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Android Auto Training: Embedded

3 days (21 hours)

Presentation

Android needs no introduction! The world's most widely used mobile operating system is currently in version 10, and with Oreo, released in 2018, it has reached over 80% market share in smartphones. The aim of this advanced training course is to teach you about Android for cars and embedded devices. As with all our training courses, this one will introduce you to the latest version of the Android SDK (at the time of writing: [Android 11 API level 30](#) and [Android Studio 4.2](#)).

Objectives

- Mastering the Android language: Java & Kotlin
- Learn about best practices in embedded development

Target audience

Advanced Android Developer

Prerequisites

- Advanced knowledge of Android
- Have attended our [Android Studio](#) session [with Android11](#)

To go further

- Become an expert with our [Kotlin training course](#)
- [Our Android Studio training course](#) will take all the secrets out of your hands.

Android Auto training program

Day 1 - First steps

- Android Studio tour
- Android project structure
- Manifest
- Gradle
- Java file
- xml file
- Download the necessary programs
- Tool installation and configuration
- The emulator
- Example programs provided in the SDK
- Debugging
- Performance
- Android documentation

Android Layout

- Activities
- View construction
- Resources
- Linear Layout
- Constraint Layout
- TextView
- ImageView
- Button
- EditText
- Debugging
- Log and Console
- Toast
- Go to a new screen

Java for Android

- Variables
- If
- Array
- For loops
- While loops
- Methods
- Classes and Objects
- Java OOP Concept 1: Encapsulation
- Java OOP Concept 2: Inheritance
- Java OOP Concept 3: Polymorphism

Day 2 - Android SDK Patters & Best Practices

- Intents
- CardView
- ListActivity
- ListView
- RecyclerView
- RecyclerView Adapter
- User preferences
- Services
- Use of third-party components
- Fragments
- WebView
- Notifications
- AsyncTask - Asynchronous HTTP - Uri Builder
- Tips, Keyboard shortcuts
- Pattern MVP
- Pattern MVVM
- Preparing release 0
- Publication on Android Market

Day 3 - Android Auto

- Android Auto SDK Complete
- Android Auto TP

Conclusion

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.