

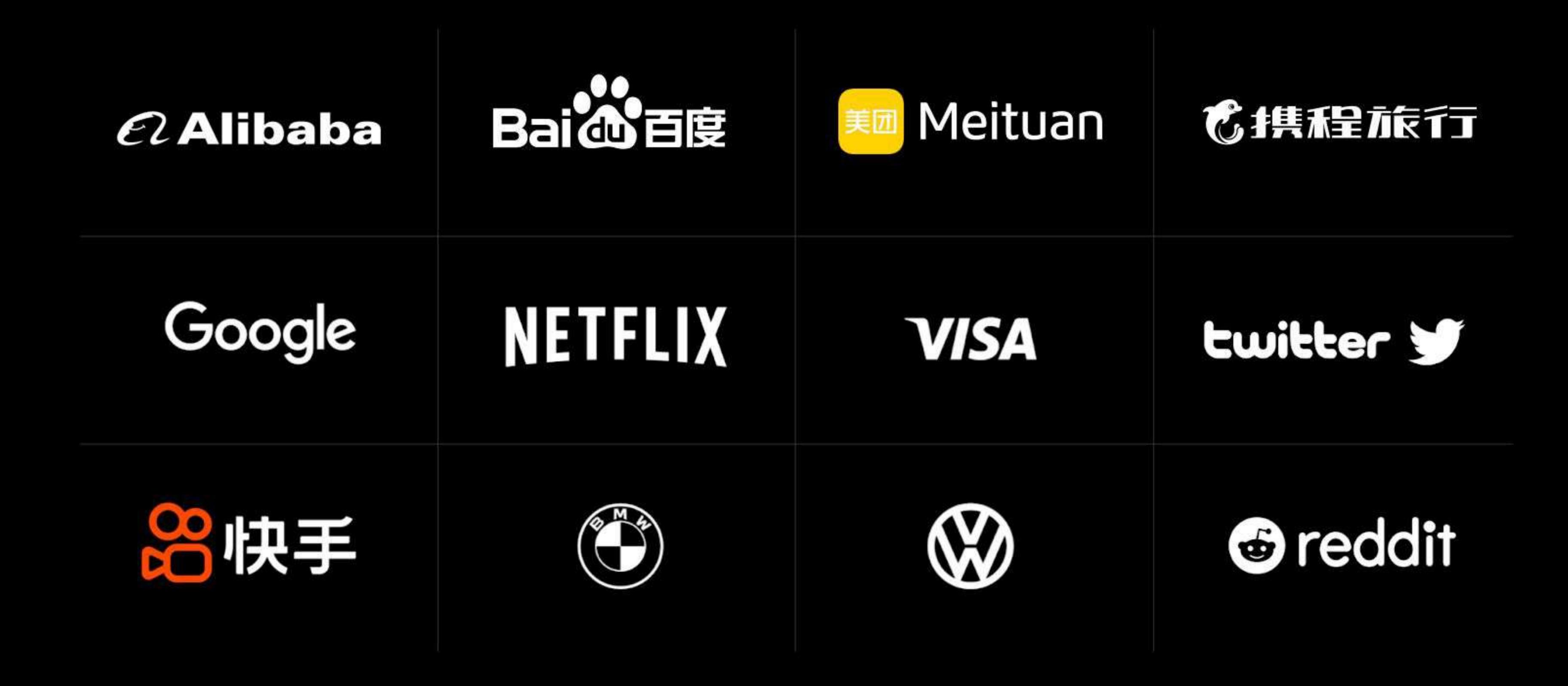
# Kotlin for Education Ksenia Shneyveys

kotlinlang.org/education ks@jetbrains.com

# Over 320 top universities teach Kotlin



# Kotlin in the business world



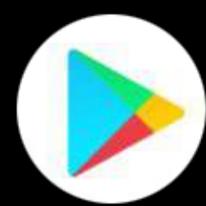
# Kotlin @ Google

# TO apposi counting • • • • • •

















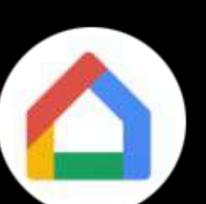




















Source: Google Internal Data, August 2022

# Kotlin & Android

• 2011: Beginning of Project Kotlin

• 2016: Kotlin 1.0



• 2019: Android is "Kotlin first"

2022: 95% of the top 1K Android apps use Kotlin

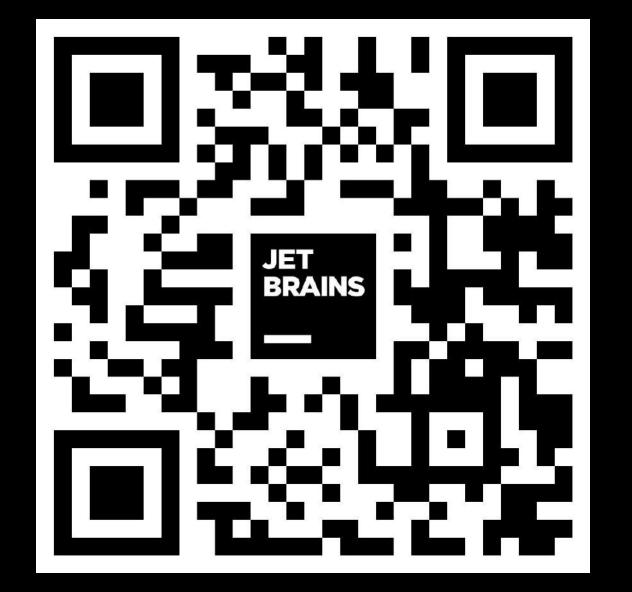


# Kotlin Multiplatform

- Kotlin Multiplatform is stable and production-ready.
- Blurs the boundaries between cross-platform and native development
- Seamless integration of shared Kotlin code into any project
- Baidu (百度), Kuaishou (快手), Netflix, Philips, McDonald's, among early adopters
- Possible to share all application logic across mobile, desktop, web, and TV while maintaining native Uls

# Kotlin Multiplatform Contest

- For students and recent graduates
- Contestants build cross-platform projects using Kotlin Multiplatform technology
- Top three win trips to KotlinConf'24 in Copenhangen, Denmark!
- Authors of all valid entries will receive neat Kotlin souvenirs
- Submission deadline: January 15, 2024



kotlinconf.com/contest

# Kotlin characteristics

- 100% interoperable with Java
- Multiparadigm
- General-purpose programming language
- Modern, concise, expressive, safe

# Beyond the language: Kotlin tooling

- IntelliJ IDEA (& Android Studio)
  - Award-winning IDE
    - Quick-fixes, hints, code inspections
    - Refactoring assistance
    - "Code walk" functionality, navigating to symbols
  - Alternative editor plugins available

# Free educational licenses

#### 免费教育许可证

使用 JetBrains 一流的开发工具学习或教授编程!



适用于学生和教师 适用于学校和大学 适用于培训课程和训练营



# Kotlin for Education

#### Teach Computer Science with Kotlin

The Programming in Kotlin course is a comprehensive toolkit for teaching Kotlin and can be easily customized to align with specific educational needs. The course comes with slides, lecture notes, and assessment resources.

Download all materials →

Lecture slides

Introduction to Kotlin <sup>↗</sup>

Object-oriented programming <sup>↗</sup>

Generics <sup>↗</sup>

Collections <sup>↗</sup>

Functional programming <sup>↗</sup>

Build systems <sup>↗</sup>

Parallel and concurrent programming <sup>↗</sup>

Asynchronous programming <sup>↗</sup>

JVM + the Kotlin compiler <sup>↗</sup>

Exceptions 7

Testing <sup>↗</sup>

Syllabus 7

**Assessment resources** 

Quizzes 7

Homework assignments <sup>↗</sup>

Tests ↗



# Beyond the language: Kotlin resources



# Start Teaching Kotlin with These Resources

Get started

Tour of Kotlin ↗

Kotlin Onboarding <sup>↗</sup>

Programming in Kotlin course materials <sup>↗</sup>

Atomic Kotlin:

Hands-on exercises <sup>↗</sup>

Course project <sup>↗</sup>

Educator start guide 7

Kotlin curriculum for beginners <sup>↗</sup>

Kotlin tracks by JetBrains Academy 7

Tools

Free educational licenses for students and teachers 7

JetBrains Academy plugin ₹

Java-to-Kotlin converter ₹

Code With Me <sup>↗</sup>

**Online Courses** 

Introduction to Kotlin Programming 7

Advanced Kotlin <sup>↗</sup>

Programming Kotlin for Java Developers <sup>↗</sup>

Android in Kotlin

Android Basics with Compose course ₹

Android Development with Kotlin course <sup>↗</sup>

Practice Kotlin

Koans

Kotlin Heroes

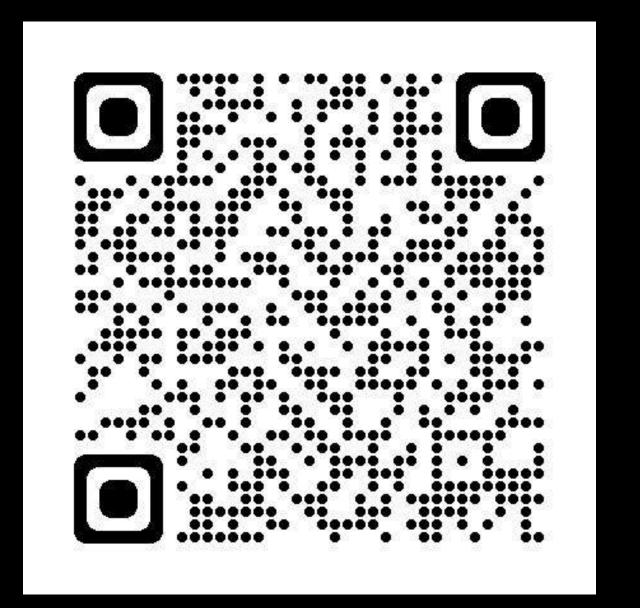
Solve Advent of Code Puzzles

# Kotlin on Bilibili and WeChat









# Kotlin in competitive programming

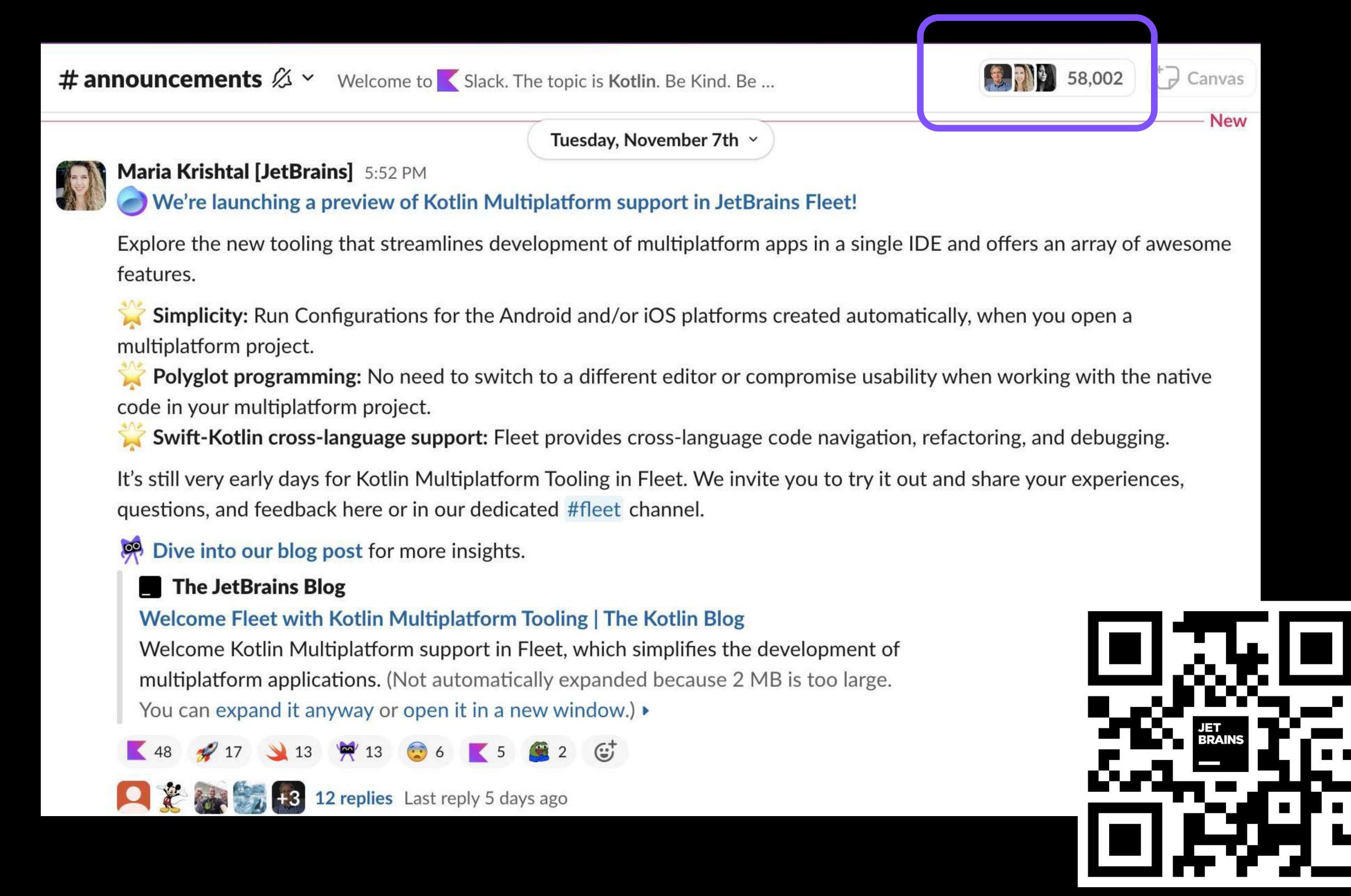
- JetBrains is the ICPC Global Tooling Sponsor.
- Kotlin is one of the official languages of the ICPC.
- Some of the world's top programmers use Kotlin for competitive coding.
- Leetcode supports Kotlin 1.9.0.
- Kotlin Heroes contests run on Codeforces.

## Advent of Code in Kotlin

- Solving Christmas-themed algorithmic problems in Kotlin for 24 days, starting on Dec 1, 2023
- Livestreaming solutions on Kotlin by JetBrains YouTube channel
- Join us and compete for the prizes!

kotl.in/advent

## Join the conversation



# Thanks, and enjoy Kotlin!

Ksenia Shneyveys

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