## Introduction

- Introduction to iOS
- Prerequisite for iOS Development
- Languages involved
- Know the IDE.
- Details about the XCode
- Introduction to Swift
- Use of Playground
- Set up new Project in XCode
- Run app in Simulator and sideload to a physical device(iPhone)

## Basics

- Understand Swift variables, constants
- Learn about printing and commenting in Swift
- Understand the data type and the primitive data types such as String, Int and Double.
- Use of Interface Builder
- Addition of custom image
- Use of UIComponents like UIButton, UILabel
- Link design with code via IBAction and IBOutlet
- Detect user interaction through UIButtons
- Collection Types
- Arrays, Dictionaries and Sets
- Higher order functions (map, CompactMap, Filter, sort)

## Advance

- Structures
- Properties and their types
- Classes
- Enumeration
- Protocols
- Functions
- Tuples
- Generics
- Access Control and organization of code
- Error handling using try and catch.
- Code refactoring.
- Basic debugging for code errors.

## UIKit-Detail

- Introduction to UlKit
- ViewController Lifecycle
- Programmatic way of creating
- UISwitch, Ulstepper
- UllmageView, UlSegmentControl
- UlNavigationController
- UlTabBarController
- UlAlertViewController
- UlTableViewController

- UICollectionViewController
- UlPickerView and DatePicker

## Auto Layout

- How it works?
- Add Constraints
- Align UI
- Debug Auto layout errors
- Use of Stack view

## Design Patterns

- Model View Controller (MVC).
- Model View ViewModel (MVVM)
- Singleton Pattern

## Multi-Screen Application

- Learn about Swift classes.
- Application lifecycle
- Learn about Object-Oriented Programming and inheritance.
- Learn the difference between Structures and Classes and when to use each.
- Creating a custom UIViewController class.
- How to build a multi-screen app using segues.
- Advanced methods of handling Swift Optional, including Optional Binding, Optional Chaining, and the Nil Coalescing Operator.
- Learn about the Delegation design pattern using Protocols.
- Learn about Swift Extensions.
- Using Grand Central Dispatch to queue asynchronous tasks
- Capturing image using gallery/Camera
- Learn about Core Location to tap into the device GPS data.

## Web Services and Databases

- What are web services
- Use of Web services
- App functioning with web services
- Introduction to JSON (JavaScript Object Notation)
- HTTP methods (GET, POST, DELETE, PUT)
- REST API
- Parsing JSON
- User Defaults
- Core data

## Version Controlling

- What is version controlling
- What is GitHub?
- Git basics.