

CS 696 Mobile Application Development
Fall Semester, 2010
Doc 13 Settings, Utility, Rotation, Tables
Oct 12, 2010

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References

Beginning iPhone 3 Development: Exploring the iPhone SDK by Jeff LaMarche, and David Mark,
Table View Programming Guide for iOS

Convert

float fahrenheitValue = centigrade *(9/5)+32;

centigrade = 100;

then

fahrenheitValue = 132???

Fear

I have been working for two weeks on this project and fear making changes

Snapshots

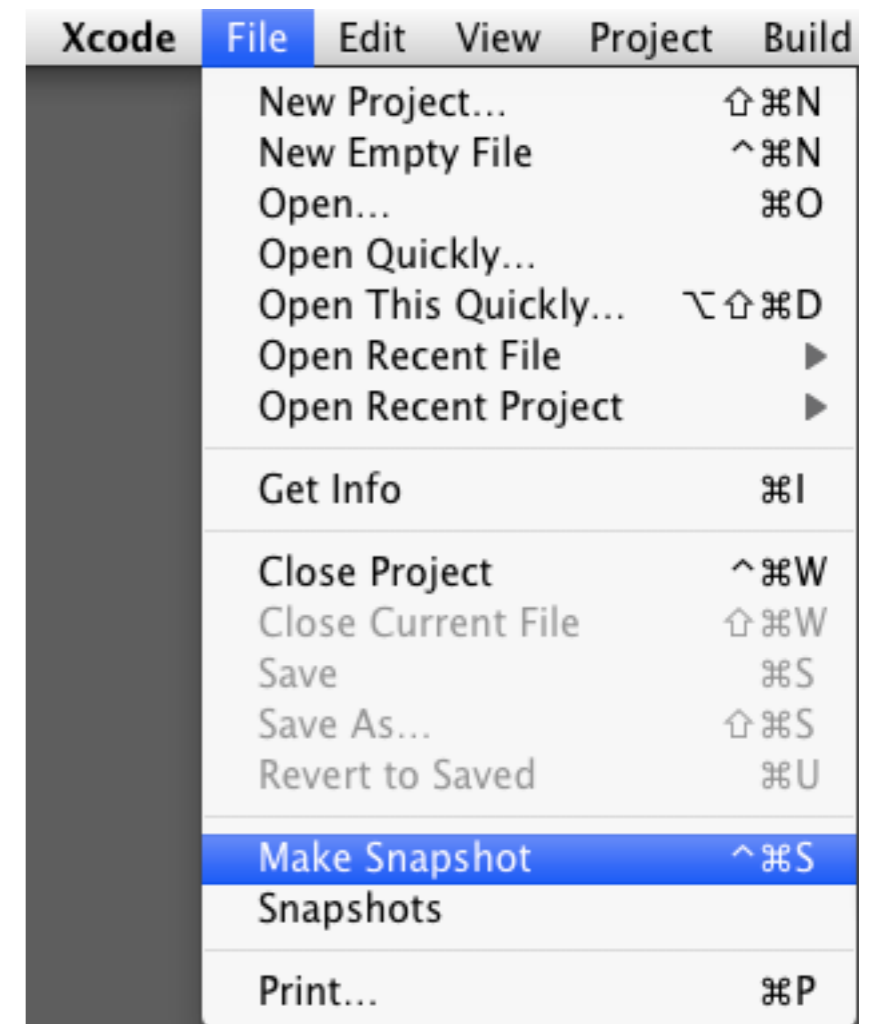
Save project state

Restore part or all of project to saved state

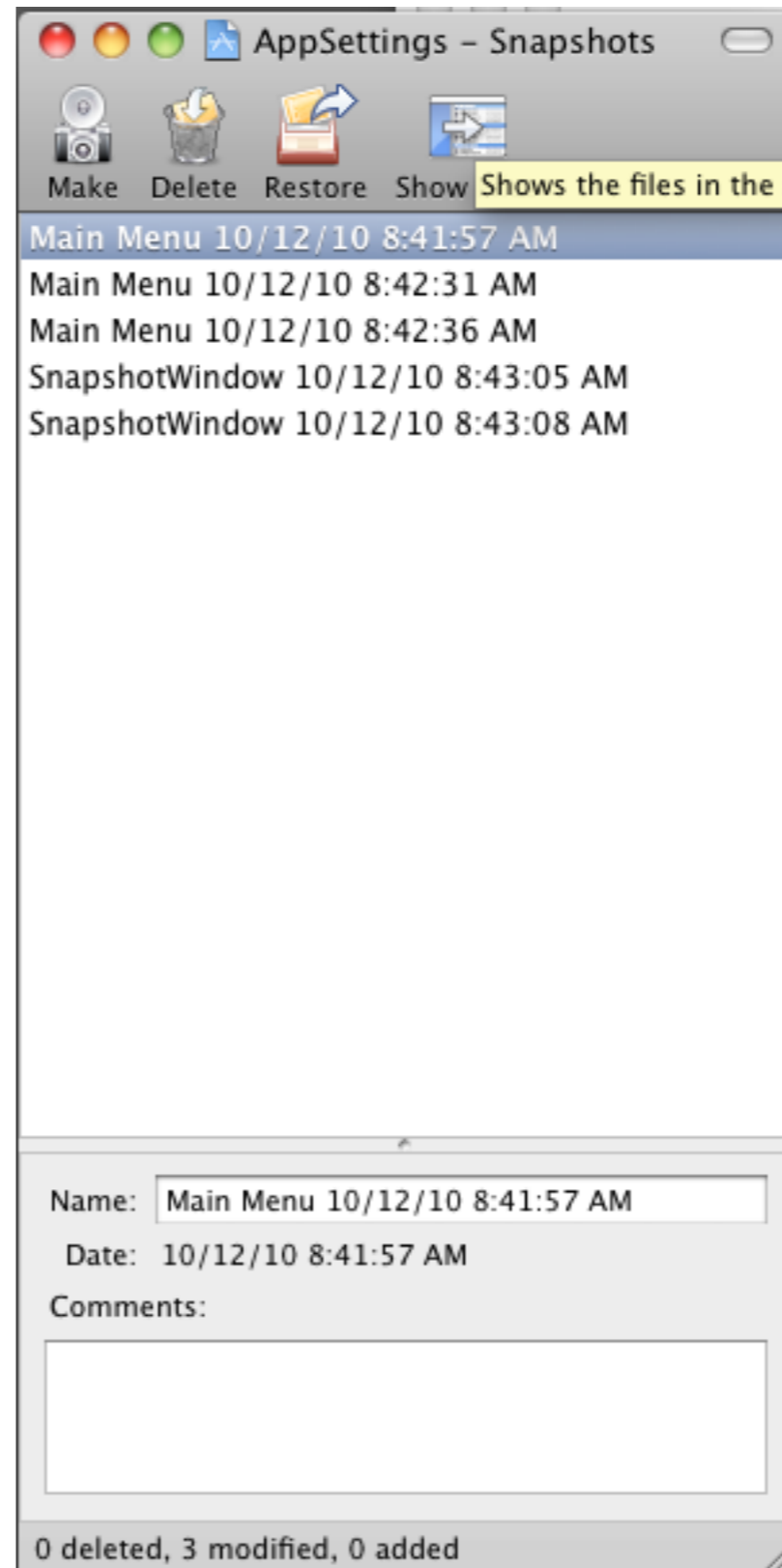
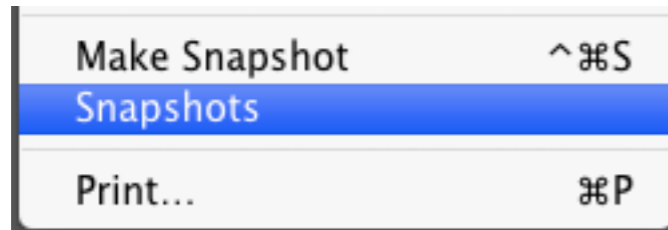
Multi-file undo/redo

Files stored locally

For individual use only



List of Snapshots



Diff

The screenshot shows a diff tool window titled "AppSettings - Snapshots". The window has a menu bar with "Make", "Delete", "Restore", and "Hide Files". Below the menu bar is a list of snapshots:

- Main Menu 10/12/10 8:41:57 AM
- Main Menu 10/12/10 8:42:31 AM
- Main Menu 10/12/10 8:42:36 AM
- SnapshotWindow 10/12/10 8:43:05 AM
- SnapshotWindow 10/12/10 8:43:08 AM

The main area of the window is divided into three panes. The top pane is a table with columns "Filename" and "Path":

Filename	Path
whitney.pbxuser	AppSettings.xcodeproj/whitney.pbxuser
MainViewController.m	Classes/MainViewController.m
whitney.modelv3	AppSettings.xcodeproj/whitney.modelv3

The middle pane shows a diff of the code in MainViewController.m. The left side shows the code from the 8:41:57 AM snapshot, and the right side shows the code from the 8:43:05 AM snapshot. A difference is highlighted in the middle pane, with a "1" in the center indicating one change. The change is in the `dismissModalViewControllerAnimated:` method call, where the value `YES` is added in the later snapshot.

```
- (void)
flipsideViewControllerDidFinish:
(FlipsideViewController *)controller
{
    [self refreshFields];
    [self
dismissModalViewControllerAnimated:
YES];
}

- (IBAction)showInfo:(id)sender {
    FlipsideViewController *
controller = [[FlipsideViewController
alloc] initWithNibName:
@"FlipsideView" bundle:nil];
    controller.delegate = self;
}

- (void)
flipsideViewControllerDidFinish:
(FlipsideViewController *)controller
{
    [self
dismissModalViewControllerAnimated:
YES];
}

- (IBAction)showInfo:(id)sender {
    FlipsideViewController *
controller = [[FlipsideViewController
alloc] initWithNibName:
@"FlipsideView" bundle:nil];
    controller.delegate = self;
    controller.modalTransitionStyle =
```

The bottom pane contains a form for the selected snapshot:

Name: Main Menu 10/12/10 8:41:57 AM
Date: 10/12/10 8:41:57 AM
Comments:

At the bottom of the window, a status bar shows: "0 deleted, 3 modified, 0 added 1 difference in MainViewController.m"

Source Control

CVS
Subversion

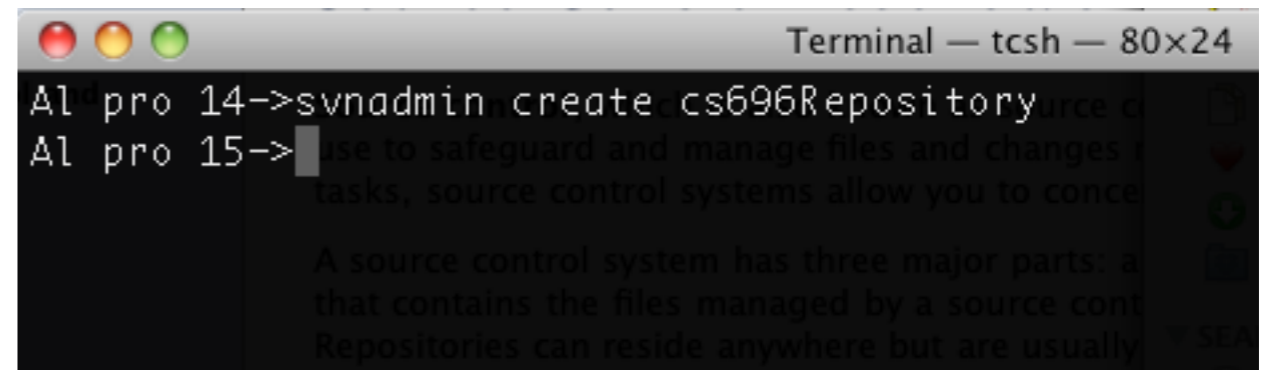
More control than Snapshots

Supports multiple developers on same project

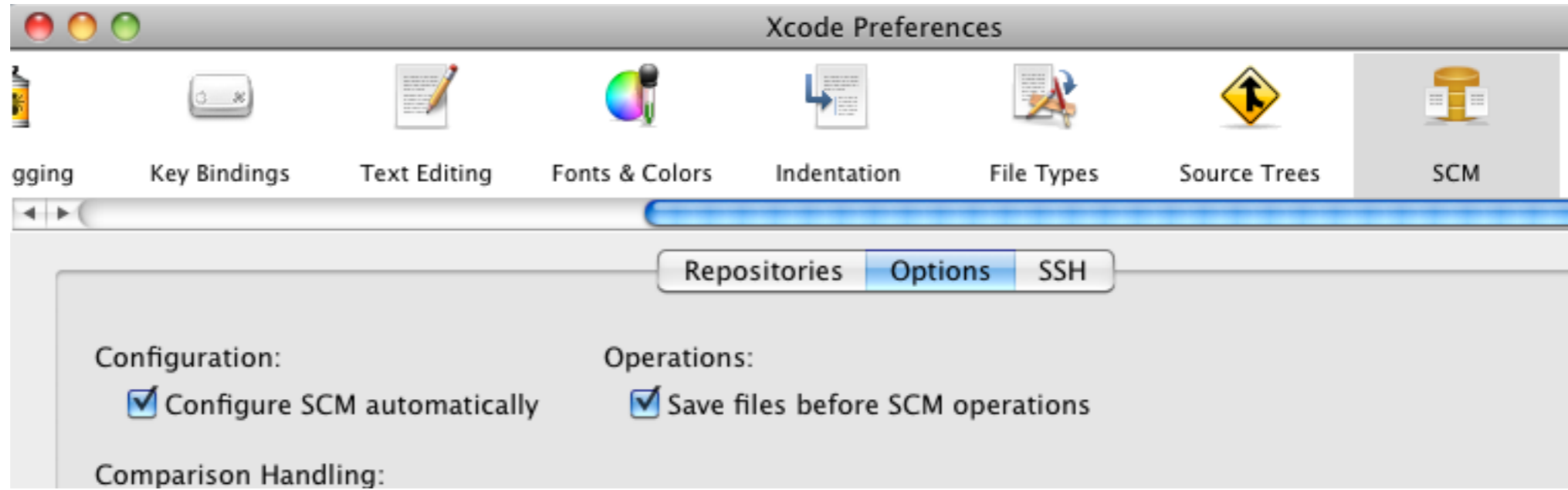
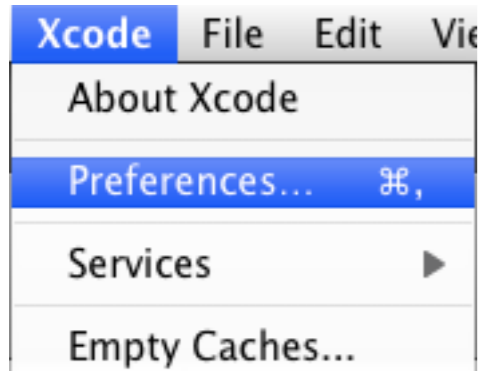
Subversion

Starting new repository

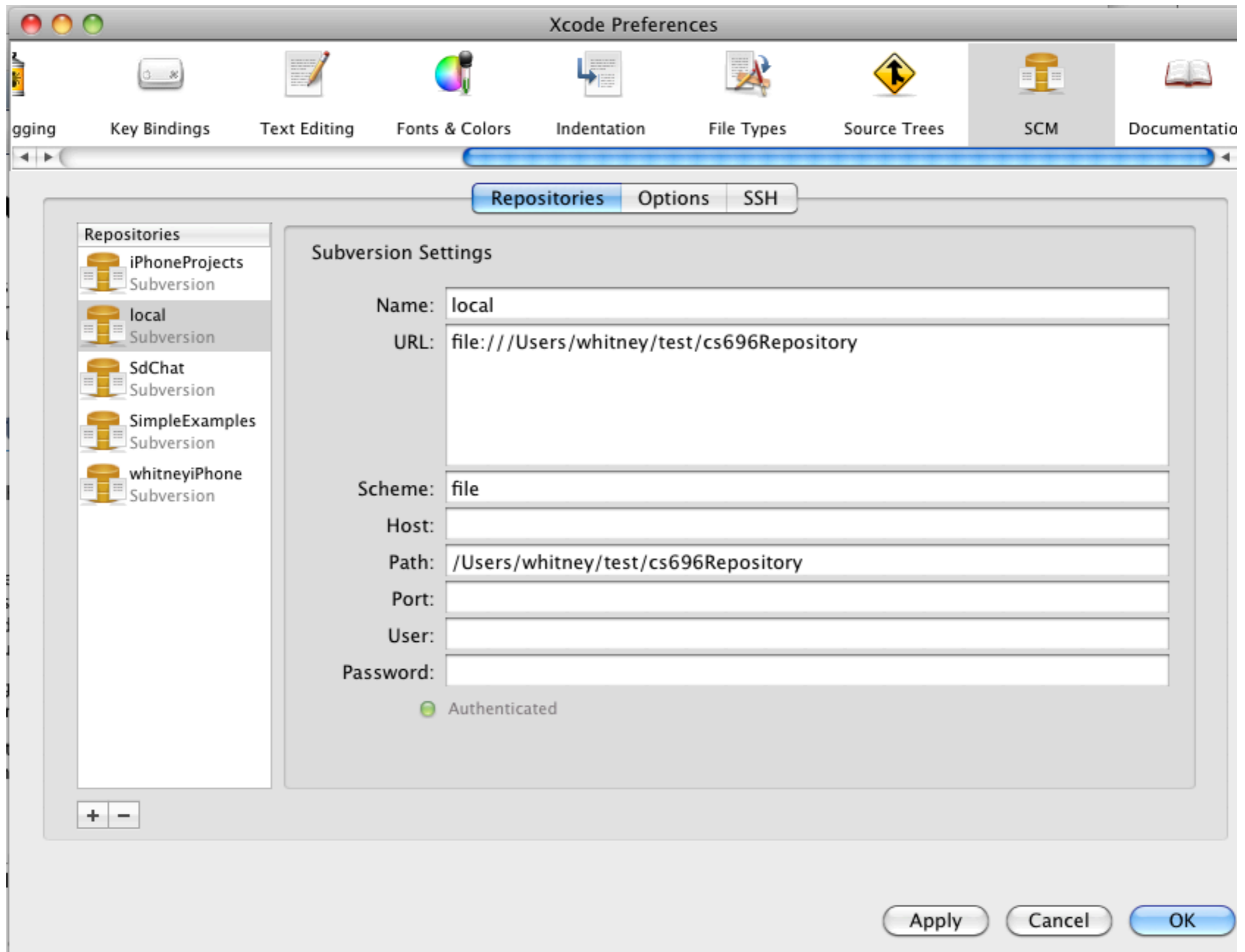
```
svnadmin create repositoryName
```



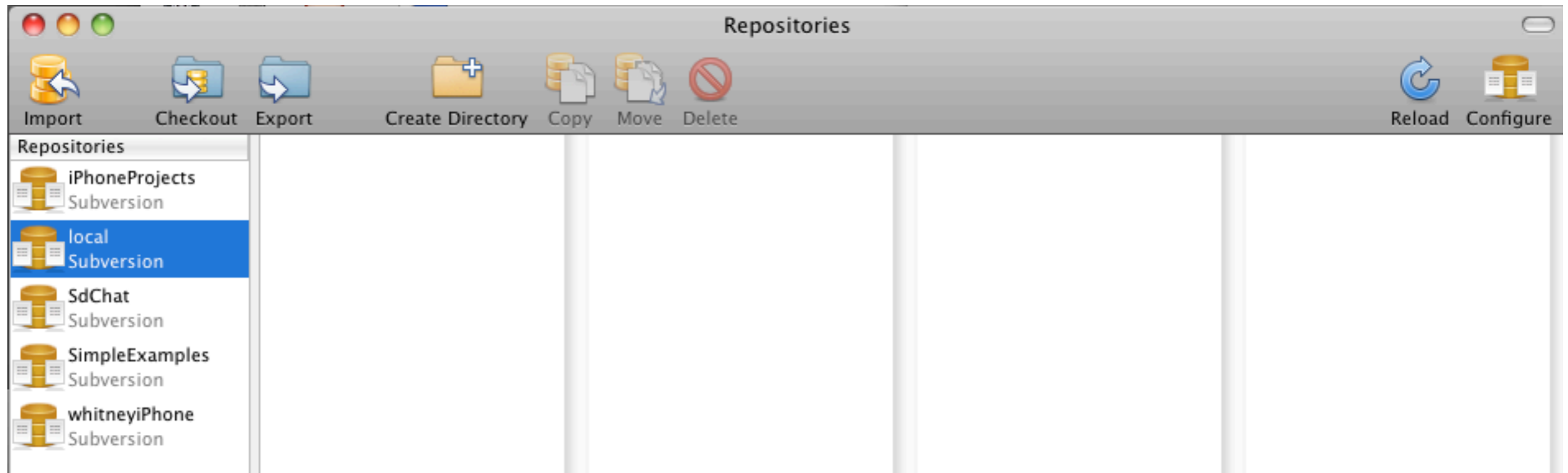
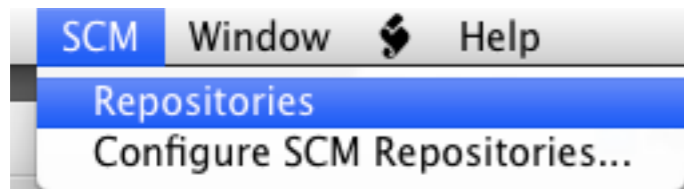
Configuring Xcode to do the right thing



Adding a Repository to Xcode



Repositories Window



Tricky Part

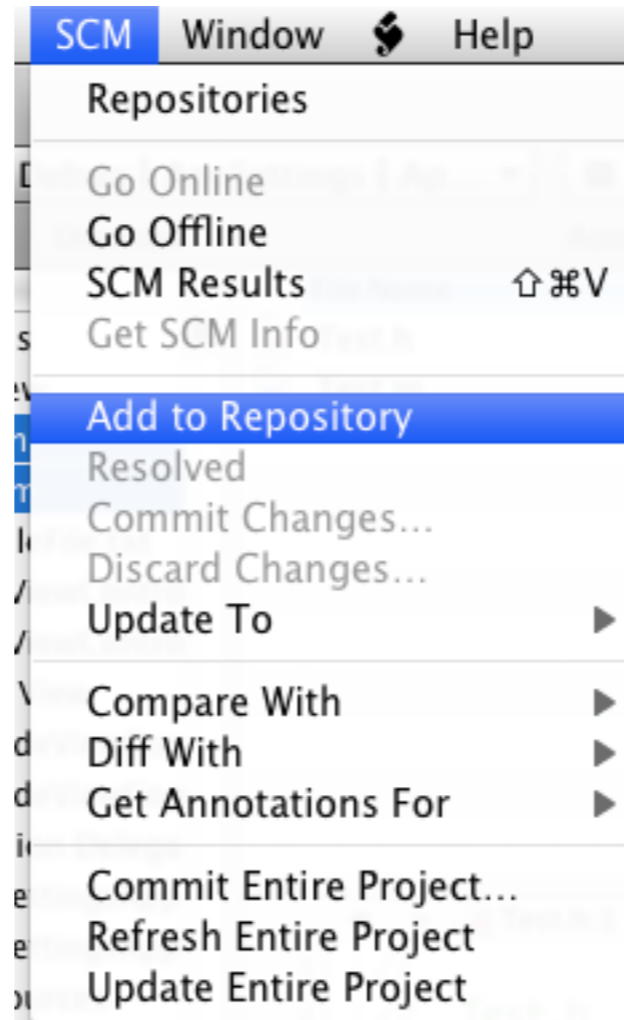
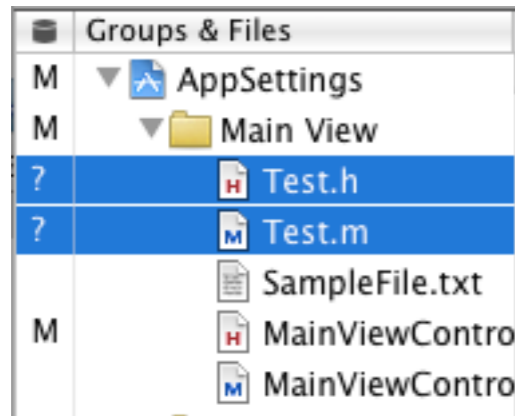
Import project

Then Check it out

Work on the checked out project

Adding new Files to project

Have to add them to repository too

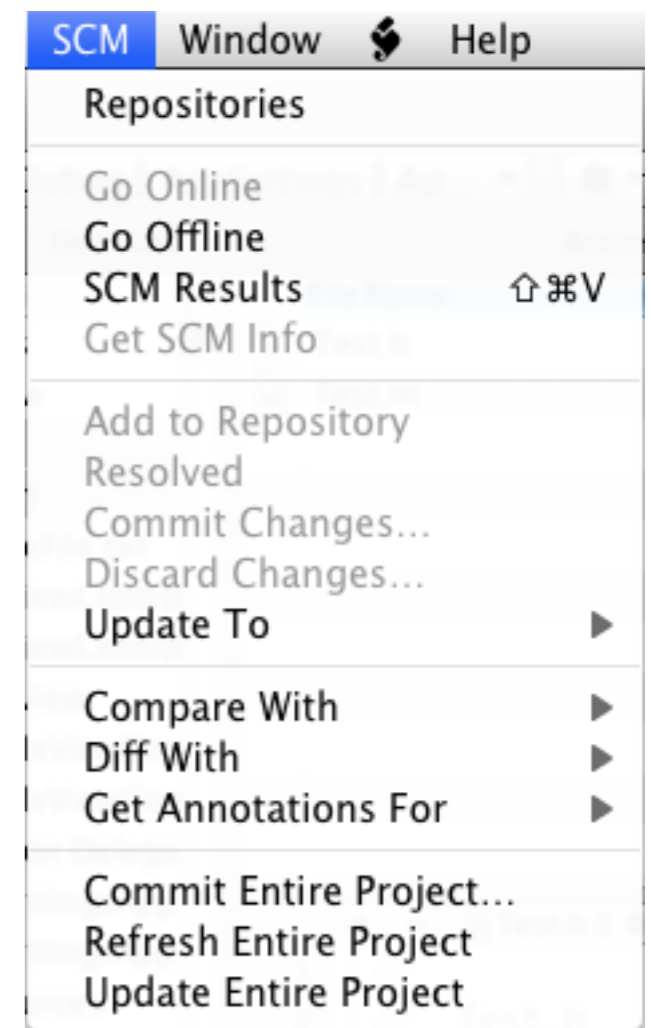


Commit & Update

Commit - send changes to repository

Update - Fetch latest version from repository

Refresh - update file status



More Information

Xcode Source Management Guide

Settings

Problem With Project Templates

Too much magic

Not enough understanding

How do we just use Standard Settings App?

Just add Settings.bundle to project

Works for any project

How do we read the values

```
NSUserDefaults *defaults = [NSUserDefaults standardUserDefaults];  
username.text = [defaults objectForKey:kUsernameKey];  
password.text = [defaults objectForKey:kPasswordKey];
```

Changing Values

```
NSUserDefaults *defaults = [NSUserDefaults standardUserDefaults];  
[defaults setObject:@"Roger" forKey:kUsernameKey];  
[defaults synchronize];
```

Details

iOS Application Programming Guide

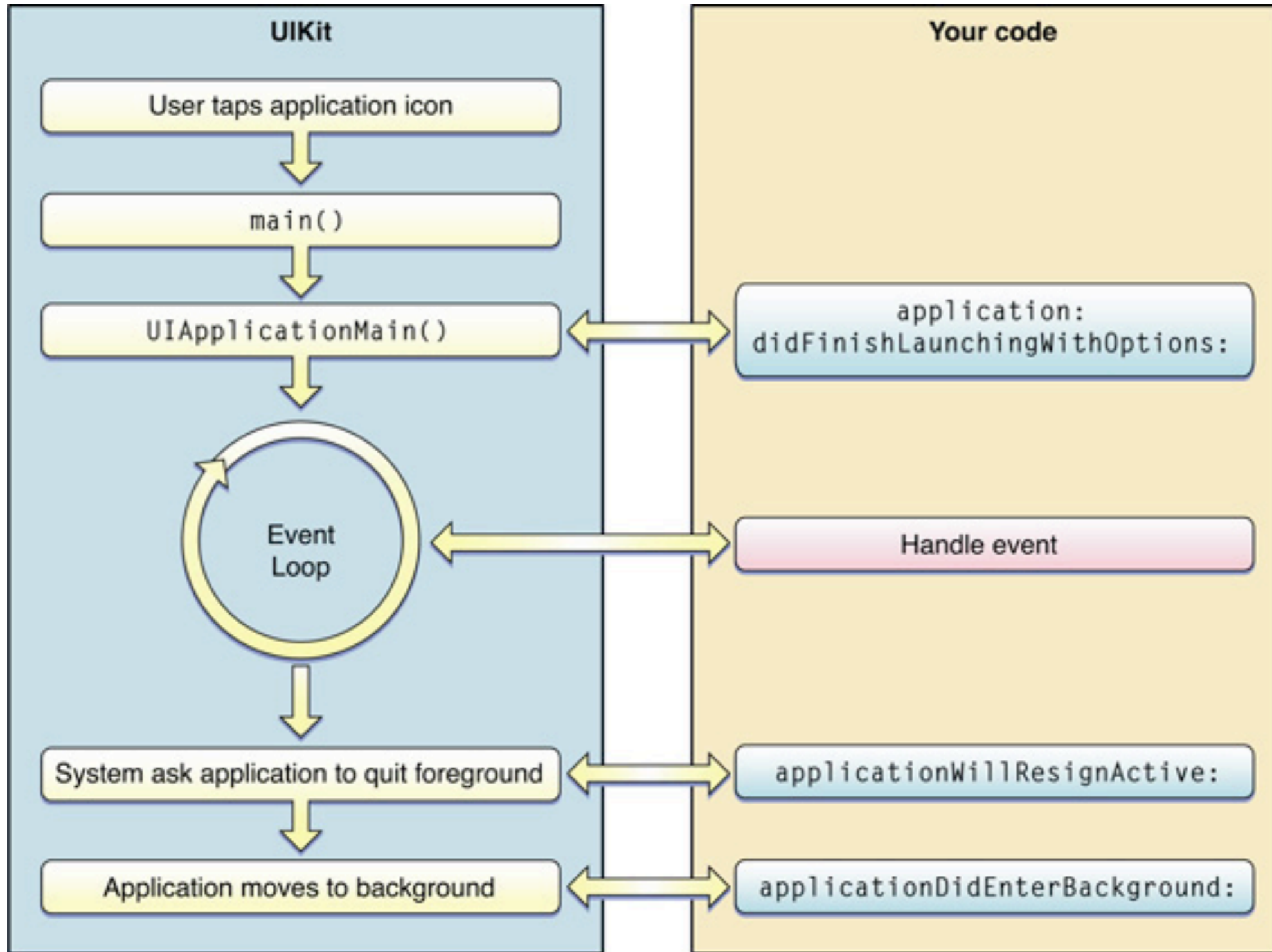
Chapter 6 Implementing Application Preferences

[NSUserDefaults class Documentation](#)

That it for Settings

except for iOS 4

Background Process

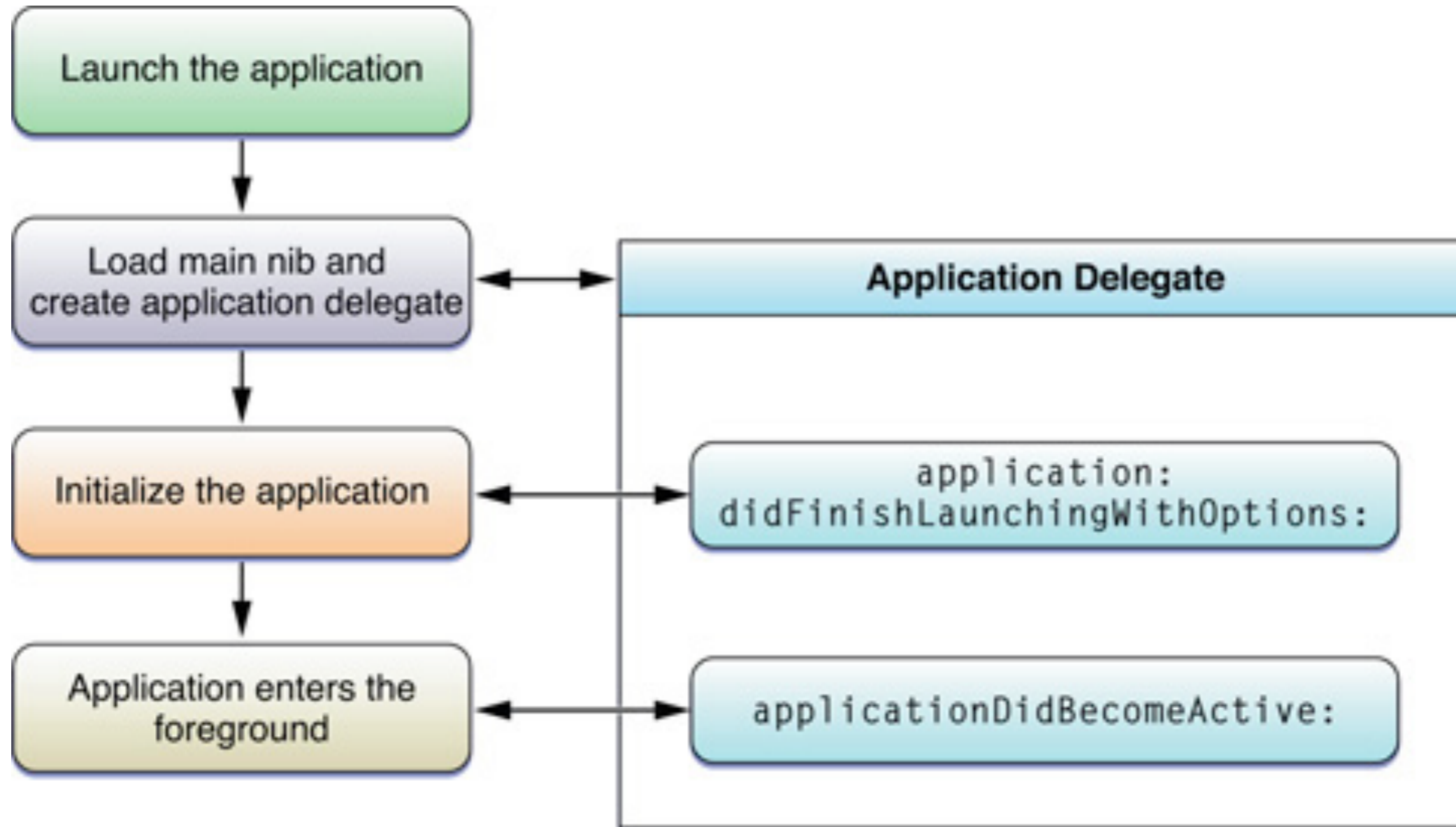


App Delegate Methods

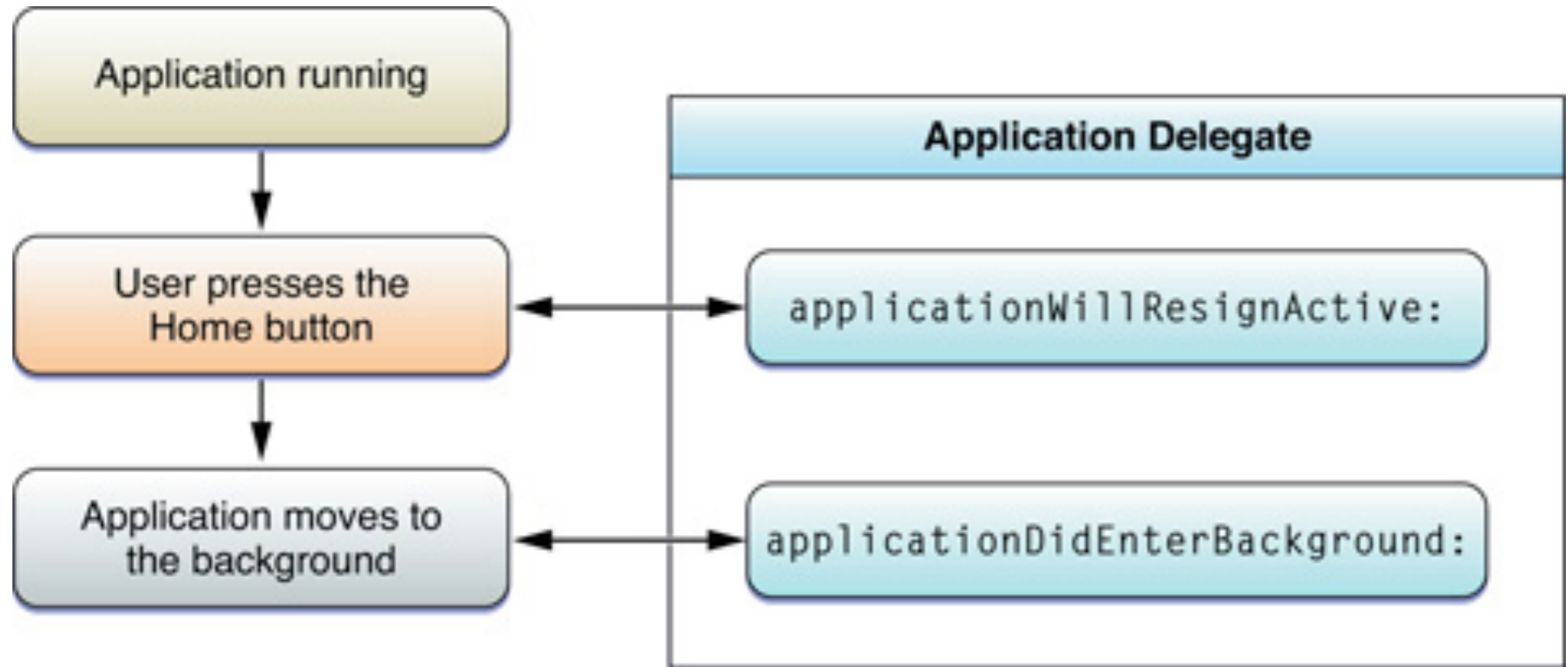
- `application:didFinishLaunchingWithOptions:`
- `applicationDidBecomeActive:`
- `applicationWillResignActive:`
- `applicationDidEnterBackground:`
- `applicationWillEnterForeground:`
- `applicationWillTerminate:`

Launching the app

UIViewController method
viewDidLoad is called

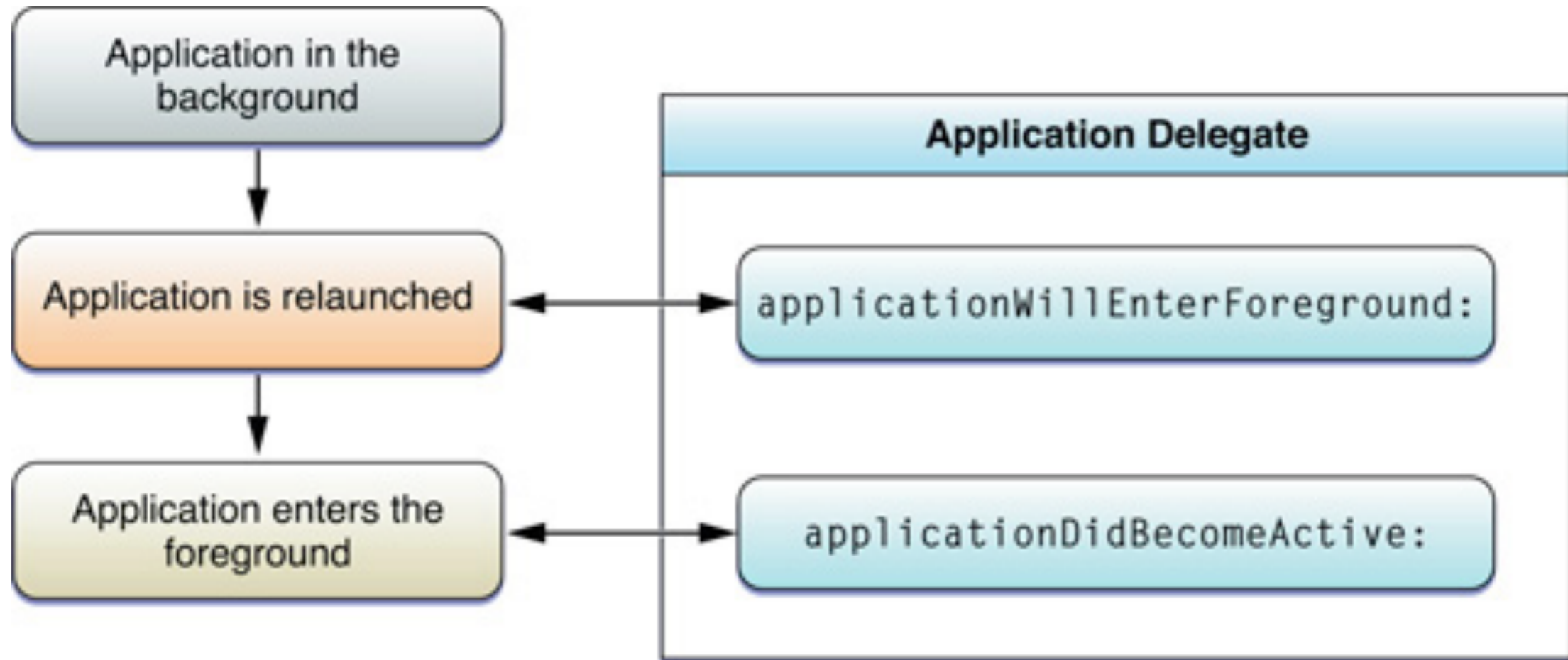


Moving to the Background



Resuming Foreground

UIViewController method
viewDidLoad is not called



Notifications

Observer

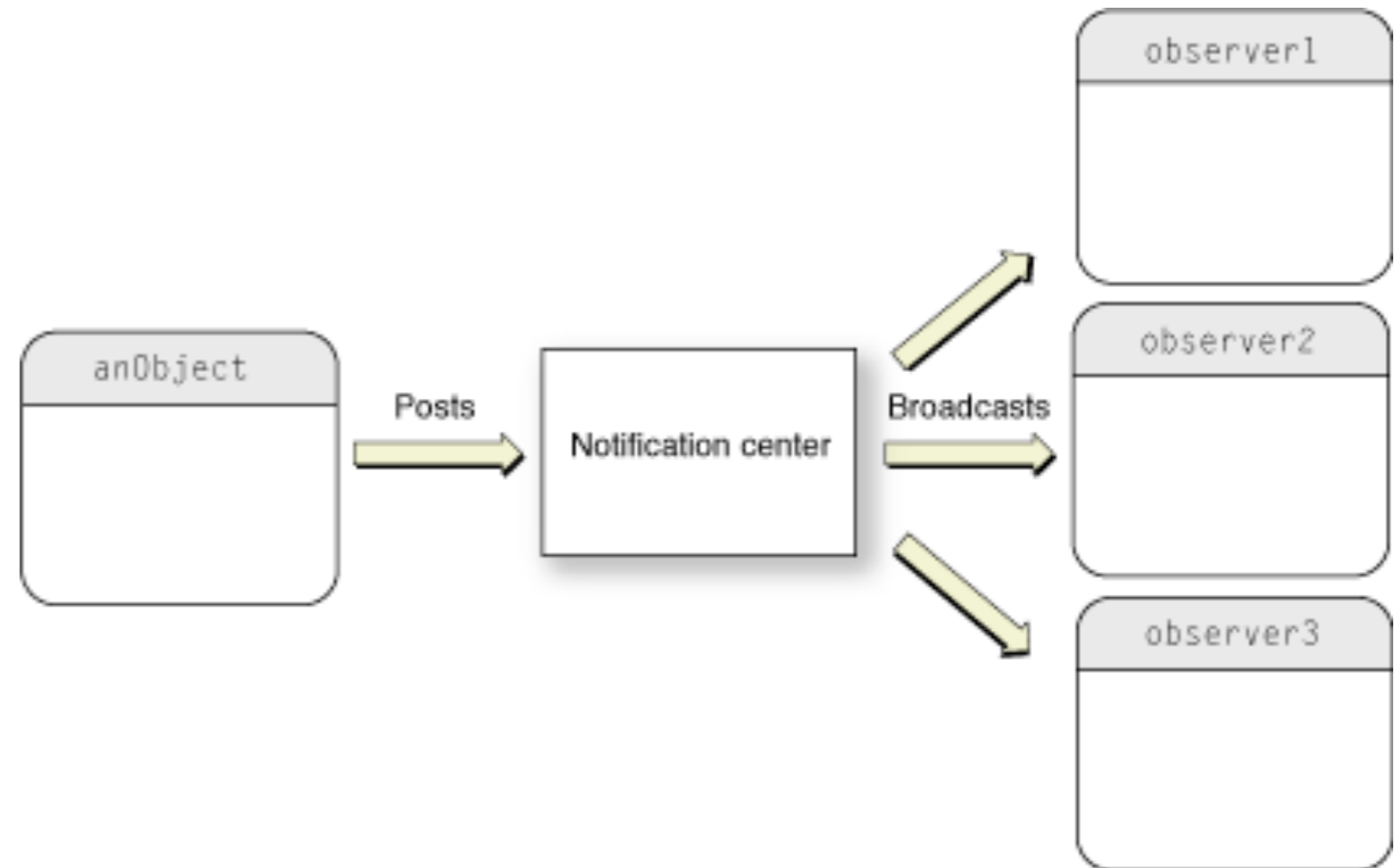
Registers with Notification center
For notification from a source

Must unregister before dealloc

Source

When changes sends message
to observers

Can create own sources



NotificationCenter

Getting the Notification Center

- + defaultCenter

Managing Notification Observers

- addObserver:selector:name:object:
- addObserverForName:object:queue:usingBlock:
- removeObserver:
- removeObserver:name:object:

Posting Notifications

- postNotification:
- postNotificationName:object:
- postNotificationName:object:userInfo:

Notification Example

```
- (void)viewDidLoad {
    [super viewDidLoad];
    [[NSNotificationCenter defaultCenter]
     addObserver:self
     selector:@selector(defaultsChanged: )
     name:NSUserDefaultsDidChangeNotification
     object:nil];
}

- (void)dealloc {
    [[NSNotificationCenter defaultCenter] removeObserver: self];
    [super dealloc];
}
```

Notification

Receive notifications when application becomes active

Receive notification for each time you register

Receive notification for each change

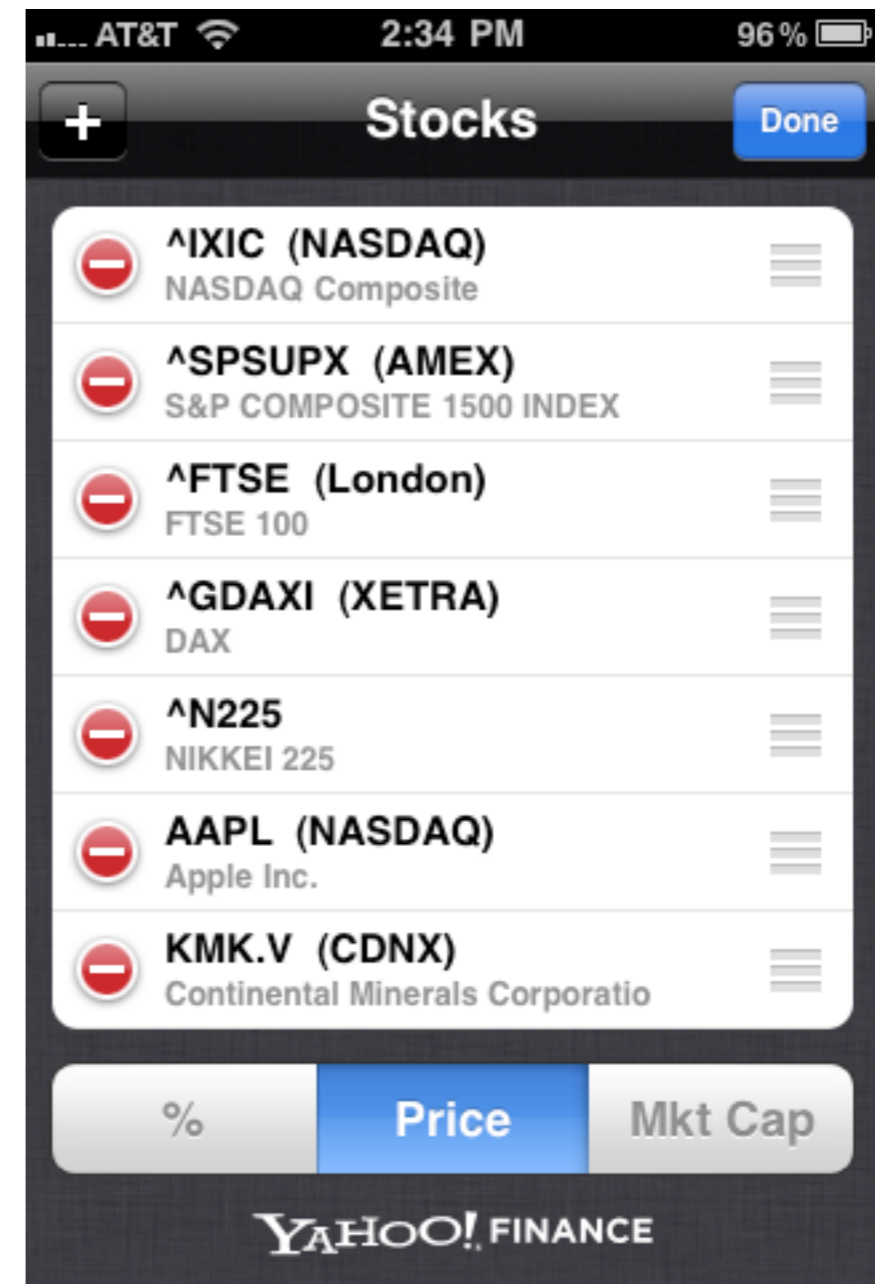
How to find out about Notifications

Each Class documents the notification it will send

- ▶ Overview
- ▶ Tasks
- ▶ Properties
- ▶ Class Methods
- ▶ Instance Methods
- ▶ Constants
- ▶ Notifications
- ▶ Appendix A: Deprecated UIApplication Methods
- Revision History

Utility

Utility Apps



Flip Button



```
- (IBAction)showInfo:(id)sender {
```

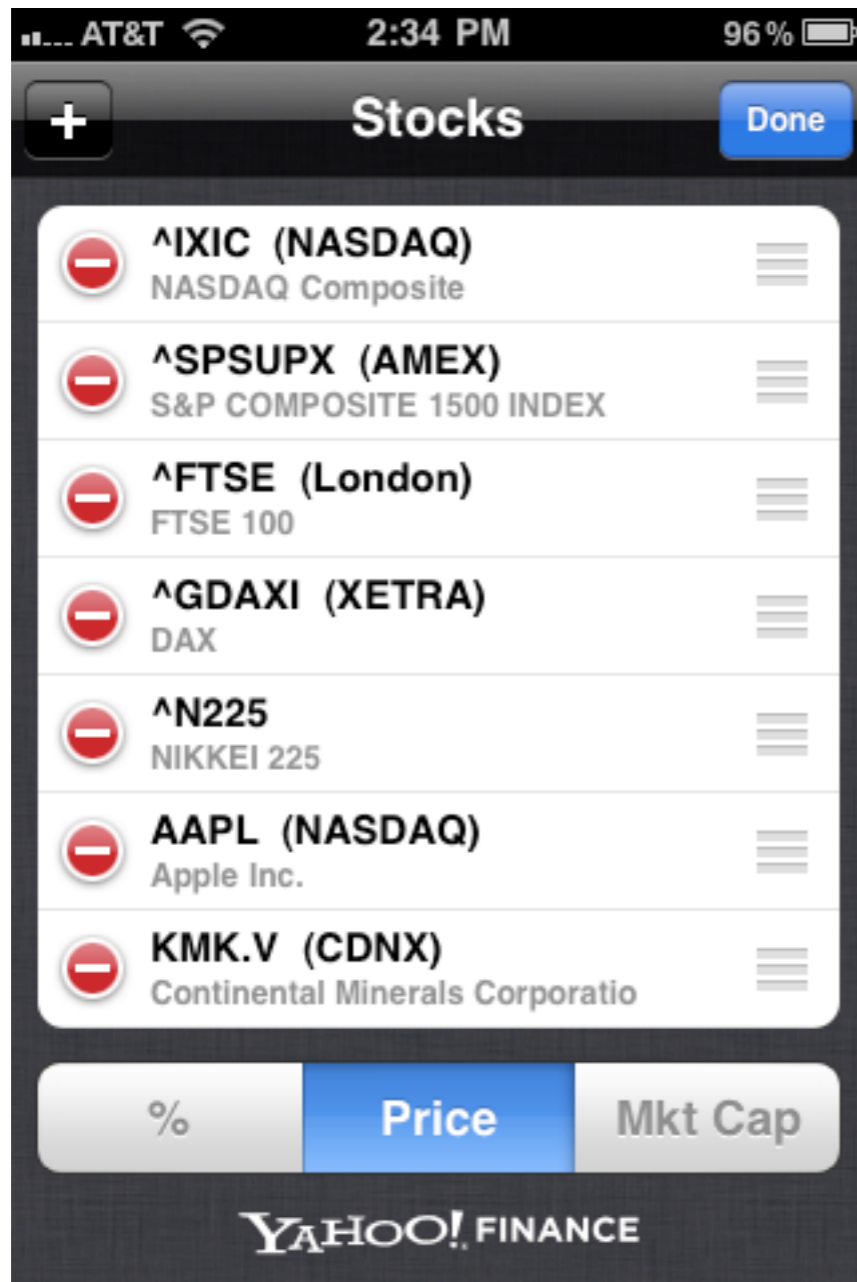
```
    FlipsideViewController *controller = [[FlipsideViewController alloc]
        initWithNibName:@"FlipsideView" bundle:nil];
    controller.delegate = self;
```

```
    controller.modalTransitionStyle = UIModalTransitionStyleFlipHorizontal;
    [self presentViewController:controller animated:YES];
```

```
    [controller release];
```

```
}
```

Done



Just a button

Linked to method done:

```
@interface FlipsideViewController : UIViewController {  
    id <FlipsideViewControllerDelegate> delegate;  
}
```

```
@property (nonatomic, assign) id <FlipsideViewControllerDelegate> delegate;  
- (IBAction)done:(id)sender;  
@end
```

```
@protocol FlipsideViewControllerDelegate  
- (void)flipsideViewControllerDidFinish:(FlipsideViewController *)controller;  
@end
```


done:

```
- (IBAction)done:(id)sender {  
    [self.delegate flipsideViewControllerDidFinish:self];  
}
```

```
- (void)flipsideViewControllerDidFinish:(FlipsideViewController *)controller {  
    [self dismissModalViewControllerAnimated:YES];  
}
```

Rotation

How to keep things synched

If used multi-views for single view rotation

Keep portrait & landscape view synched when rotate

When switching tabs

Make sure the new view is in the correct orientation

How do we know when switch tabs?

UITabBarControllerDelegate

Managing Tab Bar Selections

- `tabBarController:shouldSelectViewController:`
- `tabBarController:didSelectViewController:`

Managing Tab Bar Customizations

- `tabBarController:willBeginCustomizingViewControllers:`
- `tabBarController:willEndCustomizingViewControllers:changed:`
- `tabBarController:didEndCustomizingViewControllers:changed:`

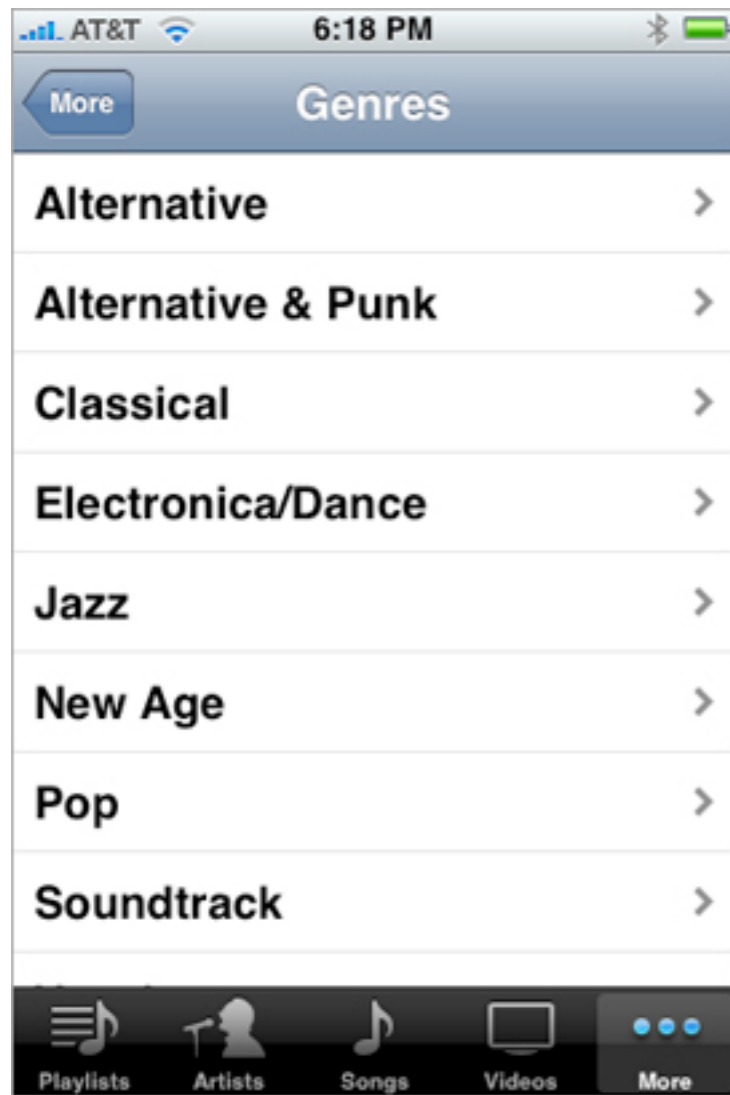
Tables

Table View Reference

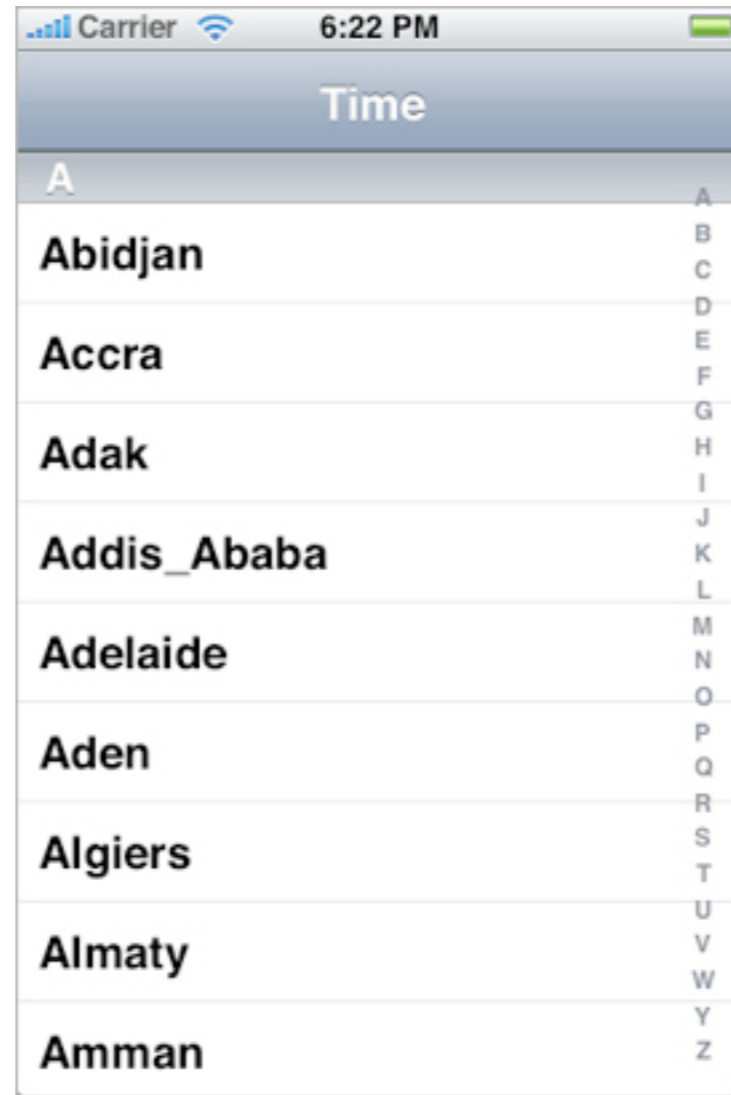
Table View Programming Guide for iOS

Class documentation

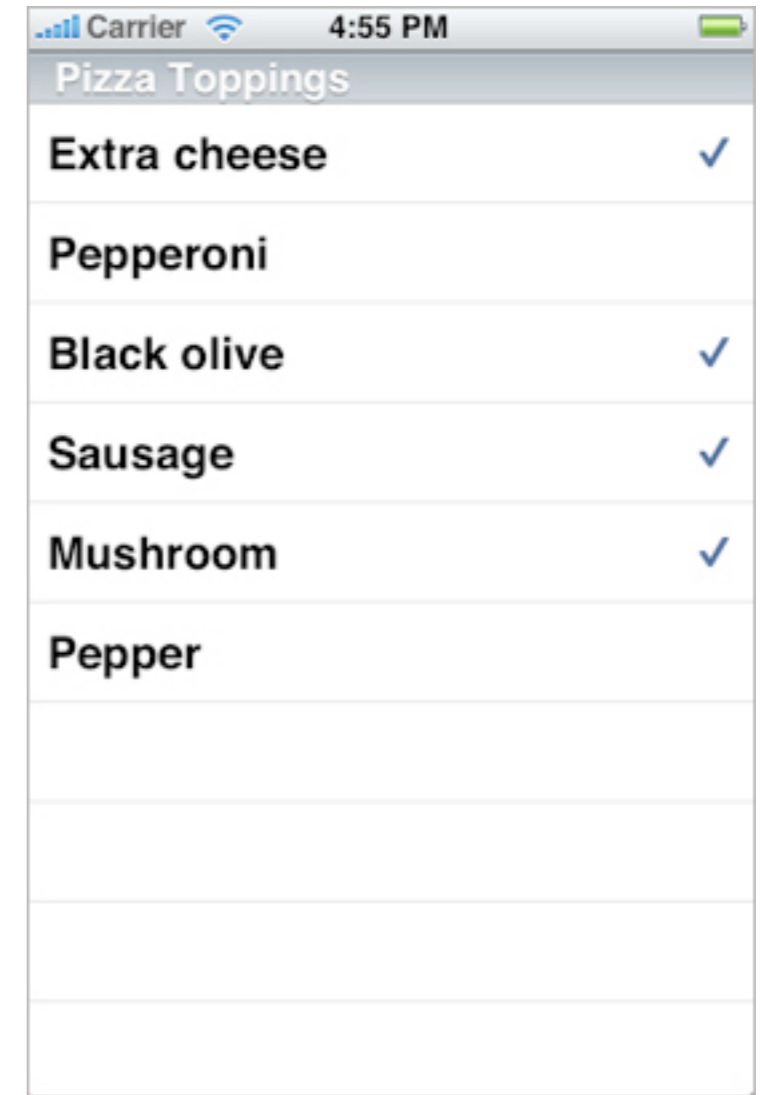
Table View Styles - Plain



Plain

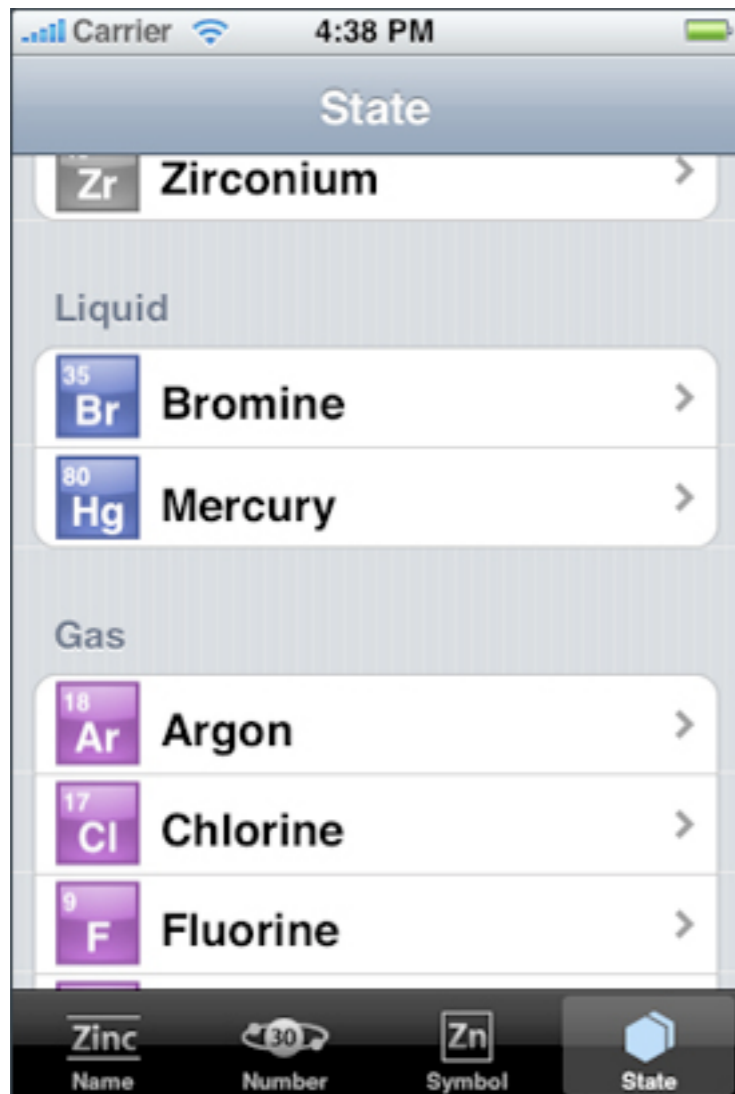


Section Index

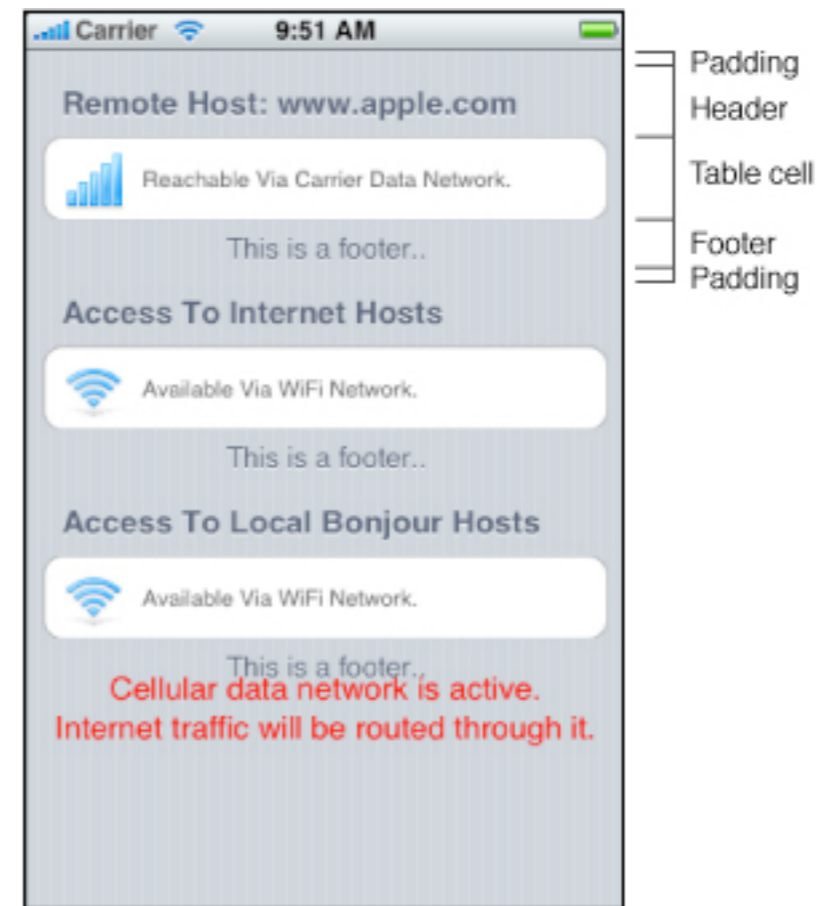


Selection List

Table View Styles - Grouped

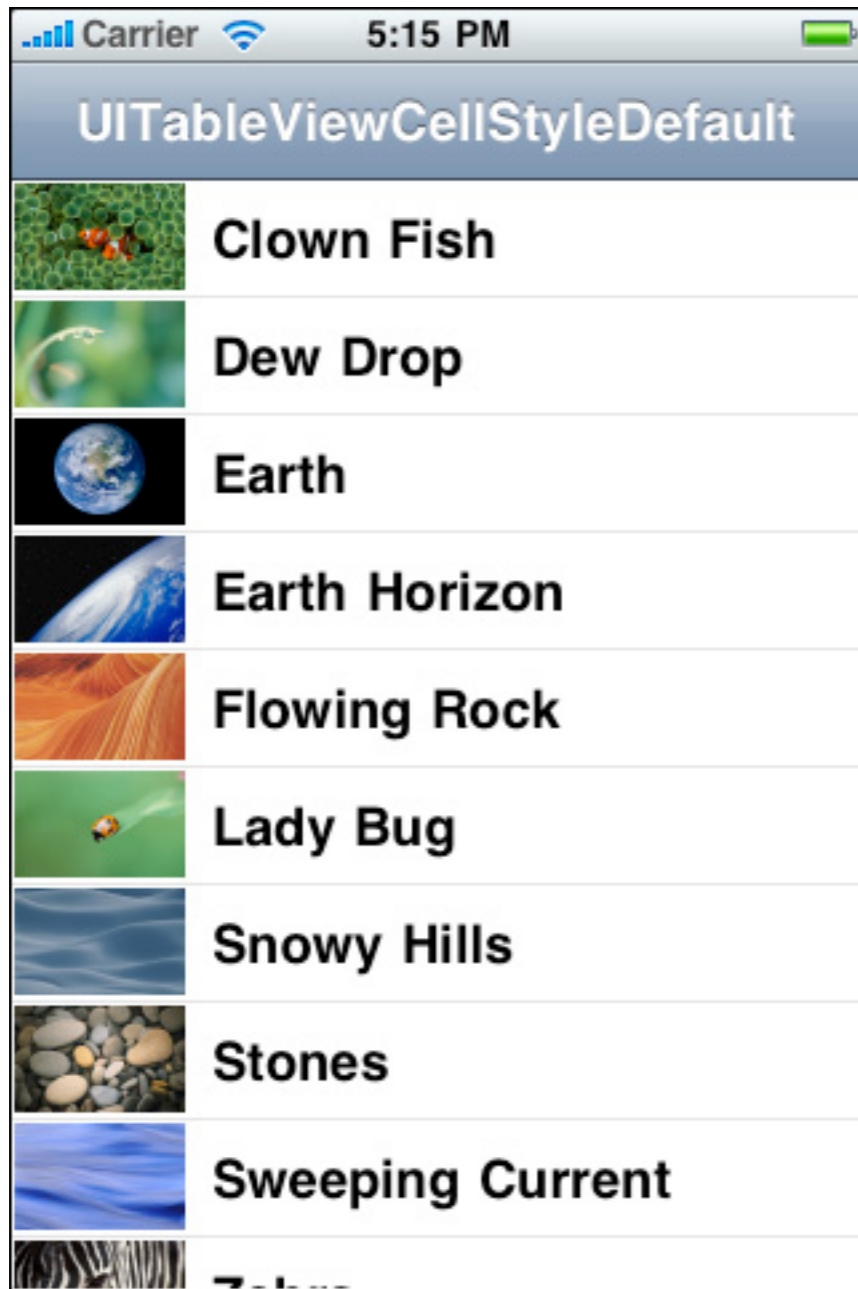


Grouped

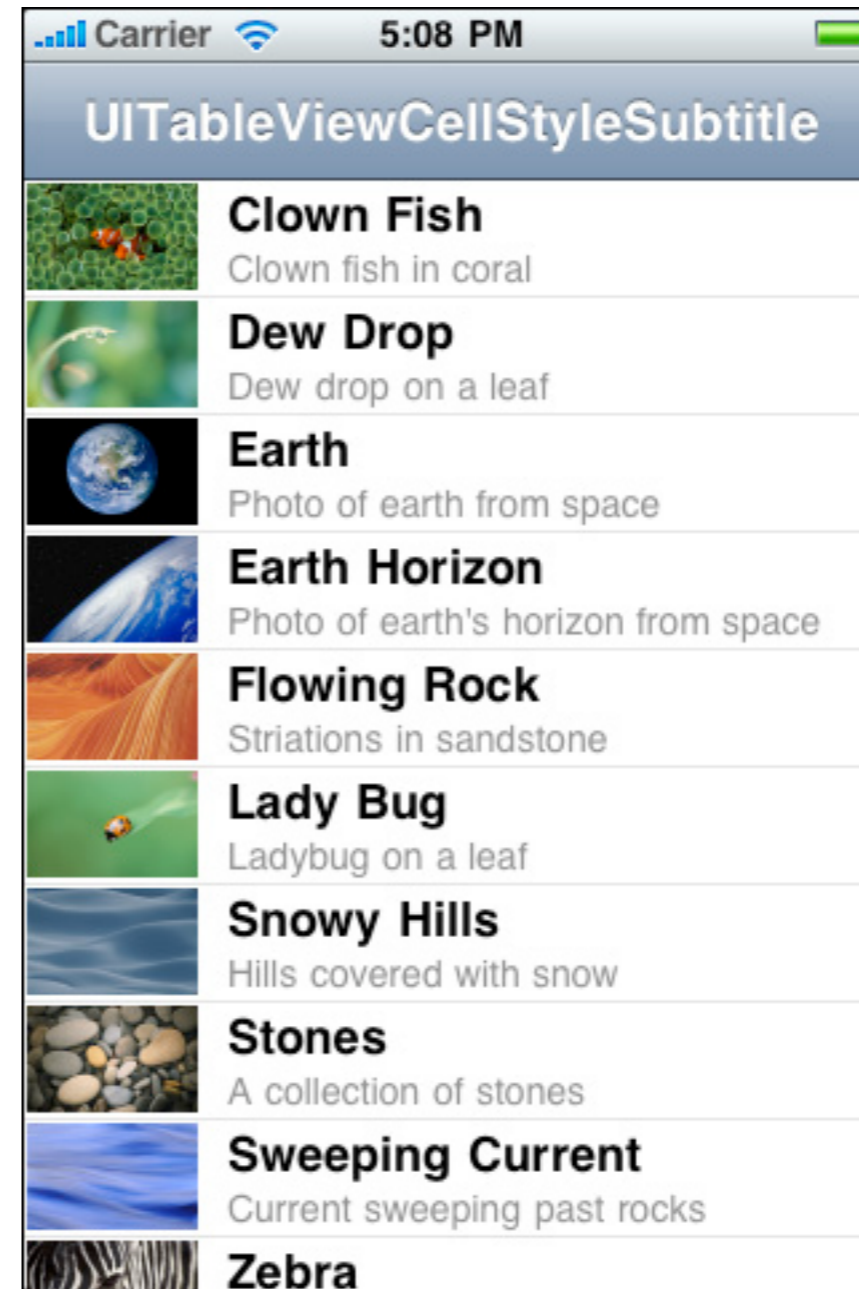


Grouped
With header &
Footer

Cell Styles

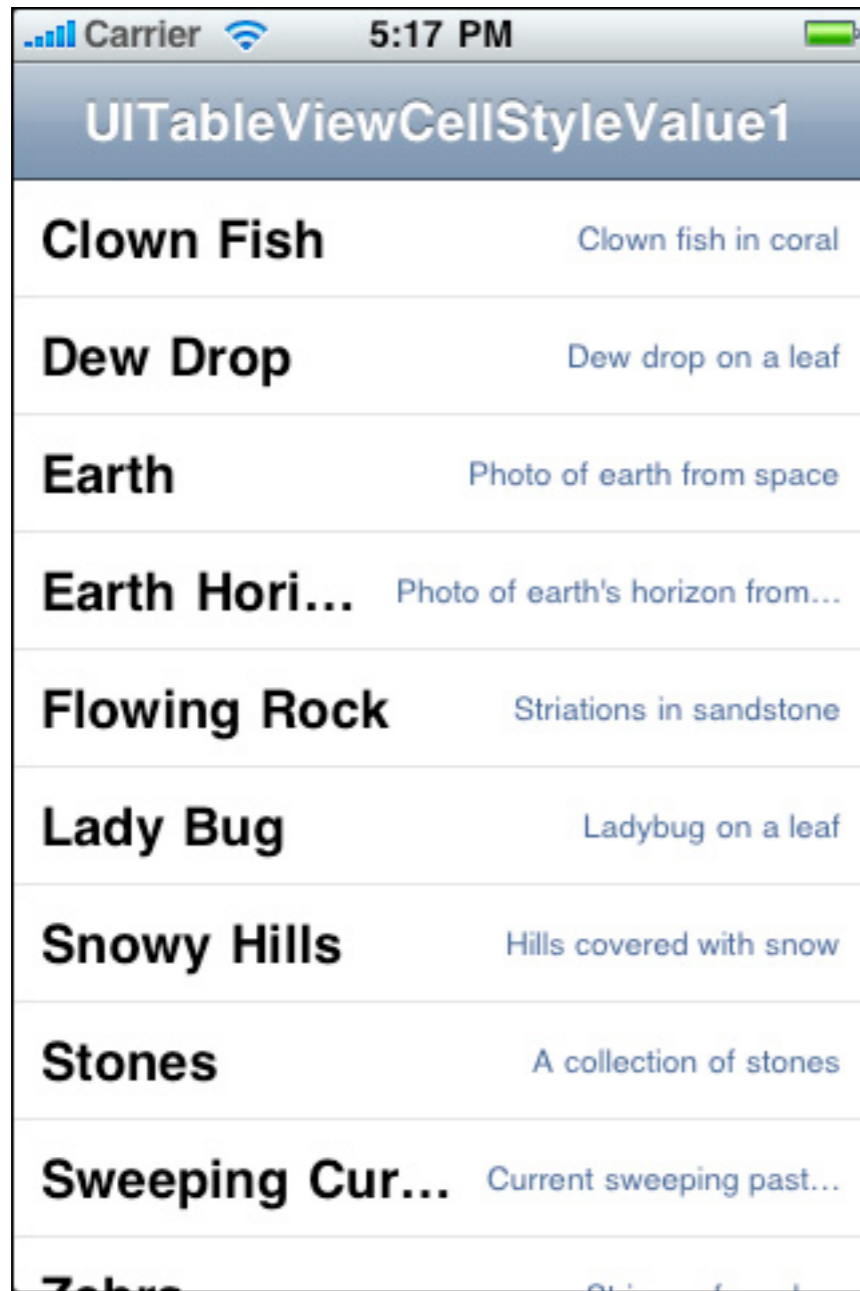


No Subtitle (default)

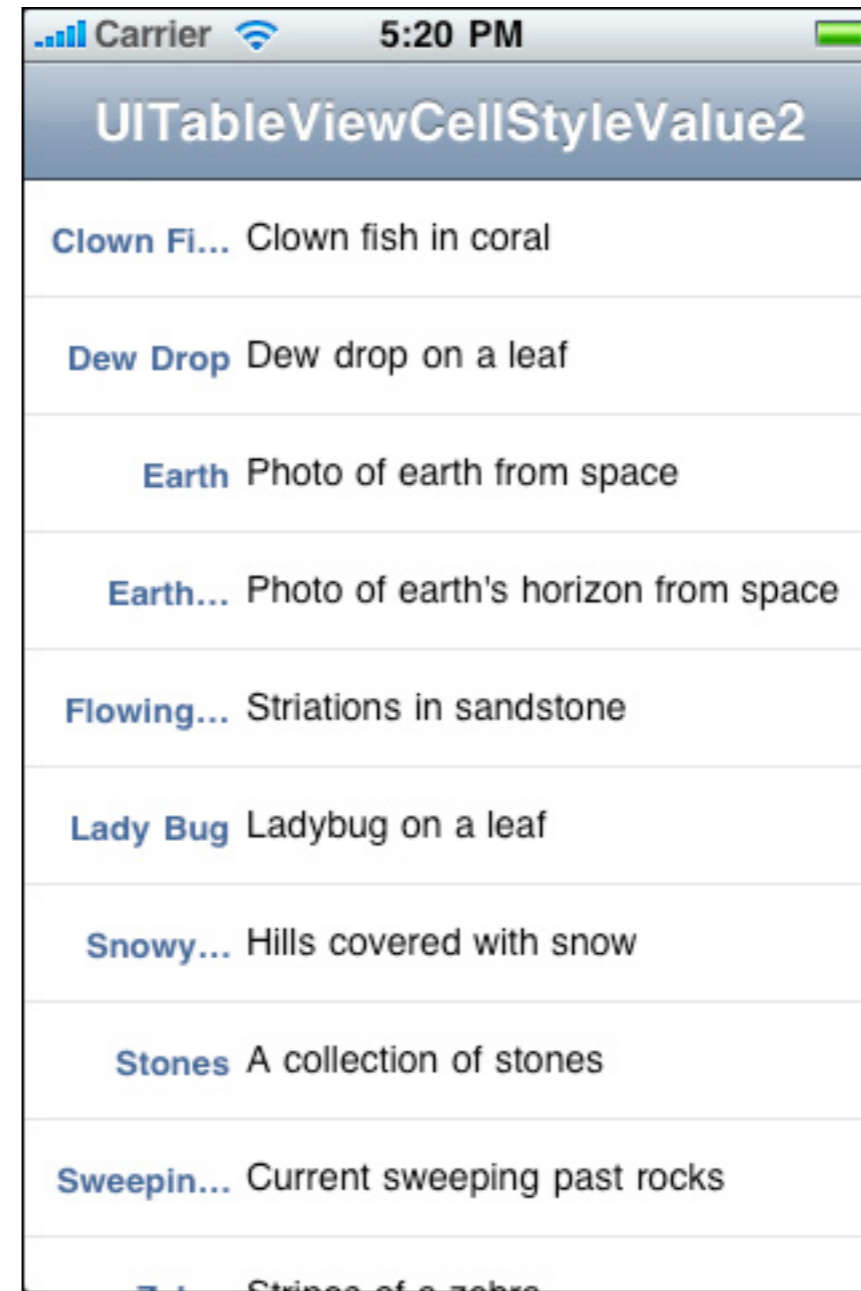


With Subtitle

Cell Styles

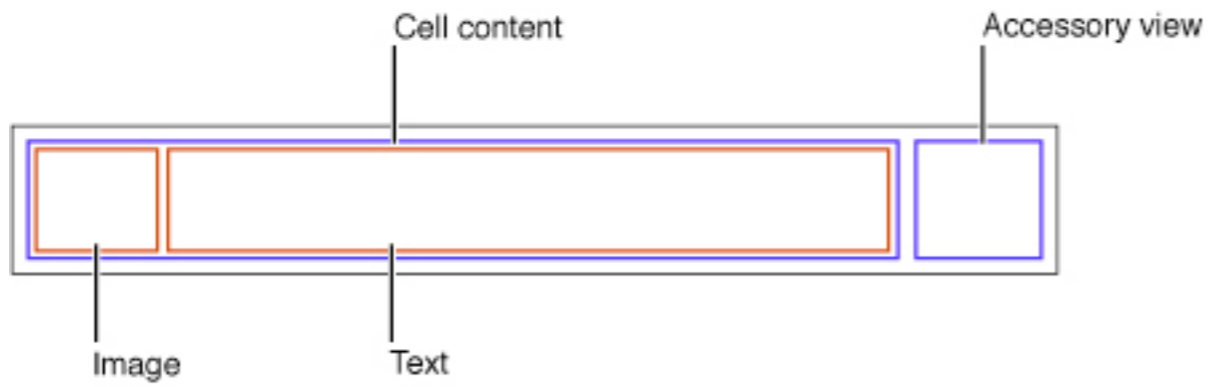
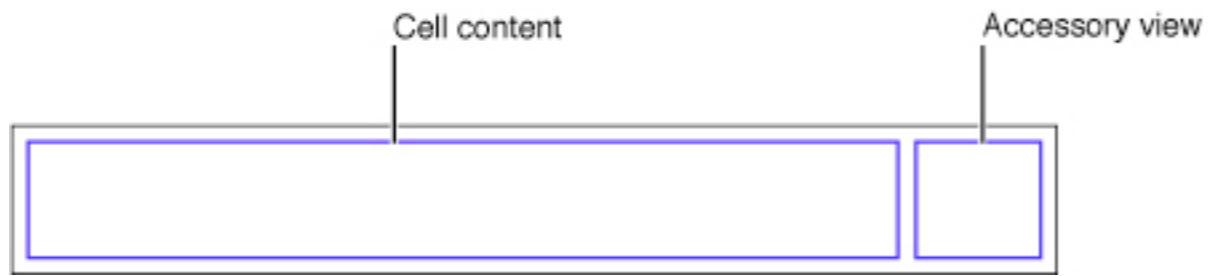


Right-aligned subtitle

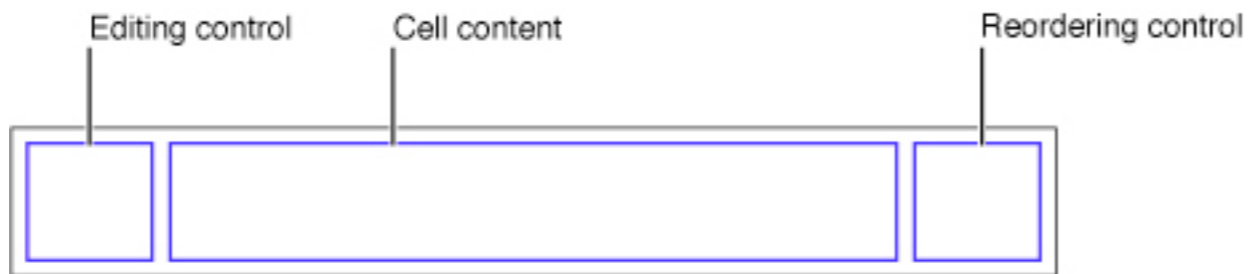


Contacts format

Parts of a cell




With Image

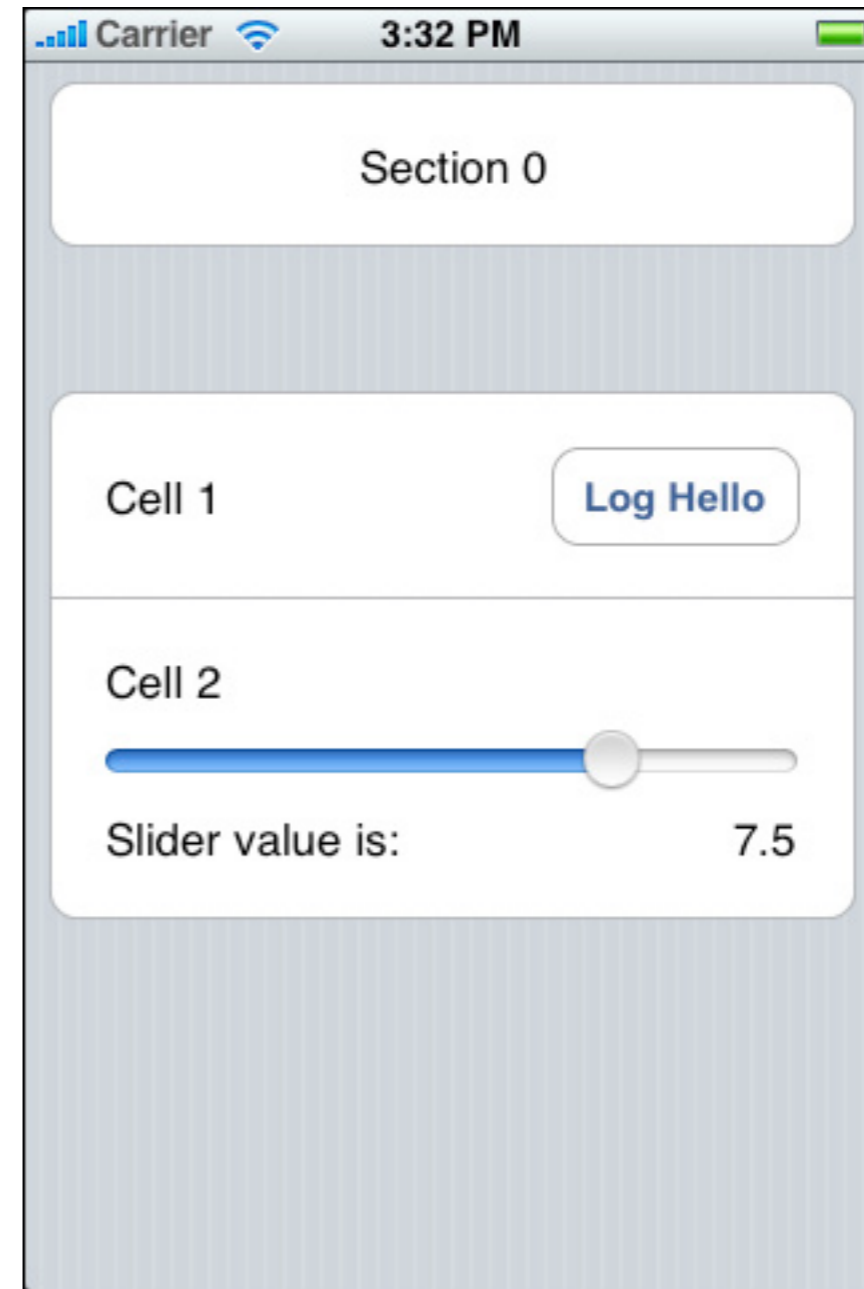
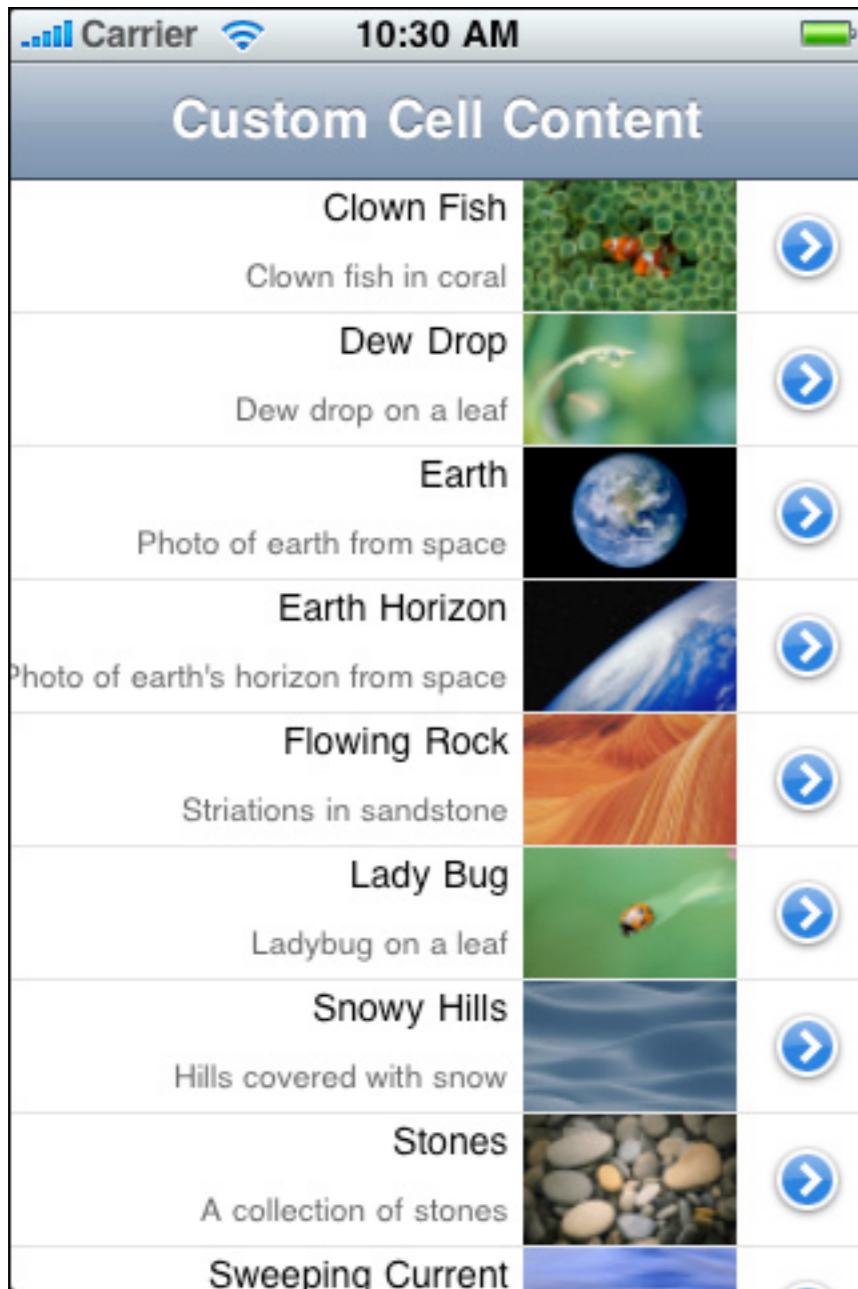


Editing mode

Accessory Views

- > Disclosure indicator - Leads to another table
-  Detail Disclosure button - Leads to detail view
- ✓ Check Mark - appears when user tabs on item

Custom Cells



Performance Issues

Reuse Cells

Layout custom cells once

Opaque subviews

Table View Delegate & Data source

Both required

Data source provides information about the data

Example From textbook

```
@interface Simple_TableViewController : UIViewController
    <UITableViewDelegate, UITableViewDataSource>
{
}

@property (nonatomic, retain) NSArray *listData;
@end
```

```
@implementation Simple_TableViewController
@synthesize listData;
- (void)viewDidLoad {
    NSArray *array = [[NSArray alloc] initWithObjects:@"Sleepy", @"Sneezy",
        @"Bashful", @"Happy", @"Doc", @"Grumpy", @"Dopey", @"Thorin",
        @"Dorin", @"Nori", @"Ori", @"Balin", @"Dwalin", @"Fili", @"Kili",
        @"Oin", @"Gloin", @"Bifur", @"Bofur", @"Bombur", nil];
    self.listData = array;
    [array release];
    [super viewDidLoad];
}
```

Number of rows

```
- (NSInteger) tableView: (UITableView *) tableView  
  numberOfRowsInSection: (NSInteger) section {  
  return [self.listData count];  
}
```

Reusing Cells

```
- (UITableViewCell *)tableView:(UITableView *)tableView
    cellForRowAtIndexPath:(NSIndexPath *)indexPath {

    static NSString *SimpleTableIdentifier = @"SimpleTableIdentifier";

    UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:
        SimpleTableIdentifier];
    if (cell == nil) {
        cell = [[[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault
            reuseIdentifier: SimpleTableIdentifier] autorelease];
    }

    NSUInteger row = [indexPath row];
    cell.textLabel.text = [listData objectAtIndex:row];
}
```