

Introduction to Programming in Swift 5

Duration: 2 Days

Prerequisites:

- Basic understanding of Computer Science theory
- Familiarity with macOS or iOS operating systems
- Knowledge of English as the course material is in English
- Passion for learning new programming languages
- Access to a Mac computer with the latest version of Xcode installed.

Course Description:

The Introduction to Programming in Swift 5 certification offers an exploration of basic programming concepts in Swift 5, Apple's proprietary language for mobile application development. It equips developers with skills to build robust and sophisticated iOS applications. This certification revolves around the basics of Swift 5, including data types, control flow, functions, object-oriented programming, error handling, and more. Industries utilize this certification to validate a developer's abilities in Swift 5, ensuring up-to-date practices in iOS development and a deeper understanding of this powerful and intuitive programming language. The certification, therefore, enhances productivity, deployment speed, and the overall quality of the applications.

Target Audience:

- Beginners with little or no experience in programming looking to learn a new language.
- Experienced programmers looking to understand Swift 5.
- Mobile app developers interested in exploring Apple's iOS or macOS app development.
- Individuals interested in a career in software development.
- Computer Science Students wanting to expand their coding skills.
- Tech enthusiasts wanting to understand Swift language.

Course Outlines:

Installation, Setup and Your First Code

- Downloading and installing Xcode
- Hello Swift

Variables, Strings and Numbers

- Variables
- Working with strings
- Working with numbers

Conditional Logic, Arrays and Loops

- Boolean and conditional logic
- Constants and logical operators
- Arrays
- Loops

Dictionaries, Functionals and Optionals

- Dictionaries
- > Functionals in Swift
- Optionals

Architecture and Object-Oriented Programming

- Object-oriented programming
- > Inheritance
- Polymorphism
- > MVC in theory
- Creating an Xcode project
- Project groups for MVC
- Creating a model layer
- Creating a custom view layer
- Connecting view to controller
- Securing model layer
- MVC challenge