

Introduction to Kotlin

The next big thing in the Java world

What is Kotlin?

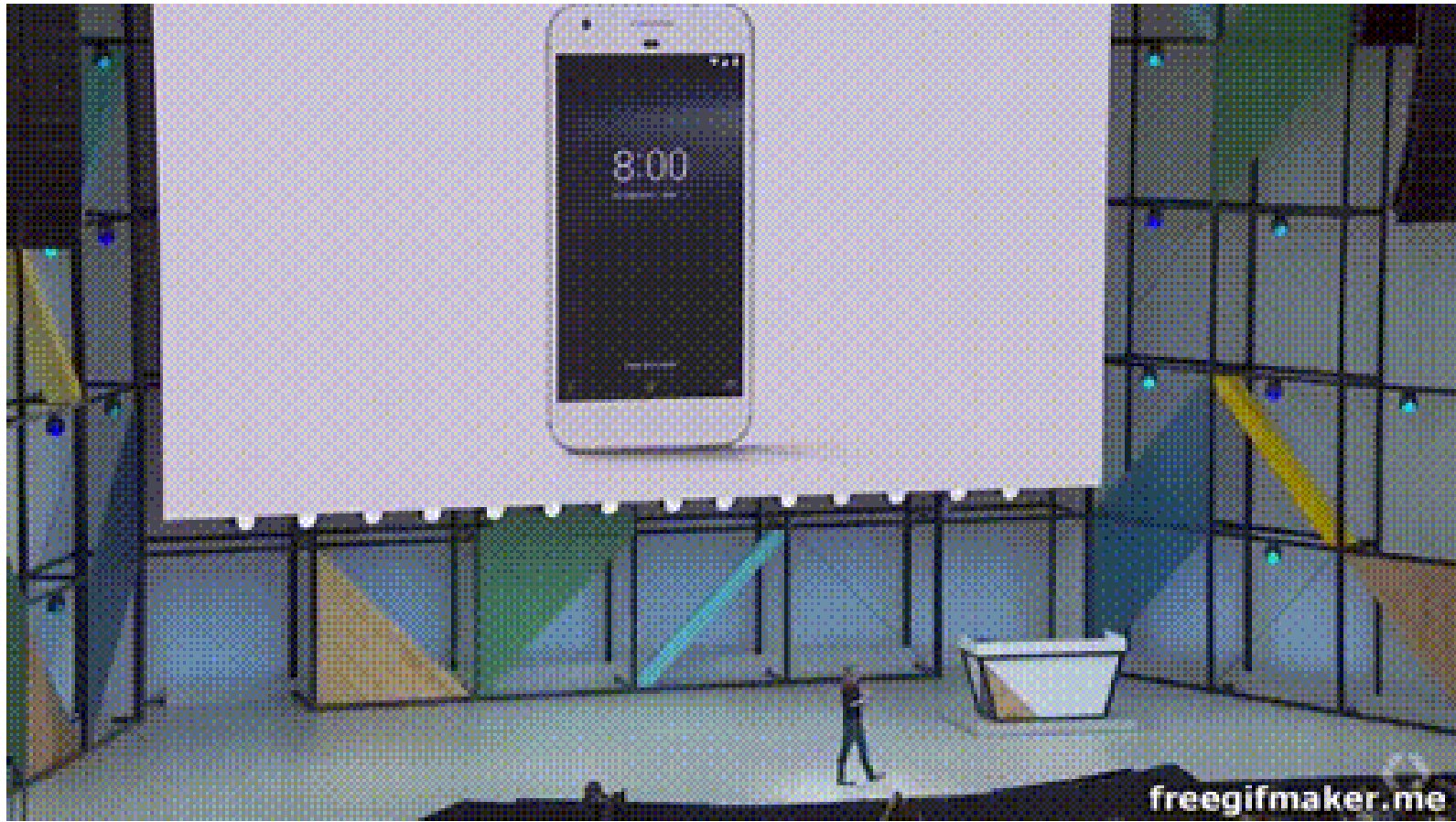
- A (fairly) new statically-typed language from JetBrains (creators of IntelliJ Idea, ReSharper, PyCharm and other IDEs and IDE extensions)
- Tries to fix many of Java's shortcomings
- Compiles to JVM bytecode, JavaScript (!) and Kotlin native (no VM)
- Created with focus on Java interoperability – Kotlin and Java classes can be used together in a project (but compilation is much faster than Scala's)

What is Kotlin?

- Works seamlessly with IntelliJ Idea, just a bit less seamlessly with Eclipse
- The Java interoperability is real – even complex applications, relying on annotation processing
- It's gaining more and more traction and is being adopted increasingly often, especially in the recent year
- Has very good support from JetBrains, an established company, who use Kotlin to develop their own products

Google and Android

At Google I/O 2017, Google announces that Kotlin would receive first-class support for Android development



What does Kotlin feature?

- Null safety (drastically limiting the number of NPEs);
- If, try-catch, when expressions;
- Extension functions;
- Var and val keywords;
- Inline functions;
- Named function parameters;
- Multi-value return functions;
- Semi-colons are optional

More things...

- Functional programming constructs (like higher order functions)
- Smart casting
- Async/await
- **Data classes**
- Properties (C#- like)
- No checked exceptions
- Operator overloading
- ... this is just scratching the surface

Let's code something!

Conclusion

- Kotlin is low-cost: can be developed in the same IDE, in the same project as Java code
- Did I mention first-class Spring support?
- It's on track to become one of the leading JVM languages
- It's best suited to work with IntelliJ idea; it can be adapter to Eclipse, albeit with some shortcomings
- It's cool; allows bragging to friends about using the latest technologies

