Reading Assignment III:

The Rest of Swift

Objective

Time to finish off your reading assignments for the quarter by reading the rest of the Swift Programming Language document and making one more pass through reading the Swift API Guidelines now that you'll be familiar with all of the Swift language.

Materials

- The reading in this assignment comes from two on-line documents: the Swift Programming Language and the Swift API Guidelines.

Sections to Read

Read the sections described below in the [Swift Programming Language](#). An attempt has been made to capture all the chapters which were in gray in previous assignments (or chapters that were not even mentioned in previous assignments). But generally, as you read through the document, you should now read anything that you have not already read.

In this document yellow means "not that important" and red means "very important."

The Swift Programming Language document is a reference document. You can always go back to it and read up on something. As long as you know some topic exists (e.g. optional chaining, subscripts or generics) and you have a general idea what it's about, you will know to revisit this document when you are confronted with it or an occasion to use that feature arises.

The Basics

Error Handling

Subscripts

Subscript Syntax
Subscript Options

Initialization

Class Inheritance and Initialization
Failable Initializers
Required Initializers

Deinitialization

This is almost never needed, but you can read up on it for completeness' sake.

Automatic Reference Counting

Don't freak out about this too much. Reference cycles are not that common of an occurrence. However, understanding how to keep a closure from having a strong reference to something that has a strong reference to it is important, so …

Strong Reference Cycles for Closures

Optional Chaining

Entire Chapter

Error Handling

We will not be needing to handle errors like this for a couple of more assignments, so read through this, absorb as much as you can, but be prepared to read through it again for Programming Assignment 4 and 5.

Type Casting

Entire Chapter

Nested Types

Entire Chapter

Extensions

Don't go crazy with this! It's a cool feature, but it can be abused. Remember that readability of your code is most important. If you add too many weird extensions or extend something in a way that is non-intuitive, you will lose readers of your code.

Protocols

Entire Chapter

This is very important. It will be covered and demoed in lecture. Read this chapter carefully.

Generics

Entire Chapter

Access Control

Entire Chapter. We will not be creating our own frameworks this quarter, so you will never use `public`, but again, it's good to know about. However, you must always use `private` appropriately in this course.

Advanced Operators

Entire Chapter

Swift API Guidelines

You should have already read the Swift API Guidelines document at least twice over. After you've done all of the above reading, go through and read the guidelines document one more time. Now that you have been exposed to all of Swift, this document should start making a lot more sense to you.

Be sure to click everywhere that it says "MORE DETAIL".