Why Kotlin?

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Kotlin was announced as an official language for Android development in 2017, joining Java, and in 2019 Google announced that Android development was going Kotlin-first. Our stance this semester is that we prefer Kotlin and will focus on that, however all tutors can also support Java. Some code snippets will be in both languages.

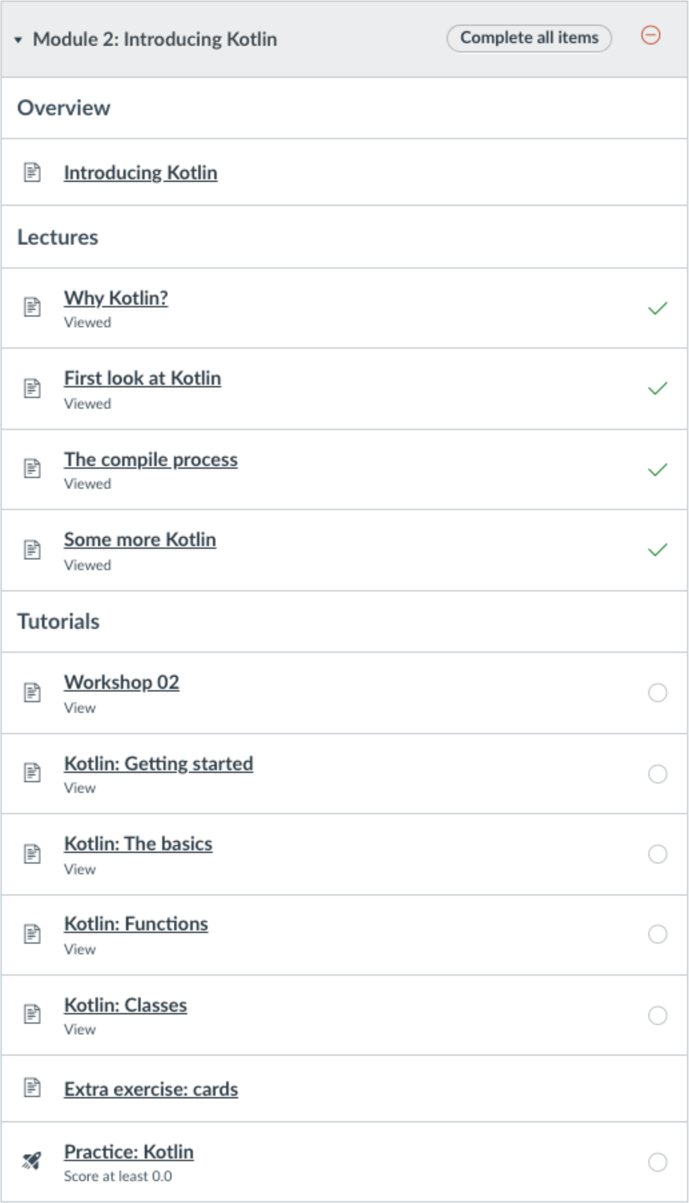
Let's start with a bit of history. Java became the main Android language in early 2006. It is one of the most used programming languages worldwide, and as such was an obvious choice.

Kotlin is developed by JetBrains (the company behind IntelliJ), which makes it interesting in that it is not developed by a research team and is very much driven by industry. It is designed to be safer, easier to use, more expressive, more functional than Java and other languages. JetBrains advertise it as "A modern programming language that makes developers happier". (https://kotlinlang.orgLinks to an external site.)

Breaking this down, we get that Kotlin is (Sommerhoff):

Pragmatic: it's built to be used in real-world software and the language developers frequently take feedback from community for new releases. Compare this with Java where releases stagnated for some time there.
Concise: the design principles include improving readability and maintainability. Take a look at data classes for example: in Java this would require lines of code to produce the same functionality.
Interoperable: it can be used wherever Java is used, and it reuses and extends Java's standard library. This has contributed greatly to takeup as it has meant that small parts of existing Java projects can be ported without breaking them.
Safe: it enforces best practice and prevents errors by design. One of the most annoying runtime errors in Java is a null pointer exception (NPE) -- while Kotlin doesn't eliminate this completely, it minimises them by introducing nullable types.
Developers seem to love it, and although I think that you need to know Java to really appreciate it, I think it can be appreciated anyway -- it is a fascinating language.

The benefits on Android include bringing new programming features now (namely lambdas), as Android supports an older version of Java. You'll also find code converters from Java, however note these can produce some not-very-nice code, as well as lots of tools and frameworks, which you'd expect when it's developed by industry. For more detail on the benefits, take a look at https://kotlinlang.org/docs/reference/android-overview.htmlLinks to an external site..



▾ Module 2: Introducing Kotlin (Complete all items) ⊖

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- Introducing Kotlin

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