CS 326
UITextFields

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UITextField

• Like UILabel but editable
• Current contents in text property.
• When tapped
  – text field becomes "first responder"
  – pulls up keyboard
  – keyboard goes away when you tell text field to resignFirstResponder()
• Make sure your text field isn't hidden by keyboard!
  – scroll it into view
  – or just keep it near the top of the window...

UITextField

• UITextFieldDelegate
  – textFieldShouldReturn(sender:) -> bool
    • returns true if you want normal processing to happen.
    • good place to call resignFirstResponder()
    • eg: target/action hooked up in Storyboard
  – See docs for other methods
• Lots of properties (check out in Storyboard)
  – type of keyboard
  – name of return key
  – auto-correction, capitalization
  – ...
UITabBarController

UISplitViewController

UISplitViewController

UITabBarController
**UINavigationController**

- `UITabBarController`
- `UISplitViewController`
- `UINavigationController`

**Show” Segue to Another MVC**

- Creates a new MVC every time
- Title is from new controller
- Back button name is from previous

**Back to Previous**

- MVCs come and go
- Store data in models to keep around!

**Accessing sub-MVCs and super-MVCs**

- UIViewController
  - var `viewControllers` : `[UIViewController]`?
    - tab bar: `[0]` is furthest left, `[last]` is furthest right
    - split view: `[0]` is master, `[1]` is detail
    - navigation: `[0]` is top of stack, `[last]` is bottom of stack
- Can always get enclosing controller
  - var `tabBarController` : `UITabBarController`?
  - var `splitViewController` : `UISplitViewController`?
  - var `navigationController` : `UINavigationController`?
  - if let `detail` = `splitViewController`.viewControllers[1] {...}
Segues

- **Kinds**
  - Show (push in a Navigation Controller, else Modal)
  - Show Detail (show in Detail of a Split View or push in a Navigation Controller)
  - Modal (take over the entire screen)
  - Popover (appears in a little popover window)

- **Segues always** create a new instance of an MVC
  - Even the Detail of a Split View will get replaced with a new instance of that MVC every time you switch to it.

EmotionsViewController

```swift
func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    let dest = segue.destination
    if let faceViewController = dest as? FaceViewController,
       let identifier = segue.identifier,
       let expression = emotionalFaces[identifier] {
        faceViewController.facialExpression = expression
        faceViewController.navigationItem.title = (sender as? UIButton)?.currentTitle
    }
}
```

private let emotionalFaces = [
    "Happy": FacialExpression(eyes: .open, mouth: .smile), ...
]
func prepare(for segue: UIStoryboardSegue, sender: Any?) {  
    var dest = segue.destination  
    if let navigationController = dest as? UINavigationController {  
        dest = navigationController.visibleViewController ?? dest  
    }  
    if let faceViewController = dest as? FaceViewController,  
        let identifier = segue.identifier,  
        let expression = emotionalFaces[identifier] {  
        faceViewController.facialExpression = expression  
        faceViewController.navigationItem.title = (sender as? UIButton)?.currentTitle  
    }  
}  

private let emotionalFaces = [
    "Happy": FacialExpression(eyes: .open, mouth: .smile), ...
]
View Controller Lifecycle

• Creation and Initialization
  – instantiated from storyboard
  – segue preparation in triggering controller
  – outlets are set
  – `func viewDidLoad() {
      super.viewDidLoad()
      // your init here...
    }`
• And then layout, appearing, etc.

Typical Lifecycle

View Controller Lifecycle

• View Events
  – `func viewWillAppear(_ animated: Bool) {
      super.viewWillAppear(animated)
      // your code here...
    }`
  – `func viewWillDisappear(_ animated: Bool)
  – `func viewDidAppear(_ animated: Bool)
  – `func viewDidDisappear(_ animated: Bool)`
View Controller Lifecycle

• Other Events
  – `func viewWillLayoutSubviews()`
    (... then autolayout happens, then ...)
    `func viewDidLayoutSubviews()`
  – If memory gets low, you might get ...
    `func didReceiveMemoryWarning()`

UINavigationController

rootViewController Outlet
"Show" Segue to Another MVC

- Creates a new MVC every time you do a Show Segue

Back to Previous

- MVCs come and go
- Models stick around!

Back To Previous

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- Title is from new controller
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