About Swift

Swift is a new programming language for iOS, macOS, watchOS, and tvOS apps that builds on the best of C and Objective-C, without the constraints of C compatibility. Swift adopts safe programming patterns and adds modern features to make programming easier, more flexible, and more fun. Swift's clean slate, backed by the mature and much-loved Cocoa and Cocoa Touch frameworks, is an opportunity to reimagine how software development works.

Swift has been years in the making. Apple laid the foundation for Swift by advancing our existing compiler, debugger, and framework infrastructure. We simplified memory management with Automatic Reference Counting (ARC). Our framework stack, built on the solid base of Foundation and Cocoa, has been modernized and standardized throughout. Objective-C itself has evolved to support blocks, collection literals, and modules, enabling framework adoption of modern language technologies without disruption. Thanks to this groundwork, we can now introduce a new language for the future of Apple software development.

Swift feels familiar to Objective-C developers. It adopts the readability of Objective-C's named parameters and the power of Objective-C's dynamic object model. It provides seamless access to existing Cocoa frameworks and mix-and-match interoperability with Objective-C code. Building from this common ground, Swift introduces many new features and unifies the procedural and object-oriented portions of the language.

Swift is friendly to new programmers. It is the first industrial-quality systems programming language that is as expressive and enjoyable as a scripting language. It supports playgrounds, an innovative feature that allows programmers to experiment with Swift code and see the results immediately, without the overhead of building and running an app.

Swift combines the best in modern language thinking with wisdom from the wider Apple engineering culture. The compiler is optimized for performance, and the language is optimized for development, without compromising on either. It's designed to scale from "hello, world" to an entire operating system. All this makes Swift a sound future investment for developers and for Apple.

Swift is a fantastic way to write iOS, macOS, watchOS, and tvOS apps, and will continue to evolve with new features and capabilities. Our goals for Swift are ambitious. We can't wait to see what you create with it.