

# App Development with Swift

Level 1 Certification

## Objective Domains

**Individuals who earn the App Development with Swift Level 1 Certification will validate foundational knowledge of Swift™, Xcode®, and app development tools covered by the App Development with Swift course from Apple®.**

### Developer Tools

- Demonstrate the basic features of Xcode for creating, managing and building apps
- Explain how to build and run an app on the iOS simulator
- Create app storyboards with segues between scenes
- Demonstrate how to add objects from the object library to a view controller
- Explain the use of IBOutlet and IBAction to connect storyboard elements to code
- Demonstrate how to set breakpoints in code
- Demonstrate how to step through code line by line

### Swift Programming Language

- Demonstrate how to and when to declare variables and constants
- Describe and use common Swift types
- Apply basic mathematical operators
- Use arrays and dictionaries to group and manage data
- Know how and when to apply control flow and loops
- Use functions to structure code
- Design, use, and differentiate between structs, classes and enums

### iOS Software Development Kit

- Understand the functions of the app delegate and how it manages the app lifecycle
- Design and create view controllers to implement app logic
- Describe the view controller lifecycle
- Use segues to pass data between view controllers
- Use Navigation and Tab Bar view controllers
- Use common view objects such as labels and image views
- Use common controls such as buttons and text views
- Use table views to display a list of data
- Describe the Model-View-Controller design pattern
- Use common iOS design principles to organize apps



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