Kotlin

WHAT JAVA MIGHT HAVE BEEN IF IT WERE WRITTEN TODAY

What is it?
Island just west of Saint Petersburg, Russia in the Baltic Sea

What is it?

- Programming language first revealed by JetBrains in 2011. Version 1.0 release in February 2016.

- Statically-typed

- Runs on the JVM

- Object Oriented or Functional

- Fully interoperable with Java

- Officially listed as a first-class language for Android development by Google in May 2017

Open Source

JetBrains / kotlin

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The Kotlin Programming Language   http://kotlinlang.org/

kotlin   programming-language   compiler   gradle-plugin   maven-plugin   kotlin-library   intellij-plugin

42,373 commits   1,282 branches   8,880 releases   190 contributors

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shiraji committed with semoro KT-20591: Show annotations in parameter info (#1358) ...   Latest commit 11f9c05 2 days ago

.idea	Fix project scope "IDE" after migration to Gradle build	5 days ago
android-studio	Prepare building plugins modules against 1.8 JDK	2 years ago
annotations	Remove KotlinSignature annotations from project code	2 years ago
ant	Fix tests in the new build infrastructure	a month ago
build-common	JS: fix copying functions with default arguments across interfaces	10 days ago
buildSrc	Do not fail build on TC when some tests fail, just report problem	5 days ago
compiler.tests-common	Rename android-annotations -> kotlin-annotations-android	18 days ago
compiler	Minor, use extracted variable in LateinitIntrinsics.kt	2 days ago
core	Don't resort deserialized descriptors based on renderer, preserve pro...	2 days ago
custom-dependencies/protobuf-lite	Declare shared shadow plugin version and use it consistently	a month ago

Language Goals

- Be useful
  - Developed by developers for developers
  - Can be used for server-side, web, or Android applications. Native support is currently being worked on.

- Be safe
  - Support for non-nullable types
  - Can be introduced gradually to existing Java projects

- Be concise
  - Their estimates say that there should be about a 40% decrease in lines of code compared to Java.

Demo

Things Kotlin Doesn't Have

- Checked Exceptions
  - These generally force Java applications to have a large amount of boilerplate around handling exceptions that happen very infrequently, leading to hard to read code.

- Semicolons

- Primitive Types
  - int, boolean, double, etc.

- Great Tooling/Static Analysis Support
  - SonarQube/Checkstyle/Findbugs

- Open Classes By Default
  - This means you can't extend classes unless you explicitly declare them open for extension.