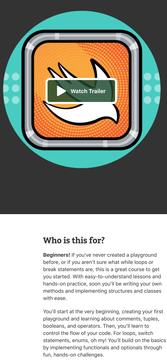
Programming in Swift: Fundamentals

Sep 24 2019 · Video Course (4 hrs, 4 mins) · Beginner

Learn about Apple's open source programming language, Swift, through hands-on examples! Take a deep-dive into the Swift language, learning about core Swift concepts like loops, collections, types, optionals, functions, classes, and more.



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Version

Swift 5.1, iOS 13, Xcode 11

Getting Started Language iOS & Swift Tutorials

Core Concepts

- **Introduction** 3:52 FREE
  Welcome to Programming in Swift! Let's go over what you'll be learning in this course, and why it's important.
- **Swift Playgrounds & Comments** 8:34
  Learn how to create your first Swift playground, what all the various bits are in playgrounds, and how comments work.
- **Booleans & Comparison Operators** 10:12
  Learn how to use a Swift type called Booleans, which represent true or false values.
- **Challenge: Booleans** 1:04
  Practice using booleans on your own, through a series of hands-on challenges.
- **Logical Operators** 15:37
  Learn how to use various logical and comparison operators in Swift to create Booleans.
- **Challenge: Logical Operators** 3:42
  Practice using logical operators on your own, through a hands-on challenge.
- **Optionals** 11:41
  Learn about one of the most important aspects of Swift development - optionals - and how to unwrap, force unwrap, and bind optionals.
- **Challenge: Optionals** 3:20
  Challenge time! In this episode you'll practice using optionals on your own. Let's get started!
- **Conclusion** 1:50
  Let's review where you are with your Swift core concepts, and discuss what's next.

Beginning Collections

- **Introduction** 1:04
  Let's review what you'll be learning in this section, and why it's important.
- **Tuples** 6:04
  Learn to group related data together into a single unit, through the power of a Swift type called Tuples.
- **Challenge: Tuples** 5:05
  Challenge time! In this episode you'll practice using tuples on your own. Let's dive in!
- **Arrays** 5:13
  Learn how to use arrays in Swift to store an ordered list of values.
- **Operating on Arrays** 10:06
  See how to manipulate arrays with their built-in methods.
- **Challenge: Arrays** 5:15
  Practice using arrays on your own, through a hands-on challenge.
- **Conclusion** 0:59
  Let's review where you are with your Swift core concepts, and discuss what's next.

Control Flow

- **Introduction** 1:15
  Let's review what you'll be learning in this section, and why it's important.
- **While Loops** 6:31
  Learn how to make Swift repeat your code multiple times with while loops, repeat while loops, and break statements.
- **Challenge: While Loops** 7:09
  Practice using while loops on your own, through a hands-on challenges.
- **For Loops** 10:09
  Learn how to use for loops in Swift, along with ranges, continue, and labeled statements.
- **Challenge: For Loops** 4:29
  Practice using for loops on your own, through a hands-on challenge.
- **Iterating Collections** 6:01
  Learn how to use your existing knowledge of for loops to *iterate* over collections.
- **Challenge: Iterating Collections** 3:04
  Practice iterating over collections using loops on your own, through a hands-on challenges.
- **Nested Loops and Early Exit** 11:31
  Learn how to nest one loop inside another, and even terminate a loop early if and when you need to.
- **Challenge: Nested Loops and Early Exit** 5:19
  Practice working with nested loops and the break and continue statements on your own, through a hands-on challenge.
- **Conclusion** 1:18
  Let's review where you are with your Swift core concepts, and discuss what's next.

More Collections

- **Introduction** 1:09
  Let's review what you'll be learning in this section, and why it's important.
- **Creating and Populating Dictionaries** 6:24
  Learn how to create and populate Dictionaries, a useful collection in Swift.
- **Accessing and Working with Dictionaries** 7:17
  See how to access the contents of dictionaries and manipulate dictionaries.
- **Challenge: Dictionaries** 5:10
  Practice using dictionaries on your own, through a hands-on challenge.
- **Working with Sets** 8:02
  Learn how to create sets, , how to populate them with data and retrieve that data, and how to compare sets to each other with their built-in methods.
- **Challenge: Sets** 4:39
  Practice using sets on your own, through a hands-on challenge.
- **Conclusion** 1:16
  Let's review what you learned in this section, and discuss what's next.

Functions and Named Types

- **Introduction** 3:24
  Let's review what you'll be learning in this section, and why it's important.
- **Introduction to Functions** 11:33
  Learn how to write your own functions in Swift, and see for yourself how Swift makes them easy to use.
- **Functions and Return** 9:16
  See how the "return" keyword is used in Swift, and when it's required and when it's optional.
- **Challenge: Functions** 5:04
  Practice writing functions on your own, through a hands-on challenge.
- **Structures** 10:22
  Learn how structures work, and all about their properties and methods.
- **Challenge: Structures** 5:32
  Learn when it's best to use computed properties, and when it's best to use methods.
- **Classes** 9:32
  Take a deep dive into methods, including writing initializers, mutating methods, extensions, and more.
- **Challenge: Classes** 2:42
  Practice writing classes on your own, through a hands-on challenge.
- **Conclusion** 2:43
  Let's review what you learned in this section, and discuss what's next for you in this learning path.

Who is this for?

Beginners! If you've never created a playground before, or if you aren't sure what while loops or break statements are, this is a great course to get you started. With easy-to-understand lessons and hands-on practice, soon you'll be writing your own methods and implementing structures and classes with ease.

You'll start at the very beginning, creating your first playground and learning about comments, tuples, booleans, and operators. Then, you'll learn to control the flow of your code. For loops, switch statements, enums, oh my! You'll build on the basics by implementing functionals and optionals through fun, hands-on challenges.

This course isn't suited for intermediate or advanced developers. If that's you, check out our intermediate or advanced video courses for more ways to level-up your developer skills!

Covered concepts

This course is jam-packed with the fundamentals to give you a solid grounding for your Swift adventures. Here are some of the concepts you'll conquer along the way:

- **Playgrounds**
- **Comments**
- **Tuples**
- **Booleans**
- **Operators**
- **For loops**
- **While loops**
- **Switch statements**
- **Enumerations**
- **Functionals**
- **Optionals**
- **Collections**
- **Arrays**
- **Dictionaries**
- **Structures**
- **Properties**
- **Methods**
- **Classes/Subclasses**
- **Protocols**
- **Closures**
- **Initializers**
- **Memory management**

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