Kotlin

programming language

- **Introduction**
- **The coolness**
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What is Kotlin?

- statically typed
- on the JVM
  - bytecode runnable on Java 6
  - experimental Kotlin -> Javascript compiler
- fully interoperable with Java
- supports both OO and functional styles

- open source (Apache 2.0)
- created by JetBrains (July 2011)
- release 1.0 on February 2016
  - compiler will be backwards compatible
- used in production
  - **JetBrains** *(IntelliJ IDEA plugins, YouTrack vNext, CRM apps, new products etc.)*
  - **prezi.com** *(backend, data processing and service development)*
  - other lesser known companies

Tool support

- language was designed with tooling in mind

- IntelliJ
  - plugin developed in lockstep with the compiler
- Eclipse
- NetBeans

- Maven
- Gradle
- Ant

Why Kotlin?

- more **<u>concise</u>** than Java & more **<u>readable</u>*** :)
- **<u>safer</u>** than Java
  - implementing advice from *Effective Java*
  - nullability check in the type system
  - final by default
  - immutable collection views
  - simpler generics
- strong **<u>interoperability</u>** with Java
- as **<u>performant</u>** as Java
- **<u>pragmatic</u>**
  - not a research language
  - designed to solve real-world problems
  - applying lessons learned from years of creating large-scale systems

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see code in IntelliJ

IntelliJ Education plugin

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More info

Official docs
- https://kotlinlang.org/docs/tutorials/
- https://kotlinlang.org/docs/reference/
- https://kotlinlang.org/docs/videos.html

Exercises
- IntelliJ Education plugin
- or https://github.com/Kotlin/kotlin-koans

Books
- Kotlin in Action, *by Dmitry Jemerov and Svetlana Isakova*
- Kotlin for Android Developers, *by Antonio Leiva*

Awesome Kotlin (list of resources)
https://github.com/mcxiaoke/awesome-kotlin

More info

https://github.com/cvmocanu/kotlin-presentation