

# TableViews and Navigation Controllers

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March 28, 2012

# Today

TableViews  
and  
Navigation  
Controllers

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TableViews

Navigation  
Controllers

Customization

- ▶ Table Views
- ▶ Navigation Controllers
- ▶ Customization

# TableViews

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Customization

- ▶ single-column list of items
  - ▶ contact list
  - ▶ music

# MVC

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Customization

- ▶ model: data to be displayed
- ▶ view: cells in table
- ▶ controller: bridge the gap between model and view

# UITableViewDelegate

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Customization

- ▶ how many sections are in the table?
  - ▶ `tableView:numberOfSectionsInTableView:`
- ▶ how many rows are in this section?
  - ▶ `tableView:numberOfRowsInSection:`
- ▶ what does this cell look like?
  - ▶ `tableView:cellForRowAtIndexPath:`

# cellForRowAtIndexPath

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Customization

- ▶ cells are cached and reused for performance
- ▶ `dequeueReusableCellWithIdentifier`: try to retrieve cell from the cache
  - ▶ identifiers allow cache to contain more than one type of cell
  - ▶ if `nil`, nothing in cache, so need to create new cell

# NSIndexPath

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Customization

- ▶ simple container for `section` and `row`
- ▶ does NOT contain cell itself!
  - ▶ instead, provides some way of indexing into the model
  - ▶ `[model objectAtIndex:indexPath.row];`

# Cell Properties

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Customization

- ▶ `cell.textLabel: UILabel` for text displayed in cell
- ▶ `cell.accessoryType: image` at right of row, describes cell behavior
  - ▶ DisclosureIndicator
  - ▶ DetailDisclosureButton
  - ▶ Checkmark



# Creating a TableView

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▶ TableViewExample

# UINavigationController

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Customization

- ▶ maintains a stack of view controllers
- ▶ `pushViewController:animated:` push a new controller onto the stack and switch to it
- ▶ `popViewControllerAnimated:` pop a view controller off the stack and switch to parent

# UIViewController Properties

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Customization

- ▶ `self.navigationController`: navigation controller managing the current stack
- ▶ `self.navigationItem`: navigation bar for current view controller
  - ▶ `title`: text in navigation bar
  - ▶ `leftBarButton`, `rightBarButton`: buttons on navigation bar

# Pushing a new ViewController

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Customization

- ▶ from Interface Builder
  - ▶ create outlet for object
  - ▶ add a generic `View Controller` object
  - ▶ set class in Identity Inspector
  - ▶ set nib name in Attributes Inspector
  - ▶ connect `View Controller` to `File's Owner`

# Pushing a new ViewController

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Customization

- ▶ from Objective-C
  - ▶ `alloc` new instance of view controller
  - ▶ supply nib name in `initWithNibName:bundle:`

# Navigation Controllers

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Customization

▶ `FruitTableViewController`

# Drilling Down

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Customization

▶ `MLBTableViewController`

# Built-In Cell Styles

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Customization

- ▶ **constructor for cells is `initWithStyle:`**
  - ▶ `UITableViewCellStyleDefault`
  - ▶ `UITableViewCellStyleSubtitle`
  - ▶ `UITableViewCellStyleValue1`
  - ▶ `UITableViewCellStyleValue2`



# Built-In Cell Styles

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▶ CellStylesExample

# Custom Cells

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Customization

- ▶ subviews of any type can be created programmatically
- ▶ nib can define a `UITableViewCell`
  - ▶ New File > User Interface > View
  - ▶ set File's Owner to relevant `UITableViewController`
  - ▶ Connect nib File's Owner to `UITableViewCell`

# Custom Cells

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▶ CustomCellsExample

# Editable TableViews

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Customization

- ▶ `self.editItemButton`: **built-in button handling delete/move**
- ▶ `canEditRowAtIndexPath`: **whether a given row is editable**
- ▶ `canMoveRowAtIndexPath`: **whether a given row is movable**

# Editable TableViews

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Customization

- ▶ `commitEditingStyle:forRowAtIndexPath:` **edit** operation performed on given row
- ▶ `moveRowAtIndexPath:toIndexPath:` **move** operation performed on rows
- ▶ update both model and view!

# Editable TableViews

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Customization

- ▶ **let's make a TODO app!**
  - ▶ <http://www.intomobile.com/2012/02/24/clear-iphone-nine-days-350000-downloads/>
- ▶ `EditableTableViewController`

# Required Reading

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Customization

- ▶ **just kidding, but not really**
- ▶ `http://developer.apple.com/library/ios/documentation/userexperience/conceptual/TableView\_iPhone/AboutTableViewsiPhone/AboutTableViewsiPhone.html`