

## iphone Programming & Application Development

### ●► Basic Knowledge:

The iPhone Hardware Platform.

The iPhone Software Platform.

Overview of iPhone SDK Content.

iPhone Development Tools (Xcode, Interface Builder, Instruments, Simulator).

Anatomy of an iPhone Application.

Important design patterns (e.g. Model View Controller, Delegation).

Sources of information.

Registering a device for development.

### ●► Objective-C Programming:

Object Oriented Design Terminology.

Objects, Classes, Messages/Methods, Inheritance and Polymorphism.

Abstract Classes.

Dynamic Binding.

Protocols.

Categories.

Memory Management.

Collections.

### ●► User Interface Design:

Views and View Controllers.

Outlets and Actions.

Using basic interface components (e.g. Image View, Sliders, Switches, Buttons, Alerts).

Handling device rotation.

Multi-View Applications and Custom Views.

Table Views (including customisation of table cells and search bars).

Animation of view transitions.

Tab bars and Pickers.

### ●► Introduction to Graphics on the iPhone:

Graphics contexts, lines, paths, polygons and colours.

### ●► Interacting with the Outside World:

Interfacing to the iPod player.

Recording and playing sounds.

Using the Movie Player.

Using the Accelerometer.

# TRON SOFTECH – IT Training

Accessing the Image Library.  
Accessing the Camera.  
Interfacing to maps.  
Using the compass.

## ●► **Managing Data:**

The application sand box.  
Storing application preferences.  
Property lists.  
Object archiving.  
Introduction to Core Data.

## ●► **Behind the scenes – Multi-threading and Multi-tasking:**

Basic Threading.  
Run Loops.  
Introducing Blocks.  
Alternatives to Threads (e.g. Timers, Grand Central Dispatch).  
NSOperation.  
Initiating background tasks.

## ●► **Behind the scenes – Web Services and Networking:**

Networking Strategies.  
Downloading resources using URLs.  
Communicating with the web using with XML.  
Communicating with the web using with JSON.  
The AFNetworking framework.