



# Introduction to Swift 3

Course Description



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From Playgrounds to protocols—discover, explore, and demonstrate how to use the fundamental building blocks of the Swift 3 programming language. This 2-day, hands-on course teaches you the basic concepts of Swift programming, including syntax, logic, structures, functions, and patterns. It also includes detailed explanations of language syntax and coding exercises.

## Audience

- Software developers
- Software architects
- Technology consultants

## Objectives

- Learn how to use Xcode Playgrounds to write Swift code.
- Learn common programming patterns used in Swift.
- Learn keywords and vocabulary used by the Swift language.

## Prerequisites

- **Getting Started with iOS Development videos:** Learn about Apple’s advanced mobile device hardware, the characteristics of modern apps, the iOS software development kit, Apple developer programs, and Apple’s approach to security and distribution.
- **Basic computer programming concepts:** You should be comfortable with basic concepts of computer programming, including variables, strings, logic, and classes. You’ll be expected to write code as part of the training.

## Lesson contents

- **Introduction to Swift and Playgrounds:** Learn about the origin of Swift and some of its basic syntax.
- **Constants, Variables, and Data Types:** Learn how to define constants for values that don’t change and variables for values that do. Learn the data types that are included in Swift and how they can help you write better code.
- **Operators:** Learn about some of the operators in the Swift language, including basic math operators.
- **Control Flow:** Learn how to use logical operators in Swift to check conditions; learn how to use control flow statements.
- **Strings:** Learn how to create and store text using the string type. You’ll learn a variety of string methods that allow you to compare two strings, access specific characters within a string, and insert and remove values.
- **Functions:** Learn how to declare functions with different parameters and return types.

- **Structures:** Learn how to create structures in Swift.
- **Classes:** Learn what makes classes different from structures and when to use classes instead of structures. Also learn about inheritance, superclasses, and subclasses.
- **Optionals:** Learn to use “optionals” to properly handle situations when data may or may not exist.
- **Collections:** Learn about the various collection types available in Swift and how to choose the appropriate one for your program.
- **Loops:** Learn how to create loops in Swift, control the conditions for looping, and specify when to stop.
- **Type Casting:** Learn why some data can be expressed using only a broader type, and how you can test for specific kinds of data before using it.
- **Guard:** Learn to use guard statements to better manage control flow.
- **Scope:** Learn to write nicely structured code that's easy to read. You'll do this by properly scoping your constants and variables.
- **Enumerations:** Learn when enumerations are commonly used, how to define an enumeration, and how to work with enumerations using switch statements.
- **Protocols:** Learn what protocols are, when to use them, and how to write your own. Learn how to enable objects to communicate with each other and how to extend protocols to provide shared functionality across multiple types.
- **Closures:** Learn about closures, how to define them, how to use them as function arguments, and how to use some of the common functions that take closures as arguments.
- **Extensions:** Learn how to define an extension, as well as how and why to use extensions.

## Get trained

Check the [training schedule](#) for a list of courses available at [LearnQuest](#), an Apple Authorized Training Provider.

The book for this course is [App Development with Swift](#).