

UIKit

part 2

Agenda

- Page View Controller
- Text Field and Search Bar delegates
- Navigation Controller
- Tab Bar Controller
- Scroll View
- Collection View

Page View Controller

Setup

```
class PageViewController: UIPageViewController {
    override init(transitionStyle style: UIPageViewControllerTransitionStyle, navigationOrientation:
UIPageViewControllerNavigationOrientation, options: [String : Any]? = nil) {
        super.init(transitionStyle: .scroll, navigationOrientation: navigationOrientation, options: options)
    }

    required init?(coder: NSCoder) {
        super.init(coder: coder)
    }

    override func viewDidLoad() {
        super.viewDidLoad()

        if let firstViewController = orderedViewControllers.first {
            setViewControllers([firstViewController], direction: .forward, animated: true, completion: nil)
        }
    }

    private(set) lazy var orderedViewControllers: [UIViewController] = {
        return [self.newViewController()]
    }()

    private func newViewController() -> UIViewController {
        return UIViewController()
    }
}
```

Before and After

```
extension PageViewController: UIPageViewControllerDataSource, UIPageViewControllerDelegate {
    func pageViewController(_ pageViewController: UIPageViewController, viewControllerBefore viewController: UIViewController) -> UIViewController? {
        guard let viewControllerIndex = orderedViewControllers.index(of: viewController) else {
            return nil
        }

        let previousIndex = viewControllerIndex - 1

        guard previousIndex >= 0 else {
            return nil
        }

        guard orderedViewControllers.count > previousIndex else {
            return nil
        }

        return orderedViewControllers[previousIndex]
    }

    func pageViewController(_ pageViewController: UIPageViewController, viewControllerAfter viewController: UIViewController) -> UIViewController? {
        guard let viewControllerIndex = orderedViewControllers.index(of: viewController) else {
            return nil
        }

        let nextIndex = viewControllerIndex + 1
        let orderedViewControllersCount = orderedViewControllers.count

        guard orderedViewControllersCount != nextIndex else {
            return nil
        }

        guard orderedViewControllersCount > nextIndex else {
            return nil
        }

        return orderedViewControllers[nextIndex]
    }
}
```

Remember to set delegate and data source

Dots

```
func setupPageControl() {
    pageControl = UIPageControl()
    pageControl.translatesAutoresizingMaskIntoConstraints = false
    view.addSubview(pageControl)

    pageControl.centerXAnchor.constraint(equalTo: view.centerXAnchor).isActive = true
    pageControl.bottomAnchor.constraint(equalTo: view.bottomAnchor, constant: -2).isActive = true
}

func configurePageControl() {

    pageControl.numberOfPages = orderedViewControllers.count
    pageControl.currentPage = 0
    pageControl.tintColor = Value.darkColor
    pageControl.pageIndicatorTintColor = Value.darkColor.withAlphaComponent(0.2)
    pageControl.currentPageIndicatorTintColor = Value.darkColor
}
```

```
func pageViewController(_ pageViewController: UIPageViewController, didFinishAnimating finished: Bool,
previousViewControllers: [UIViewController], transitionCompleted completed: Bool) {
    let pageContentViewController = pageViewController.viewControllers![0]
    self.pageControl.currentPage = orderedViewControllers.index(of: pageContentViewController)!
}
```

TextField Delegate

Functions

```
func textFieldDidEndEditing(_ textField: UITextField) {}  
func textFieldDidBeginEditing(_ textField: UITextField) {}  
func textFieldShouldClear(_ textField: UITextField) -> Bool {return true}  
func textFieldShouldReturn(_ textField: UITextField) -> Bool {return false}  
func textFieldShouldEndEditing(_ textField: UITextField) -> Bool {return true}  
func textFieldShouldBeginEditing(_ textField: UITextField) -> Bool {return false}  
func textFieldDidEndEditing(_ textField: UITextField, reason: UITextFieldDidEndEditingReason) {print(reason)}  
func textField(_ textField: UITextField, shouldChangeCharactersIn range: NSRange, replacementString string: String) -> Bool  
{return false}
```

Remember to set delegate

SearchBar Delegate

Functions

```
61
62 searchBar
63 [M] searchBar(_ searchBar: UISearchBar, textDidChange searchText: String)
64 [M] searchBar(_ searchBar: UISearchBar, shouldChangeTextIn range: NSRange, replacementText text: String) -> Bool
65 [M] searchBarTextDidEndEditing(_ searchBar: UISearchBar)
66 [M] searchBarCancelButtonClicked(_ searchBar: UISearchBar)
67 [M] searchBarSearchButtonClicked(_ searchBar: UISearchBar)
68 [M] searchBarTextDidBeginEditing(_ searchBar: UISearchBar)
69 [M] searchBarBookmarkButtonClicked(_ searchBar: UISearchBar)
70 [M] searchBarResultsListButtonClicked(_ searchBar: UISearchBar)
71
72 Tells the delegate that the user changed the search text.
73
74
75
```

Expected declaration

Remember to set delegate

Touch Outside

```
override func viewDidLoad() {  
    super.viewDidLoad()  
  
    let tap: UITapGestureRecognizer = UITapGestureRecognizer(target: self, action: "dismissKeyboard")  
    view.addGestureRecognizer(tap)  
}  
  
func dismissKeyboard() {  
    view.endEditing(true)  
}
```

Navigation Controller

“[https://developer.apple.com/documentation/
uikit/uINavigationController](https://developer.apple.com/documentation/uikit/uINavigationController)”

Tab Bar Controller

“[https://developer.apple.com/documentation/
uikit/uitabBarController](https://developer.apple.com/documentation/uikit/uitabBarController)”

ScrollView

Vertical Scroll Image Zooming

<https://www.raywenderlich.com/159481/uiscrollview-tutorial-getting-started>

CollectionView

Coming soon

“Type a quote here.”

–Johnny Appleseed