**TRAINING DESCRIPTION**

This training presents the fundamentals of developing an iOS application using Swift and XCode. Participants will learn to use Swift, SwiftUI, and the XCode integrated development environment to create interactive mobile applications capable of handling text, images, audio, and video data.

**LEARNING OUTCOMES**

By the end of this training, participants will be able to:

o Explain market and financial concepts at a high level.  
o Explain ITIL principles, DevOps, SRE, and Disaster Recovery at a high level.  
o Design, develop, test, and build iOS applications.  
o Demonstrate and explain the iOS ecosystem.  
o Use the Swift programming language to develop applications for iOS devices. o Explain how to leverage XCode for iOS development  
o Use SwiftUI to create interactive mobile applications.

**PREREQUISITE SKILLS**

Prior programming experience is required. Participants should have a working knowledge of a modern programming language such as Java, Python, C# or Go.

**TRAINING TOPICS**

**PRODUCTION SUPPORT AND FINANCIAL CONCEPTS**

o Information Technology Infrastructure Library (ITIL) o Monitoring  
o DevOps  
o Introduction to Site Reliability Engineering (SRE)

o Disaster Recovery o Financial Markets o Equity Trading  
o FIX Protocol

o Fixed Income o Derivatives  
o Currency  
o Treasury

o Regulation and Risk

-For 2 weeks we received the Finance Course along with the IOS Course. All topics listed, we went over them in detail except for DEVOps, ITIL SRE. I do not recall going over these topics with my finance instructor

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-Swift basic knowledge-how to install new version, discussed installing with virtual machines & mac-in-cloud service

-REPL and LLDB Debugger were covered but not in depth

* Package manager was covered but needed a little more info on the topic
* Swift Basics- Strings, Characters, operators, functions, strucs and classes, props., methods, Inheritance, Type casting were covered, enums - - prior knowledge of OOLs (i.e Java & Python) helped
* Closures can’t recall covering
* Generics covered but briefly
* Subscripts mentioned but cannot recall covering
* Initialization covered but unfamiliar with de-initialization
* Concurrency, Nested Types, Extension & protocols covered in depth,Automatic Ref counting & mem safety
* XCode overview, basics, Playgrounds covered briefly
* Learned to navigate Xcode interface, run apps, using storyboard layouts, connecting ui elements to code
* SwiftUI-how to manage views, navigation & presentation, passing data, state mangment were topics that were covered as well as MVVM design architecture
* Drawing, recording audio were briefly mentioned but not covered
* UIKit- MVC, Navigation, Table Views, Editable cells, Data sources were all covered
* Design and animation mentioned but could’ve benefitted from more explanation
* Filtering Data and System frameworks as well

Projects

ChatApp- Implemented Firebase API to create chatting application, login/logout authentication and updating profiles as well as sending/recieveing messages to other users

WeatherApp- developed an app showcasing the weather for the day based on location using location services, incorporated the OpenWeather API

BankAccount summary app – developed bank account app, login && onboarding, users could login, see their different accounts and balances and settings

Suggestions for course

* More in depth with Git
* MVVM vs. MVC and when to use what
* Pros/Cons for SwiftUI vs. UIKit and when to use what
* More info on SCRUM and agile development
* More hands on- let us fail, then show the solution