



Premium Software Consulting Group

For quote and registration: email ron@thepscg.com or call +972-54-5529466 (Course #: RAND101)

Android Bootcamp (RAND001)

Length: 5 Days

Type: Hands-On

Target Audience: Software developers, anyone interested in learning Android

Summary:

In this intensive hands-on course, you will learn about the Android design philosophy, and bring it to practice by crafting a native modern Android application, utilizing most of the platform's building blocks. You will learn to design an interactive User Interface, have your application work in the background, respond to events, use files, databases, and network based information, interact with hardware and sensors, interact with the Google Play Services, integrate third party libraries, debug, secure, optimize and publish an Android app.

Upon completing this intensive bootcamp, you will be comfortable using the Android Open Source Project tools, diving into your teammates' code, contribute to it, and build your own Android apps effectively, securely and robustly.

Prerequisites

- Essential:
 - The attendees should proficient with the Java programming language
- Recommended:
 - Working knowledge of Linux command line tools
 - Theoretical knowledge of Operating Systems

Outline:

- Introduction to Android, Introduction to the AOSP
- Introduction to Android component framework and life cycles
- Hello Android Studio/Gradle (Eclipse/Ant)
- Introduction to Android debugging/profiling, working with the Android Tools
- Activities, User Interface, The Action bar and navigation options
- Material design philosophy and practice
- Using third party libraries/code
- Using and not abusing the support libraries
- Services
- Broadcast receivers
- Databases in Android, sqlite
- Adapters
- Custom Views
- Content Providers
- Shared Preferences
- The media store: Accessing, viewing, playing, and recording media.
- Fragments

- Animations
- User Interface revisited: Building custom UI's with RecyclerView
- Material Design
- Custom Views
- Android Testing Frameworks
- Android Security
- Using sensors and hardware.
- Integrating Google Play services
- Uploading your app to the Google Play Store
- Application Release Cycle - Best Practices

Additional/Optional Themes: It is possible to elaborate on the following subjects and others, either within the course, or in the scope of separate courses:

- Hybrid apps - Android and Javascript/HTML/CSS
- NDK and native programming
- Advanced Debugging tools and techniques
- Introduction to Android Internals - working with the AOSP codebase
- Introduction to server side fast prototyping
- Programming for Android Wear/Google Glass/Android Auto/Android TV
- Android Unit Testing and Fuzzing (UIAutomator, Espresso, Monkey*, and more)
- More advanced topics - on a sequel course.