W2D5

- TextInput
- UITextField
- UITextView
- TextInput Delegates
- Customizing TextInput Views
- UIWebView, WKWebView, SFSafariViewController
- Custom Drawing With Core Graphics & UIBezierPath

Text Input

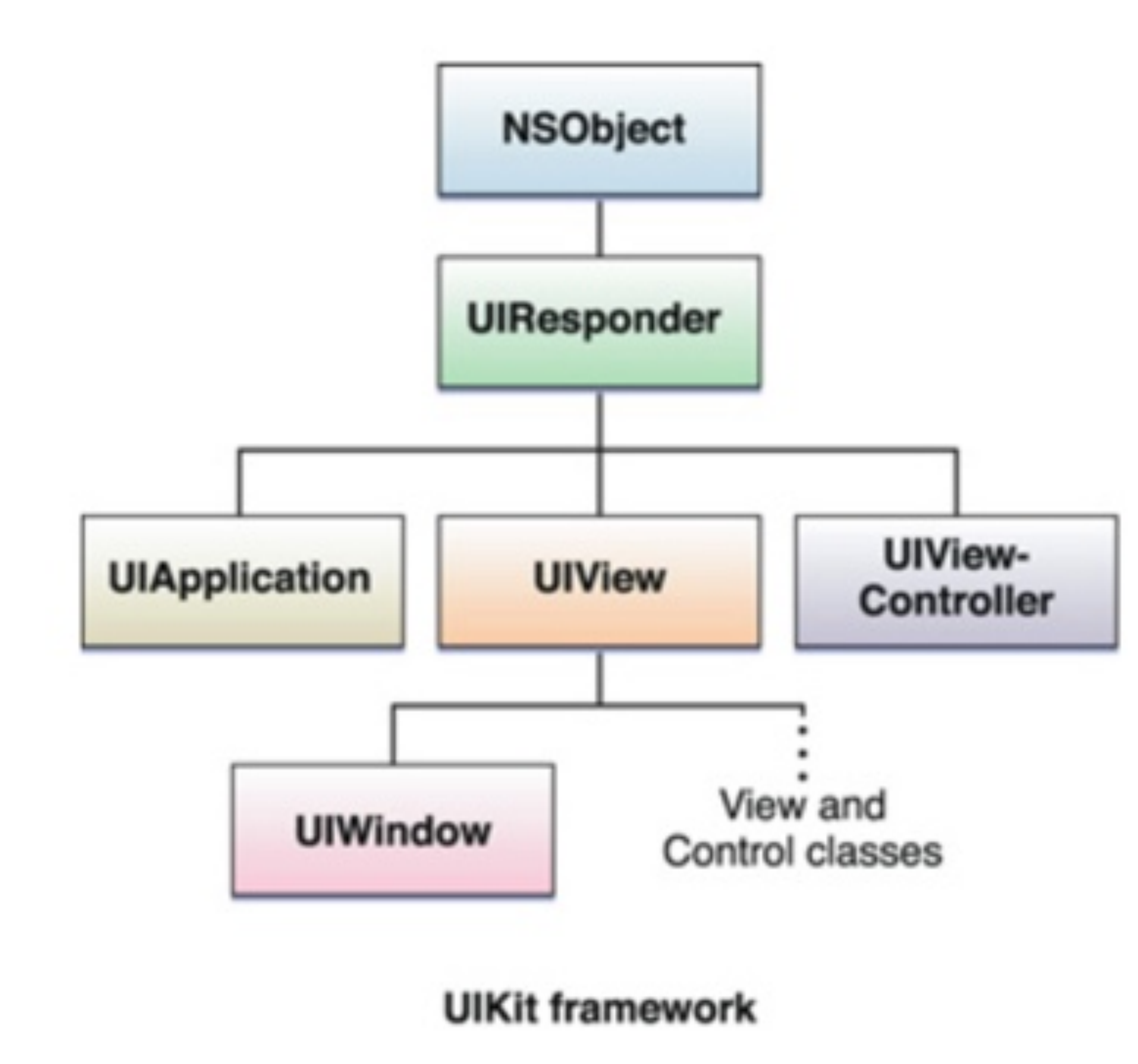
UIKit offers 2 ways to input text

1. UITextField: single lines
2. UITextView: multiple lines

- `UITextView` inherits from `UIScrollView`.
- Delegates are important for interacting with text input controls.
- These inputs conform to the `UITextInputTraits` protocol which allows you to customize the keyboard type.

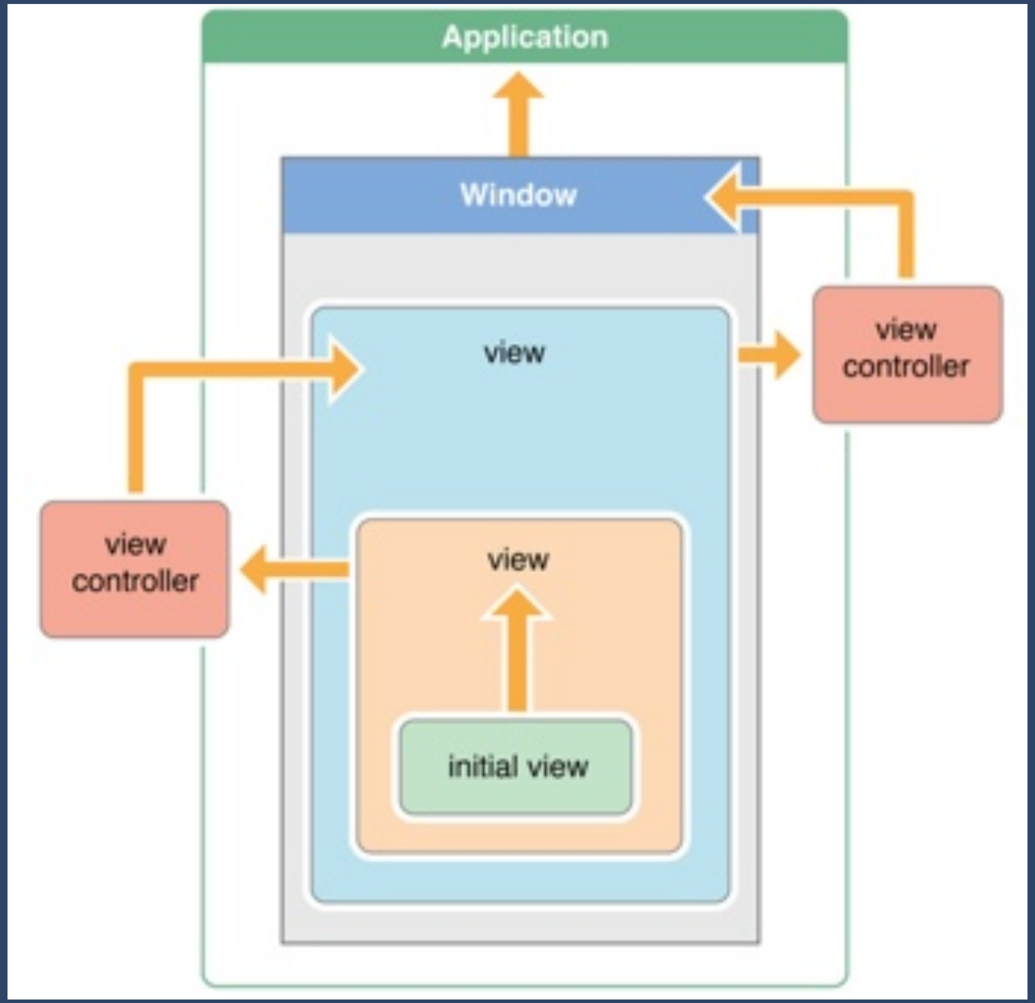
UIResponder

- Both UITextField & UITextView inherit from UIResponder
- Let's talk about responders in iOS.
- All responder objects inherit from the class UIResponder
- Any instance that inherits from UIResponder can handle events, like, touch events, motion events, presses (from accessories).
- Visible elements of an app are almost always responders. e.g. all subclasses of UIViews, controls (like UIButton).
- ViewControllers, the UIApplication are responders.
- The AppDelegate is a also a subclass of UIResponder.


NSObject
UIResponder
UIApplication
UIView
UIView-Controller
UIWindow
View and Control classes
UIKit framework

Responder Chain

- If a responder cannot handle an event it *automatically* forwards it to the "next responder" in a linked series called the **responder chain**.



Responder Chain

- The **Responder Chain** will always mark one responder as the `First Responder` and one as the `Next Responder`.
- The responder chain allows flexibility in handling events. (How so?).
- Events travel up the chain starting at the leaf most responder.
- If nothing overrides the event in question it is forwarded to the next responder in the chain until the final responder in the chain the UIApplication (unless we override UIApplication (don't)).
- If UIApplication delegate doesn't handle it then the event is just discarded.

userInteractionEnabled

- *userInteractionEnabled* is a property on UIView (or subclasses) that determines whether a view receives interactions. By default this is set to `YES` for `UIViews`.
- But most subclasses of UIView (like `UIImageView`, `UILabel`, etc.) set *userInteractionEnabled* to `NO` by default.
- So, if you want a `UIImageView` to handle a touch event you must always set the *userInteractionEnabled* to `YES`. (This is a common beginner gotcha).

UIWebView / WKWebView

- `UIWebView` is a crippled version of Safari that you ~~can~~ just drop into your view controller.
- Apple says "In apps that run in iOS 8 and later, use the `WKWebView` class instead of using `UIWebView`." It is marked as deprecated in IB.
- `WKWebView` is much faster and more flexible. As of Xcode 9.0.1 it has IB support! 🙌
- You can use webviews for displaying web pages (obviously!)
- You can also load web content from other sources, like a data base, or network endpoint.
- You can interact with web content using javascript and do things like make content editable using *contentEditable*.
- So, you can make things like a blog editor from a webview.

SFSafariViewController

- For just displaying web content in your app prefer `SFSafariViewController`.
- `SFSafariViewController` "includes Safari features such as Reader, AutoFill, Fraudulent Website Detection, and content blocking. It shares cookies and other website data with Safari".
- "If your app lets users view websites from anywhere on the Internet, use the `SFSafariViewController` class. If your app customizes, interacts with, or controls the display of web content, use the WKWebView class."
- Many apps now use `SFSafariViewController`, for instance Twitter.