View Controllers
Navigation/Tab/Modal

Lecture 4
Overview

“Cocoa”
- AppKit

“Cocoa Touch”
- UIKit

Foundation

Core Foundation, BSD, …
It’s mostly the same!

- Foundation almost identical: NSObject,NSString,NSArray, etc.

- UIKit very similar to AppKit, but with a different prefix: UIView instead of NSView, for example
UIKit vs. AppKit

- Both use Interface Builder
- On iOS, actions don’t need a sender, e.g. 
  - (IBAction)reload;
- On iOS, controls can send multiple actions
UIKit vs. AppKit

- AppKit — Multiple `NSWindows`, each with a single `contentView`
- UIKit — One `UIWindow`, content managed by `UIViewController`s
UIViewController

- Main method of structuring user interface code
- Each view controller displays one “pane” of the user interface
- Can be put inside specialized view controllers to form more complex UIs
UIViewController

View Controller 1

View Controller 2
UIViewController

• Important methods:
  - `(void)viewDidLoad`
  - `(void)viewDidLoad:(BOOL)animated`
  - `(void)viewWillDisappear:(BOOL)animated`
  - `(BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)orientation`
Specialized View Controllers

- `UITabBarController` implements a “radio” interface with several distinct modes
- `UINavigationController` implements a hierarchy of views, e.g. Contacts or Notes application
UITabBarController

Switches contained view
UITabBarController

Draws tab bar under view
Each view controller can access its tab bar item with \[self tabBarItem\] (includes icon, title and badge value)
UINavigationController

Draws navigation bar with title
UIViewController

“Pushes” view controllers onto the navigation “stack”
塌出按钮以“pop”视图控制器掉出来
UINavigationController

[NavController pushViewController:viewController animated:YES];

[NavController popViewControllerAnimated:YES];
Each view controller can access its navigation item as `[self.navigationItem]` (includes title & buttons)
Modal UIViewController

- [self presentModalViewController:ctrlr animated:YES];
- [self dismissModalViewControllerAnimated:animated:YES];
**UITableViewController**

- Manages lists of information in tables
- Works with **UITableView**
- More about this later
Multiple NIBs and UIViewController

- Good idea to split up your interface into one NIB file per view controller
- Interface Builder makes this easy
Multiple NIBs and UIViewController

The view will automatically load from RootViewController.xib