

# "Android Kick-Start"

**The key to successful development is knowledge!**

**Duration: 2 days**

## Overview

Android has become the dominating software platform for mobile devices. It is based on the GNU/Linux kernel. Android is originally developed by Android Inc., bought by Google, and later taken up by the Open Handset Alliance.

## Goal/Benefits

This two days training introduces the participant to the Android programming environment. Beside an introduction of the Android environment, you will be taught about the fundamentals of the Android platform like:

- Android development environment
- Android application lifecycle
- How to write simple Android GUI applications using built-in components and widgets
- Basic network communication
- Localization and Internationalization concepts

The major objective of this module is to get started with Android programming.

## Audience/Participants

This training is aimed for anyone who wants to obtain a sound understanding of what Android is, and how to develop applications using Android as platform.

## Previous Knowledge

Basic Java programming experience, or corresponding Object-Oriented Programming skills.

## Practical Exercises

During the training you will develop an App using the most common Android framework software components.

## Language

The course can be delivered in either Swedish or English.

## Outline

### 1. Introduction to the Android Platform

- The Evolution of Android
  - Android Versions
- Devices Running Android
- The Android platform
- The Android Business
  - The Android Market
  - Mobile Operators
  - Android Versus the Feature Devices
  - Android Versus the Smartphones
  - Android Versus the Itself - Future
  - Licensing Android
- Understanding the Android Software Stack
- App Lifecycle
- Android Fundamental Component Types
  - Activity
    - View
  - Intents and Services
  - BroadcastReceiver
  - ContentProvider
- File `AndroidManifest.xml`
- Creation of an Android Application

### 2. Quick Start

- Installing the Android SDK
  - JDK
  - Eclipse
  - Android SDK
  - Android Development Tools (ADT)
- Introducing the Android SDK
  - Android Virtual Devices (AVD)
- Hands on: Hello, Android!
- Running the App
  - In the Emulator
  - On the Real Device (Phone)

**3. The Android APIs: Finding Your Way – Getting Help**

- API Categories
- Finding Tutorials and Demos
- Android Releases
- API Levels

**4. Android Survey – Making an App from Scratch**

- Create a Project
- Views
  - Layouts
  - Widgets & Other Views
  - Pickers and Spinners
  - Forms
  - Map View
    - Hands on: Create an App - Show a Map
- Persistence – How to save the state of the App
- Networking
- Localization - Adapting to Different Languages
  - Strings
  - Images
    - Hands on: Extend the App: Try out Localization
- Structure of an Android App
- Android Application Lifecycle
- Debugging an App