GogoTraining™
Leader in IT & Management Training

7561 E. Gold Dust Ave
Scottsdale, AZ 85258
1-877-546-4446
www.gogotraining.com

Advanced Android Programming
Training Course Outline

Course Description:

Interested in learning how to make Android apps? Learn Android programming with our 2-part training course series. *Introduction to Android Programming* and *Advanced Android Programming* make it easy and efficient to learn Android development.

This second training course builds on the Android programming training started in *Introduction to Android Programming*. This Advanced Android online training course teaches you how to create custom advanced Android applications. You will learn how to create location-aware applications that use animations, work with the built-in camera, use sensors, create and use advanced content providers and manage Bluetooth, telephony and networking connectivity.

Course Objective:

Upon completion of this Android developer training course, you will be able to:
- Create location-aware applications.
- Create custom "services" that multi-task and run in the background.
- Monitor, manage and control Android's WiFi networking capabilities.
- Monitor, manage and control Android's Bluetooth networking capabilities.
- Monitor, manage and control Android's telephony capabilities (abilities to place receive and manage calls.)

Course Prerequisites:

Java/OOP programming is required. The Java prerequisite can be met by either having the equivalent Java /OOP programming experience or completing *Programming in Java 6 with Swing and Servlets Parts 1 and 2* along with *Introduction to Android* and *Programming.*

Modular Outline:
Module 00: Advanced Android Programming - Course Introduction

Module 01: Custom Content Providers
- Why Content Providers
- Where the content comes from
- Implementing the API Supporting content files
- Exercise: Creating and Working with a Custom Content Provider in Android

Module 1A: Custom Content Providers Demo

Module 02: Location Services
- Working with the Location Manager
- Working with Google Maps extensions
- Exercise: Working with Proximity Alerts and Shared Preferences

Module 02A: Location Services Demo

Module 03: Services
- Overview of services in Android
- Implementing a Service
- Service lifecycle
- Bound versus unbound services
- Exercise: Local and Remote Services in Android

Module 03A: Services Demo

Module 04: Broadcast Receivers
- What are Broadcast Receivers
- Implementing broadcast receiver
- System broadcasts and how to use them
- Exercise: Broadcast Receivers in Android

Module 04A: Broadcast Receivers Demo

Module 05: Intent Filters
- Role of filters
- Intent-matching rules
- Filters in your manifest
- Filters in dynamic Broadcast Receivers
- Exercise: Android Intent Filters

Module 05a: Intent Filters Demo

Module 06: Networking in Android
- Working with web services
- Best practices
- Exercise: Networking in Android

Module 06a: Networking Demo

Module 07: Sensors
- How Sensors work
- Listening to Sensor readings
- Best practices for performance
- Exercise: Working with Sensors in Android

Module 07a: Sensors Demo

Module 08: WiFi
- Monitoring and managing Internet connectivity
- Managing active connections
- Managing WiFi

- Exercise: Working with Wireless Networks in Android

Module 09: Telephony
- Making calls
- Monitoring data connectivity and activity
- Accessing phone properties and status
- Controlling the phone
- Exercise: Working with Telephony in Android

Module 09a: Telephony Demo

Module 10: Camera
- Taking pictures
- Rendering previews
- Exercise: Working with the Camera in Android

Module 10a: Camera Demo

Module 11: Bluetooth
- Controlling local Bluetooth device
- Discovering and bonding with Bluetooth devices
- Managing Bluetooth connections
- Communicating with Bluetooth
- Exercise: Working with Bluetooth in Android

Module 11a: Bluetooth Demo

Module 12: Automated Testing
- Why automate tests
- Instrumentation and unit testing