

What is Swift?

<https://docs.swift.org/swift-book/LanguageGuide/TheBasics.html>
<https://developer.apple.com/swift/>

- Programming language for Apple products
- Type-safe language
- Static & Dynamic Dispatch whereas ObjC only Dynamic Dispatch
- Tuples and multiple return values
- Generics
- Structs that support methods, extensions, and protocols
- Higher order functions, e.g., map and filter
- Advanced **control flow** with `do`, `guard`, `defer`, and `repeat` keywords
- Enums can have payloads and support pattern matching

Swift 5.7/5.6 new features

<https://www.hackingwithswift.com/swift/5.7>
<https://github.com/twostraws/whats-new-in-swift-5-6>

OOPs Concept

<https://medium.com/swift-india/oops-in-swift-998738407423>

State of an iOS app

<https://www.techrepublic.com/blog/software-engineer/understand-the-states-and-transitions-of-a-n-ios-app/> (Quick Rev.)
<https://medium.com/@chinthaka01/the-execution-states-of-an-ios-application-84e117132e27>

App/VC/Lifecycle for Swift / Swift UI

<https://medium.com/@ansujain/ios-application-life-cycle-d517a3c44e7e>
<https://manasaprema04.medium.com/application-life-cycle-in-ios-f7365d8c1636>
<https://bradbambara.wordpress.com/2015/01/18/object-life-cycle-uiview/>
<https://medium.com/swlh/ios-app-lifecycle-explained-4e2f9d2370ab>

Functions

<https://code.tutsplus.com/tutorials/swift-from-scratch-function-parameters-types-and-nesting--cms-23056>

Optionals in Swift:

<https://medium.com/@agoiabeladeyemi/optionals-in-swift-2b141f12f870>

Completion Handler:

<https://grokswift.com/completion-handler-faqs/>

Closure:

<https://medium.com/@abhimuralidharan/functional-swift-all-about-closures-310bc8af31dd>

Escaping and Non-Escaping Closure:

<https://medium.com/swiftcommunity/what-do-mean-escaping-and-nonescaping-closures-in-swift-d404d721f39d>

Capture List:

<https://www.swiftbysundell.com/articles/swifts-closure-capturing-mechanics/>

<https://blog.bobthedeveloper.io/swift-capture-list-in-closures-e28282c71b95>

Properties:

<https://medium.com/@abhimuralidharan/all-about-properties-in-swift-d618481b1cc1>

Constants

<https://medium.com/swift-india/defining-global-constants-in-swift-a80d9e5cbd42>

Structs and Classes in swift

<https://docs.swift.org/swift-book/LanguageGuide/ClassesAndStructures.html>

https://medium.com/@nitingeorge_39047/copy-on-write-in-swift-b44949436e4f

<https://stackoverflow.com/questions/24232799/why-choose-struct-over-class>

Protocol vs Class

<https://www.hackingwithswift.com/example-code/language/whats-the-difference-between-a-protocol-and-a-class>

Enum

<https://abhimuralidharan.medium.com/enums-in-swift-9d792b728835>

Access Level:

<https://medium.com/@abhimuralidharan/swift-3-0-1-access-control-9e71d641a56c>

Final in Swift/Dynamic Dispatch:

<https://developer.apple.com/swift/blog/?id=27>

<https://stackoverflow.com/questions/46049783/what-is-the-difference-between-final-class-and-class>

Inline/Static/Dynamic/Message Dispatch in Swift

<https://medium.com/flawless-app-stories/static-vs-dynamic-dispatch-in-swift-a-decisive-choice-ce1e872d>

https://medium.com/@nitingeorge_39047/swift-performance-dynamic-dispatch-bcbc71fda181

Memory Management in iOS (Read each word and hyperlink)

<https://docs.swift.org/swift-book/LanguageGuide/AutomaticReferenceCounting.html>

<https://heartbeat.fritz.ai/memory-management-in-swift-heaps-stacks-baa755abe16a>

<https://swiftrocks.com/memory-management-and-performance-of-value-types>

<https://medium.com/flawless-app-stories/unowned-vs-weak-614ac71ac516>

<https://developer.apple.com/videos/play/wwdc2015/409/?time=1076>

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<https://cocoacasts.com/swift-and-cocoa-fundamentals-threads-queues-and-concurrency>

<https://www.swiftbysundell.com/articles/task-based-concurrency-in-swift/>

<https://www.viget.com/articles/concurrency-multithreading-in-ios/>

GCD in Swift

<https://www.appcoda.com/grand-central-dispatch/>

<https://www.oreilly.com/library/view/high-performance-ios/9781491910993/ch04.html>

<https://ali-akhtar.medium.com/concurrency-in-swift-grand-central-dispatch-part-1-945ff05e8863>

Dispatch Group

<https://medium.com/swift-india/parallel-programming-with-swift-part-2-4-46a3c6262359>

<https://medium.com/swift2go/using-dispatch-group-semaphore-to-group-ios-async-tasks-alfian-osari-81335fa6e92e>

<https://www.raywenderlich.com/5371-grand-central-dispatch-tutorial-for-swift-4-part-2-2#toc-anchor-002>

Memory Leak:

<https://jayeshkawli.ghost.io/when-to-weakify/>

Retain Cycle, Weak and Unowned:

<https://krakendev.io/blog/weak-and-unowned-references-in-swift#:~:text=A%20weak%20reference%20is%20just,from%20being%20deallocated%20by%20ARC.&text=In%20Swift%2C%20all%20weak%20references,a%20strong%20reference%20to%20it.>

<https://medium.com/mackmobile/avoiding-retain-cycles-in-swift-7b08d50fe3ef>

<https://medium.com/@vinodhswamy/strong-cycle-retain-cycle-in-swift-f452f07518b2>

Autolayout Architecture

<https://www.vadimbulavin.com/view-auto-layout-life-cycle/#:~:text=Every%20UIView%20with%20enabled%20Auto,the%20whole%20cycle%20to%20repeat.>

<https://matteomanferdini.com/ios-auto-layout/>

Size Classes

<https://medium.com/@craiggrummitt/size-classes-in-interface-builder-in-xcode-8-74f20a541195>

Size Classes(Programatically)

<https://medium.com/flawless-app-stories/building-adaptive-layout-with-size-classes-programmatically-40db42950c89>

SetNeedsLayout vs LayoutIfNeeded

<https://medium.com/@gagan5278/setneedslayout-vs-layoutifneeded-in-swift-6f5fb2972d5f>

<https://abhimuralidharan.medium.com/ios-swift-setneedslayout-vs-layoutifneeded-vs-layoutsubviews-5a2b486da31c>

AutoLayout (Must read **Why Points instead of Pixels?**)

<https://www.appcoda.com/learnswift/auto-layout-intro.html>

Content Sizing Priorities (Hugging n Compression Resistance)

<https://krakendev.io/blog/autolayout-magic-like-harry-potter-but-real>

Frames Vs Bounds

<https://suragch.medium.com/frame-vs-bounds-in-ios-107990ad53ee>

Get/Set/WillSet/DidSet

<https://stackoverflow.com/questions/25398753/swift-willset-didset-and-get-set-methods-in-a-property>

Coredata

<https://medium.com/xcblog/core-data-with-swift-4-for-beginners-1fc067cca707>

<https://cocoacasts.com/what-is-the-core-data-stack>

<https://ali-akhtar.medium.com/mastering-in-core-data-part-0-5a529c6c5a93>

Core Data vs Realm

<https://cocoacasts.com/core-data-or-realm#:~:text=An%20important%20advantage%20Realm%20has,it%20has%20over%20Core%20Data.>

<https://www.cloudbees.com/blog/ios-databases-sqlite-core-data-realm/>

Typealias in Swift:

<https://medium.com/pretty-swifty/swift-101-typealias-9d6a794bc59f>

<https://www.programiz.com/swift-programming/typealias>

<https://www.swiftbysundell.com/articles/the-power-of-type-aliases-in-swift/>

Two phase initialization

<https://docs.swift.org/swift-book/LanguageGuide/Initialization.html#ID220>

Assert

<https://medium.com/@alecoconnor/asserts-in-swift-and-why-you-should-be-using-them-6a7c96eaec10>

Subscript

<https://abhimuralidharan.medium.com/subscripts-in-swift-51e73cc5ddb5>

Any vs AnyObject:

<https://medium.com/flawless-app-stories/any-anyobject-in-ios-803515bd95a6>

NSOperation Queues(Only if needed)

Dependency Injection in Swift

<https://learnappmaking.com/dependency-injection-swift/>

<https://levelup.gitconnected.com/dependency-injection-in-swift-bc16d66b038b>

Dependency Inversion in Swift

<https://medium.com/flawless-app-stories/practical-dependency-inversion-in-swift-1c1142161a8>

Paths n Layers in Swift

<https://www.appcoda.com/bezier-paths-introduction/>

iOS 14 for developers

<https://medium.com/better-programming/ios-14-checklist-for-developers-372bd6d2507e>

iOS 15 for developers

<https://medium.com/geekculture/whats-new-in-ios-15-for-developers-cdde64a68511>

CachePolicy(need to implement Protocol based in request)

<https://medium.com/flawless-app-stories/ignorance-of-the-urlrequest-cache-a3584bc2f05f>

Closures catch by value

<https://medium.com/swlh/can-you-answer-this-simple-swift-question-correctly-3d2836cff7b1>

NSPredicate

<https://nshipster.com/nspredicate/>

Push Notifications

<https://medium.com/flawless-app-stories/ios-remote-push-notifications-in-a-nutshell-d05f5ccac252>

Codable In Swift

Method Swizzling

<https://abhimuralidharan.medium.com/method-swizzling-in-ios-swift-1f38edaf984f>

Error Handling/Try/Try?/Try! in Swift

<https://abhimuralidharan.medium.com/error-handling-in-swift-d0a618499910>

Result

Tuples

<https://abhimuralidharan.medium.com/tuple-in-swift-a9ddeb314c79>

KVO n KVC

<https://www.uraimo.com/swiftbites/kvo-and-kvc-in-swift/>

Google Maps

Firebase

Design Pattern

<https://medium.com/flawless-app-stories/the-only-viable-ios-architecture-c42f7b4c845d>

Singleton Pattern

<https://cocoacasts.com/what-is-a-singleton-and-how-to-create-one-in-swift>

Architecture in iOS

<https://www.raywenderlich.com/6733535-ios-mvvm-tutorial-refactoring-from-mvc#toc-anchor-005>

<https://medium.com/better-programming/how-to-implement-viper-architecture-in-your-ios-app-rest-api-and-kingfisher-f494a0891c43>

SOLID in iOS

<https://www.scaledrone.com/blog/solid-principles-for-becoming-a-better-ios-swift-developer/>

<https://marcosantadev.com/solid-principles-applied-swift/>

<https://medium.com/swift-india/solid-principles-part-3-liskov-substitution-principle-723e025d0589>

Data persistence in iOS

Networking in iOS

<https://matteomanferdini.com/network-requests-rest-apis-ios-swift/>

Filters, map, flatmap, etc...

PHAsset

Document Directory

<https://coggle.it/diagram/W5E5tqYlrXvFJPsq/t/master-the-interview-click-here-for-course-link>

Modularise App

<https://medium.com/kinandcartacreated/modular-ios-splitting-a-workspace-into-modules-331293f1090>

Diffable Data Source

<https://www.alfianlosari.com/posts/using-ios13-diffable-datasource-api-in-tableview/>

Discardable Result

<https://sarunw.com/posts/what-is-discardableresult/>

Property Wrappers

<https://www.swiftbysundell.com/articles/property-wrappers-in-swift/>

App Profiling

<https://www.avanderlee.com/debugging/xcode-instruments-time-profiler/>

<https://www.hackingwithswift.com/articles/81/how-to-find-and-fix-slow-code-using-instruments>

Reasons for application rejection

<https://medium.com/alphalogicinc/15-reasons-why-apple-will-reject-your-app-96f8802a2a65>

API Design Guidelines

<https://swift.org/documentation/api-design-guidelines/>

UIResponder chain

<https://dev-wd.github.io/swift/responderchain/>

<https://dev-wd.github.io/swift/uicontrol/>

Thread safe operations

<https://stackoverflow.com/questions/28191079/create-thread-safe-array-in-swift>

Background Execution

<https://abhimuralidharan.medium.com/finite-length-tasks-in-background-ios-swift-60f2db4fa01b>

<https://medium.com/swlh/handling-background-tasks-in-ios-13-67f717d94b3d>

<https://medium.com/@vialyx/ios-dev-course-background-modes-fetch-70c18f9f58d5>

Memory Profiling

Time Profiler

<https://stackoverflow.com/questions/51946972/xcode-instruments>

App Launch

<https://developer.apple.com/videos/play/wwdc2019/423/>

Protocol Based Network Layer

<https://github.com/AjayBhanushali/NetworkLayer>

SwiftUI

Why Struct for views in SwiftUI

<https://www.hackingwithswift.com/books/ios-swiftui/why-does-swiftui-use-structs-for-views>

Opaque type:

<https://www.alfianlosari.com/posts/understanding-opaque-return-type/>

Combine

MetalKit

ARKit

AVKit

Interview Prep:-

<https://iosinterviewguide.com/ios-interview-questions-for-senior-developers-in-2020>

<https://tanaschita.medium.com/ios-interview-questions-and-answers-for-senior-developers-part-1-9256221356f5>

<https://www.hackingwithswift.com/interview-questions>

<https://iosinterviewguide.com/ios-interview-questions-for-senior-developers-in-2020>

There are several ways to pass data in swift such as KVO, Delegate, NSNotification & Callbacks, Target-Action, etc.

<https://github.com/apple/swift/blob/main/docs/OptimizationTips.rst>

Static vs Dynamic Library

<https://pratheeshbennet.medium.com/static-library-vs-dynamic-library-in-ios-55478ed53a03>

Improvements on compilation time:

<https://medium.com/@joshgare/8-tips-to-speed-up-your-swift-build-and-compile-times-in-xcode-73081e1d84ba>

<https://medium.com/flawless-app-stories/analyzing-and-improving-build-times-in-ios-5e2b77ef408e>(Build and release time)

<https://www.avanderlee.com/optimization/analysing-build-performance-xcode/> (Some Xcode Setting changes)