1. Introduction to iOS App Development

A. Overview of mobile application development
B. Introduction to iOS ecosystem
C. Apple devices and platforms (iPhone, iPad, Watch)
D. iOS application architecture
E. Native vs cross-platform apps
F. Career opportunities in iOS development

2. iOS Development Environment

A. Introduction to Xcode IDE
B. Setting up Xcode and iOS Simulator
C. Creating first iOS project
D. Understanding project structure
E. Swift Playgrounds overview

3. Swift Programming Fundamentals

A. Introduction to Swift language
B. Variables, constants, and data types
C. Operators and control flow
D. Functions and closures
E. Optionals and type safety

4. Object-Oriented & Protocol-Oriented Programming

A. Classes and structures
B. Inheritance and polymorphism
C. Protocols and protocol extensions
D. Enumerations and value types
E. Memory management (ARC basics)

5. iOS App UI Design

A. Introduction to UIKit and SwiftUI
B. Views and view controllers
C. Storyboard and Interface Builder
D. Auto Layout and constraints
E. Human Interface Guidelines (HIG)

6. Navigation & App Lifecycle

A. View controller lifecycle
B. Navigation controllers
C. Tab bar controllers
D. Scene delegate and app delegate
E. Managing app states

7. Data Handling & Persistence

A. UserDefaults for lightweight storage
B. Core Data basics
C. SQLite overview
D. File handling in iOS
E. Data modeling concepts

8. Networking & API Integration

A. Introduction to REST APIs
B. URLSession and networking
C. JSON parsing and Codable
D. Error handling in networking
E. Async and background tasks

9. Device Features & Sensors

A. Camera and photo library integration
B. Location services (GPS)
C. Push notifications
D. Biometrics (Face ID / Touch ID)
E. Accessing device hardware

10. Security & Performance

A. iOS security fundamentals
B. App sandboxing and permissions
C. Secure storage (Keychain)
D. Performance optimization techniques
E. Battery and memory management

11. Testing & Debugging

A. Debugging tools in Xcode
B. Unit testing with XCTest
C. UI testing basics
D. Crash handling and logs
E. TestFlight overview

12. App Deployment & App Store

A. App signing and provisioning profiles
B. Preparing app for App Store
C. Publishing apps on Apple App Store
D. App versioning and updates
E. App maintenance and monitoring

13. Apple Ecosystem Integration

A. iCloud basics
B. Integration with Apple services
C. Intro to Apple Watch & widgets
D. Universal apps overview
E. Accessibility features

Mini Projects:

- iOS utility application
- API-based iOS app
- Authentication-based mobile app
- Complete iOS mini project
- Live app deployment