# KOTLIN

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# Summary

- What is Kotlin?
- JetBrains
- Story of Kotlin
- Code
- Visit of the official website
- Kotlin 1.1
- What about real-world?

# What is Kotlin?

- **Statically typed** programming language
- Running on **JVM**
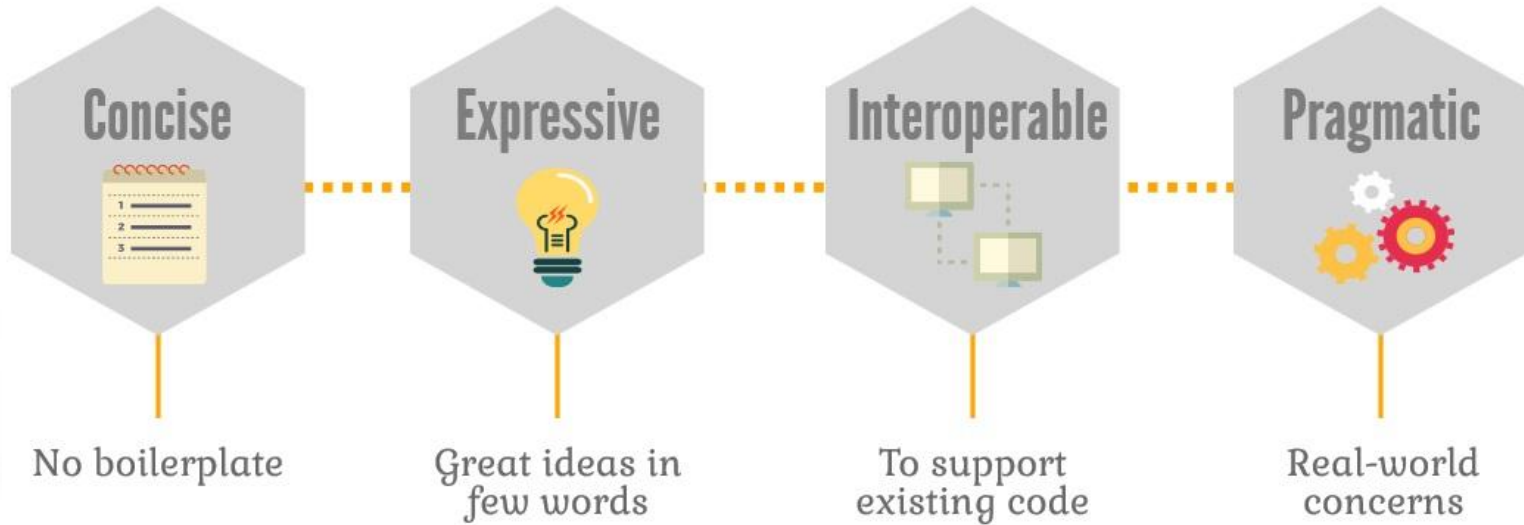- Developed by **JetBrains** since 2010
- A better Java

# JetBrains

- Making **IDEs** and **tools** for different languages
- Created in **2000**
- *Most Innovative Java Company* award 2012
- Large codebase in **Java**

# Looking for a new language

**Concise**
No boilerplate

**Expressive**
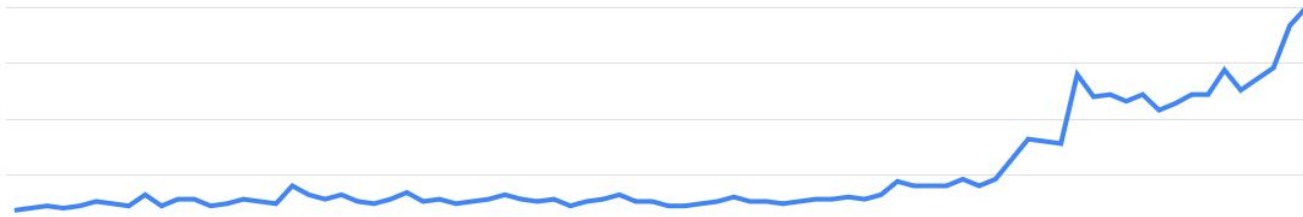Great ideas in few words

**Interoperable**
To support existing code

**Pragmatic**
Real-world concerns

# Candidates



**Performance issue (in 2010)**

**Tools issue**

**Nice language**

**But interest divergences**

# Timeline



**2010**
- Project started

**2011**
- Project revealed

**2012**
- Open-source

**2014**
- New official website
- Kotlin Koans

**February 2016**
- 1.0 ready for production
- Kotlin + **Spring-Boot** article on Spring blog

**January 2017**
- Kotlin support in **Spring 5** announced

**March 2017**
- Kotlin 1.1
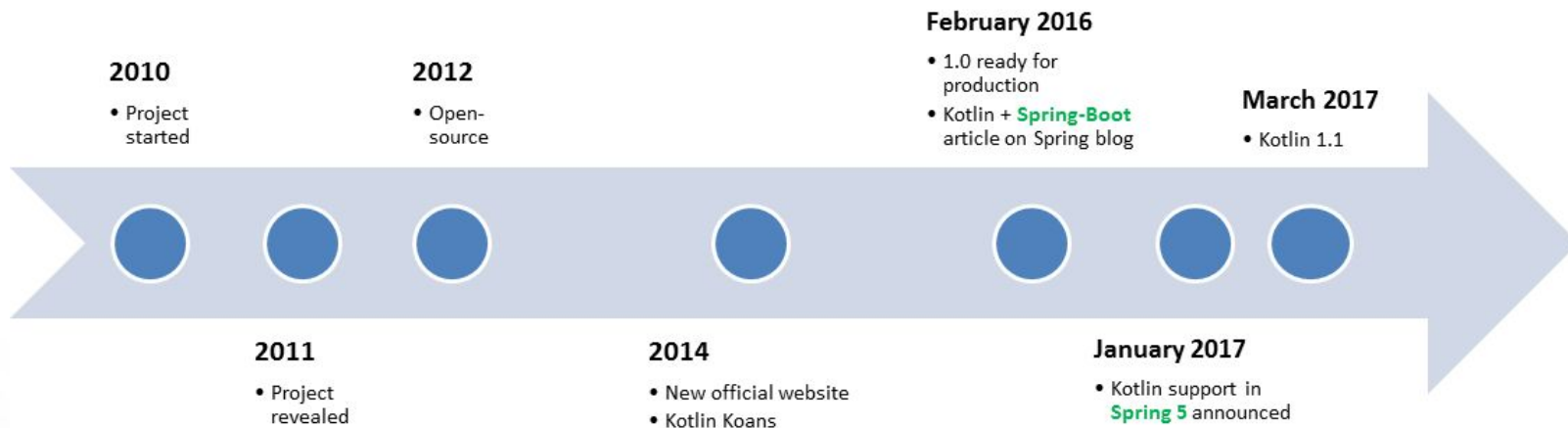
# Official website

kotlinlang.org

# Kotlin 1.1

**JavaScript** target no longer experimental

**Coroutines**

# Coroutines

- Asynchronous code
- Non-blocking
- Lightweight

*"Much better threads"*

# Coroutines

**Maximum flexibility**

- ⬡ Language: very little is fixed
- ⬡ Libraries: many possibilities
  - ⬡ generators/yield (Python)
  - ⬡ channels/select (Go)
  - ⬡ async/await (C#)

# Spring support

- Many articles on spring.io blog
  - Springboot + Kotlin for the 1.0
  - Guide and tips
  - **Exclusive** support for Kotlin in Spring Framework 5.0
  - Custom implementations/extensions
  - Code comparisons

**Spring + Kotlin > Spring + Java**

# Current state

- 22 JetBrains developers working full-time on Kotlin
- Used in 10 products
- New tools are written in Kotlin
- IntelliJ has parts written in Kotlin

# Community

- 1 year since 1.0
- 160,000 devs
- 50% server-side, 50% Android

**Kotlin LOC on GitHub**

100k

2012

2013

# Roadmap

- Support Java 9 (Jigsaw)
- Incremental compilation for JavaScript
- Tool and support for multi-platform target
- Performance, maintenance

# Multi-platform

# Sustainability

*Our commitment to Kotlin is that it's here to stay because we're using it in our products. The business model around Kotlin is JetBrains tooling, not consulting.*

Hadi Hariri, developer and speaker at JetBrains

# They use Kotlin

# Kotlin in the banks?

Yeah! Our Luxembourgish banks are already using it!
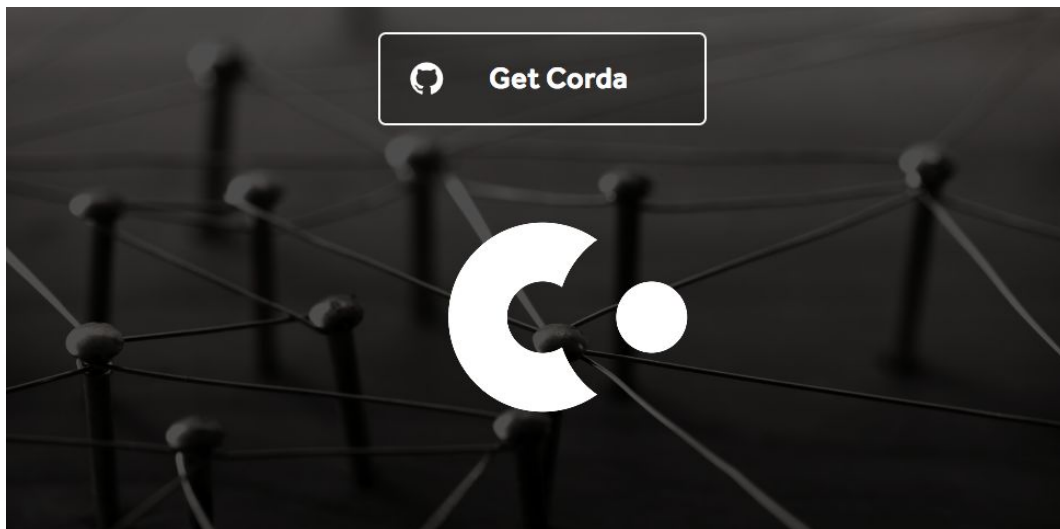
# Conclusion

- Nice syntax for Java developers
- No boilerplate
- Easy to learn
- Seamless interoperability
- Support from Spring

Realm ✔
@realm  [ Suivre ]

No learning curve from Java, but better syntax & safety.
Is this a dream? 🤯💭
No, it's Kotlin! 👏 @hhariri explains: realm.io/news/gotocph-h
... pic.twitter.com/lvqMJhbN7M

15:30 - 28 Déc 2016

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# Mindmap

**Kotlin**

- A better Java
  - JVM
  - Statically typed
- JetBrains
  - IDEs and tools
  - Large Java codebase
  - Created Kotlin for themselves
    - 22 full-time devs
- Multi-platform
  - JVM
  - Android
  - JavaScript
  - Native?
- Supported by Spring
  - Spring-boot
  - Spring 5
- 2016: 1.0 Ready for production
- 2017: 1.1 Coroutines and JavaScript full support
- Concise
  - Functional
  - No boilerplate
- Safe
  - Null-safety
  - Immutability
- Pragmatic
  - Interoperable
    - Compatible JDK6
    - Works seamlessly with Java
  - Soft learning curve
- Tooling
  - Done by JetBrains