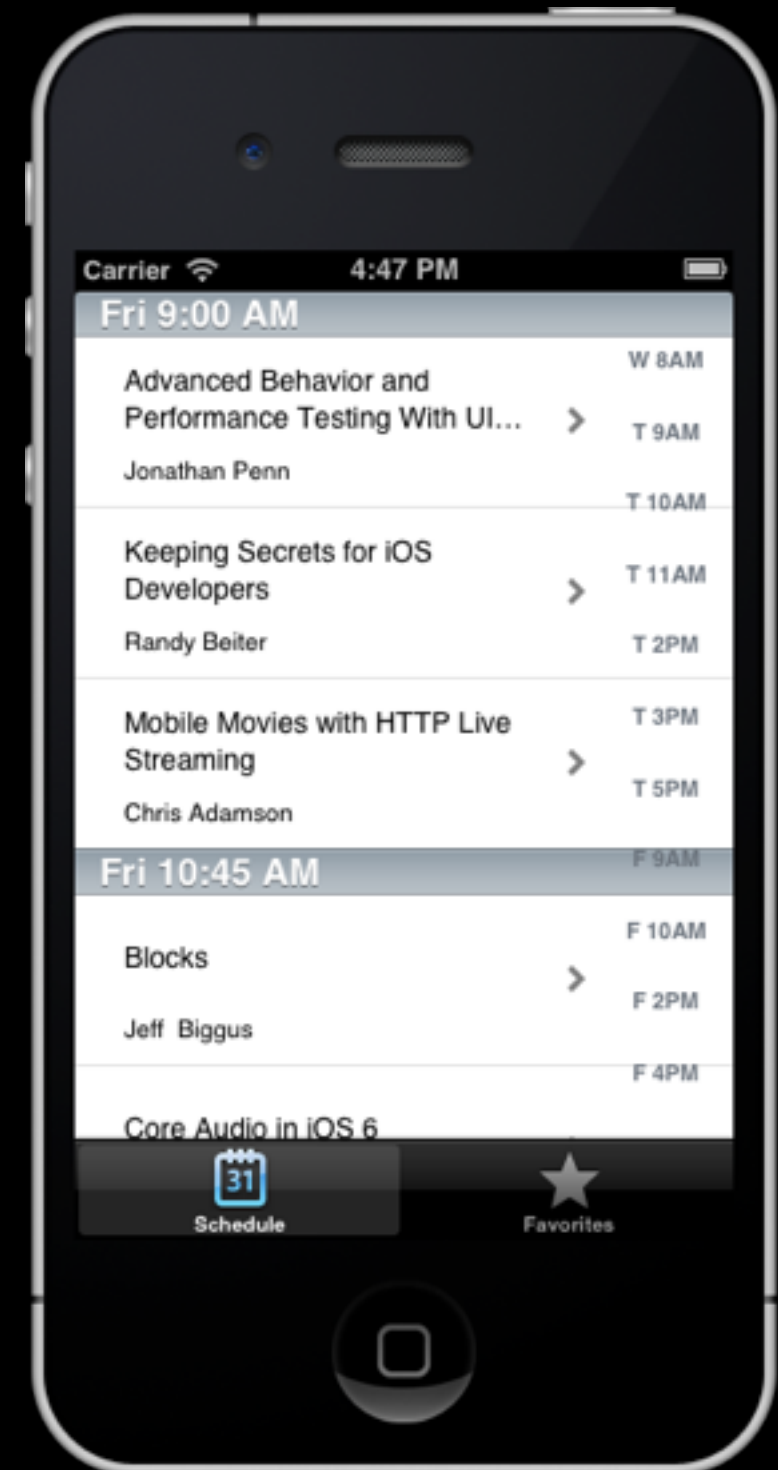
Assert Behavior

Test Performance

Stub Dependencies

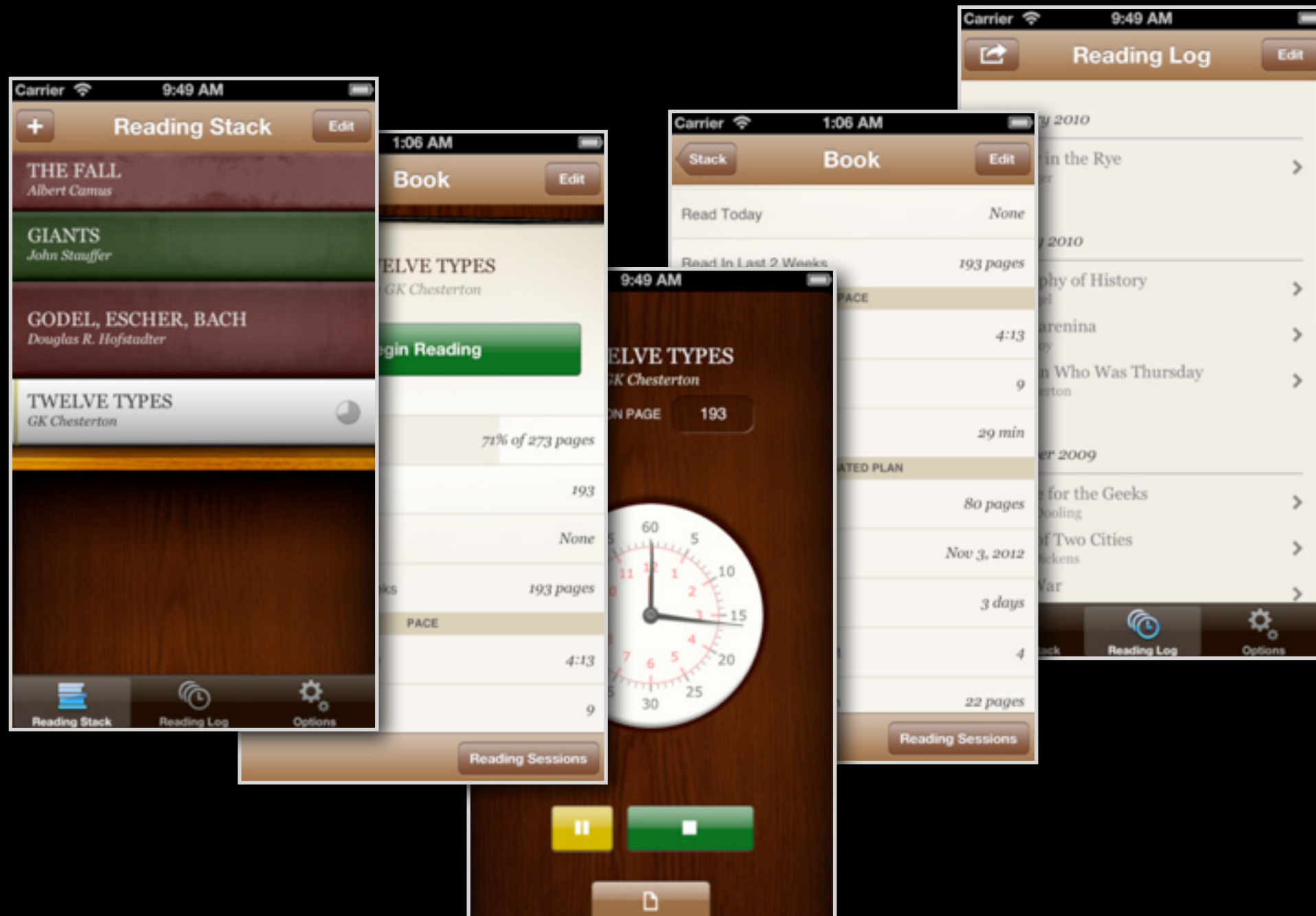
Run From Command Line

More Fun



Other resources

UI Screen Shooter



github.com/jonathanpenn/ui-screen-shooter

tuneup.js

```
test("my test", function(target, app) {  
  assertWindow({  
    tableViews: [  
      {  
        cells: [  
          { name: "Fred" },  
          { name: "Flintstone" }  
        ]  
      }  
    ]  
  });  
});
```

github.com/alexvollmer/tuneup_js

mechanic.js

```
$( '#My Scroll View' ).find( 'UIAStaticText' );
```

github.com/jaykz52/mechanic

Bwoken

```
iphone favorites.js
Start: Favoriting a repository
Debug: tap tableViews["Repositories"].cells["CITravis by Travis-ci"]
Debug: tap navigationBar.rightBarButtonItem
Debug: tap actionSheet.elements["Add"]
Debug: tap navigationBar.leftButton
Debug: tap navigationBar.elements["Favorites"]
Debug: navigationBar.elements["Favorites"].scrollToVisible
Debug: tap navigationBar.elements["All"]
Pass: Favoriting a repository
Start: Unfavoriting a repository
Debug: tap navigationBar.elements["Favorites"]
Debug: tap tableViews["Repositories"].cells["CITravis by Travis-ci"]
Debug: tap navigationBar.rightBarButtonItem
Debug: tap actionSheet.elements["Remove"]
Debug: tap navigationBar.leftButton
Debug: should be true null
Debug: tap navigationBar.elements["All"]
Pass: Unfavoriting a repository

Complete
Duration: 23.419741s
```

bendyworks.github.com/bwoken

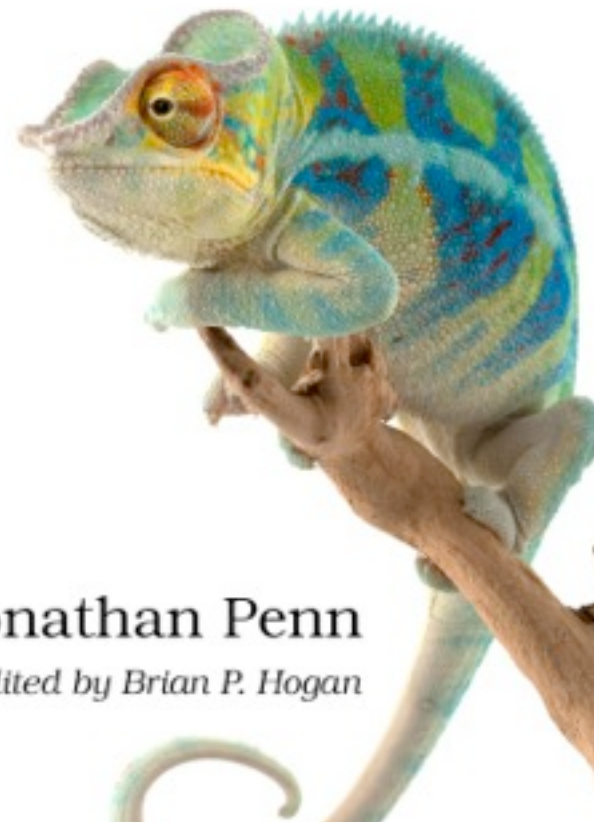


The
Pragmatic
Programmers

Test iOS Apps with UI Automation

Bug Hunting Made Easy

**Your mom
writes tests**



Jonathan Penn

Edited by Brian P. Hogan

pragprog.com/book/jptios

And now for something
completely different...

UIAutoMonkey

github.com/jonathanpenn/ui-auto-monkey

UI Automation





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for more info...

cocoamanifest.net/features