iOS
Application Development

Training Outline

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Shaping Digital Futures

> "Your mobile device has quickly become the easiest portal into your digital self."

Márcio Cyrillo

```
var shoppingList = ["catfish", "water", "tulips"]
shoppingList[1] = "bottle of water"

var occupations = [
    "Malcolm": "Captain",
    "Kaylee": "Mechanic",
]
occupations["Jayne"] = "Public Relations"
```

Source: https://docs.swift.org/swift-book/GuidedTour/GuidedTour.html

```
let individualScores = [75, 43, 103, 87, 12]
var teamScore = 0
for score in individualScores {
    if score > 50 {
        teamScore += 3
    } else {
        teamScore += 1
    }
}
print(teamScore)
```

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Master Module

- Creating an iOS App
- Outlets, Actions, and Views
- Using ViewControllers
- Application Templates
- The iOS Keyboard
- Working with Different iOS
- Using TableViews
- Supporting Screen Rotations
- Working with Databases
- Using Animations & Video
- Accessing integrated iOS Apps
- Using WebServices within an iOS app
- Working with iOS Maps and Location Services
- Working with iCloud
- Working with the Accelerometer
- Publishing App on App Store

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Creating an iOS App

- Understanding Xcode
- Using the Xcode Interface Builder
- Using the Xcode Objects Library
- Understanding View Hierarchy
- Creating a Custom App Icon
- Creating a Custom Splash screen

In this module you will learn about the core concepts of the Xcode and working with it.

Outlets, Actions, and Views

- Understanding Outlets and Actions
- Using TextFields, Buttons, Labels,
- WebViews, and PageControllers
- Using Views along with Subviews
- Creating Views using Code

In this module you will learn about the Outlets, Actions and Views in using XCode

Using ViewControllers

- Working with the Single View template
- Exploring the App Delegate
- Adding new View Controllers
- Transition between multiple View
- Controllers
- Using Animations

Developers use view controllers to manage UIKit app's interface, this module discuss about the ViewControllers and managing your apps

Application Templates

- Working with the TabBar Application Template
- Understanding the MasterDetail Application Template

Learn and explore about the application templates of iOS using Swift Programming language.

The iOS Keyboard

- Customizing the iOS keyboard for
- different Inputs
- Adjusting TextField behaviors
- Methods for dismissing the keyboard
- Detect keyboard activities with the
- NotificationCenter
- Using the Scroll View
- Responding to keyboard activities
  programmatically using scrolling views

In this module you will learn about iOS keyboard and performing events on it.

Working with Different iOS

- Devices: iPhone & iPad
- Programmatically detecting device hardware
- Dynamically adjusting graphical layouts
- Working with multiple devices
- Creating apps that work universally

In this module you will learn about the different type of devices that runs iOS and how to write a program that executes on different hardware.

Using TableViews

- Understanding the UITableView
- Using UITableViewCell Classes
- Working with UITableView DataSource and Delegate
- Using TableView and TableViewCell
- The MasterDetail Template
- Creating drill-down menus
- Navigation to other views
- Using PropertyLists for DataPersistence
- Creating MultiSection tables

A table view displays a list of items in a single column. Learn to master the TableViews using Swift

Supporting Screen Rotations

- Portrait & Landscape Modes
- Handling device rotation
- Setting preferred device orientation
- Forcing specific orientation using noRotations
- Dynamically adjusting graphical layouts based upon rotation

Learn to develop to support your apps for different screen rotations

Working with Databases

- Importing the sqlite3 library
- Creating a database, writing tables, and inserting records into tables
- Bundling a database with your app
- Checking for database existence
- Reading and displaying database data

Learn to access and manipulate your data from sqlite database. This module highlight on breaking down the database related solutions for your iOS apps.

Using Animations & Video

- Using the NSTimer Class
- Animating objects on the screen
- Using transformation, rotation, scaling, and translation
- Animating image arrays
- Playing video within an app

Adding animation and video makes you iOS app more interactive.
Learn to master adding animation and videos to your iOS app

Accessing integrated iOS Apps

- Using the email app
- Accessing Safari
- Sending SMS text messages
- Working with the camera
- Using with the PhotoLibrary

Need to access information from the integrated app of iOS, like emails, SMS, camera. Learn accessing the information using Swift Programming language

Using WebServices within an iOS app

- Consuming a WebService
- Parsing XML
- Consuming and Parsing JSON based Web Services
- Integrating Common Twitter and Facebook with iOS apps

We may need to fetch certain data from the different application to use in our apps, like weather information, SENSEX data or others. Learn to consume web service to get your things done

Working with iOS Maps and Location Services

- Using the MapKit and UIMapView
- Getting and displaying user location
- Getting directional information
- Displaying map annotations
- Displaying disclosure buttons on annotations
- Performing reverse GeoCoding

Learn how to use the MapKit framework to display real-world points of interest in your own apps.

Working with iCloud

- Storing documents in iCloud
- Setting project entitlements
- Managing iCloud documents
- Using the UIDocument Class
- Storing KeyValue files in iCloud

In this module you'll learn about how to add and query data in iCloud from your developed app, also how to process that data

Working with the Accelerometer

- Using the Gyroscope
- Using the Accelerometer
- Outputting Sensor Data
- Using the Shake API

All iOS devices have a three-axis accelerometer, learn how to retrieve data from the onboard accelerometers to your app

Publishing App on Apple's App Store

- Publishing APP on iTunes
- Setting up iTunes
- Setting up Apple developer account
- Create provisional certificate & developer certificate
- Key Chain Access
- Push notification

Once your app is developed, learn how to publish your developed app on apple's app store.

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