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May 30, 2017

## **Kotlin or Java which one to choose?**

Kotlin became the third official Android development language in 2017. Of course this raises the question, should we abandon Java? The answer is: absolutely not: Kotlin and Java can be used together.

One of the main benefits of Kotlin is that it is 100% interoperable with Java, the Java code can literally have lines of Kotlin with no issues. Kotlin files that don't use any Kotlin-specific semantics can be referenced from Java code directly without any annotations at all. It is also bi-directional, meaning that you can seamlessly call both ways Java to Kotlin and Kotlin to Java, a very unique language feature.

Kotlin promises to reduce the amount of boilerplate code. It is definitely more concise than Java, the same results can be achieved with less lines of code, the most extreme example of it is from Google demo where Kotlin accomplished with one line what took 83 lines of Java code. In the same time it is also considered to have more readable and expressive syntax. Add in that Kotlin is type- and null-safe, with careful use it allows to potentially avoid whole classes of errors, and the language starts sounding pretty sweet.

Kotlin supports all versions of Android starting with JDK 6, so apps with Kotlin run safely on older Android versions. It does not have direct impact on performance, Kotlin runtime adds about 7000 methods and approximately 1MB to the debug APK but the net impact is less when Kotlin replaces another library in the project and is further lessened when the APK gets optimized for release. JetBrains claims that Kotlin is more stable at runtime than Java, because it can statically check weak points and supports features like variable type interface, extension functions, and mix-ins.

Google says that Kotlin is also more fun. Is it really? Create a new project in Android Studio 3.0, it has full Kotlin tooling support built in and can run parallel to other versions of Android Studio, just check the Include Kotlin support checkbox and find out yourself!

Resources to check out:

<http://kotlinlang.org/>

<https://www.raywenderlich.com/132381/kotlin-for-android-an-introduction>

<https://developer.android.com/kotlin/resources.html>