

Building **Web Apps** with Kotlin and Wasm*

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* kotlin.in/wasm

DisclAImer

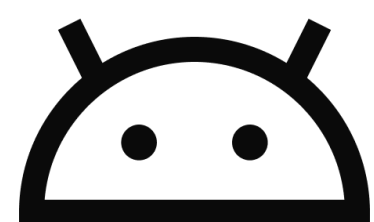


Kotlin

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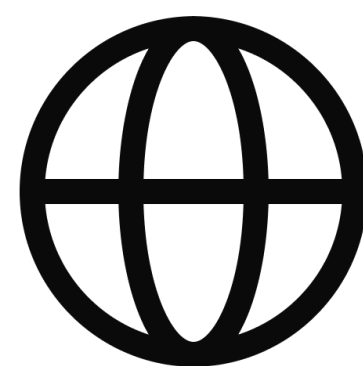
Multiplatform



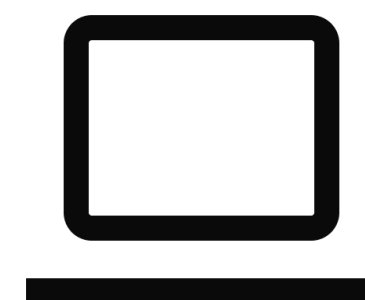
Android



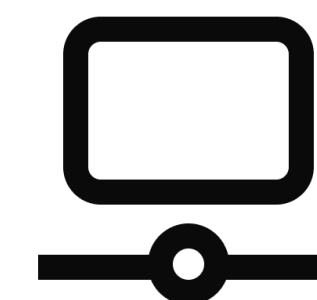
iOS



Web



Desktop



Server



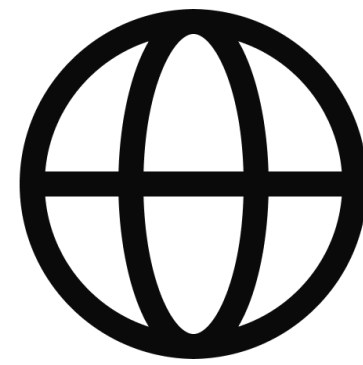
Multiplatform



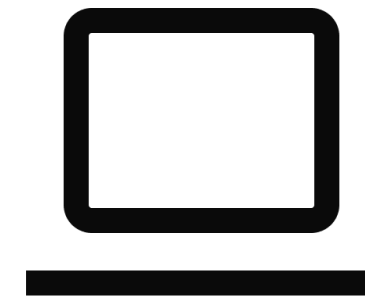
Android



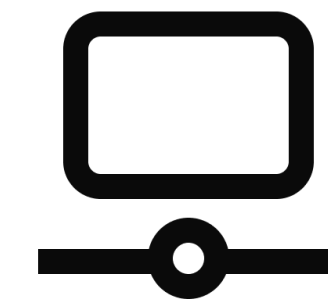
iOS



Web



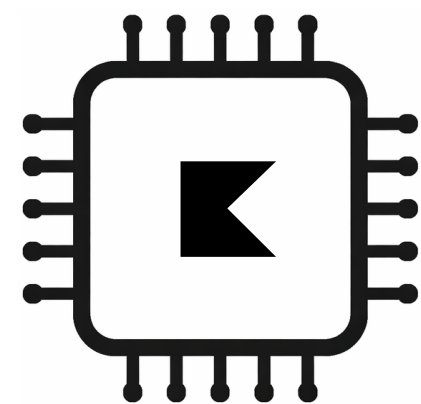
Desktop



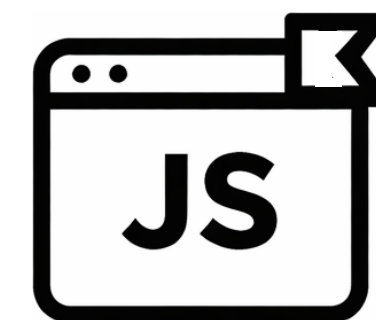
Server



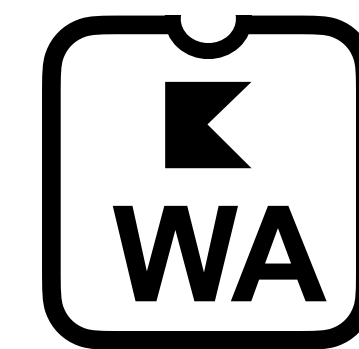
Kotlin/JVM



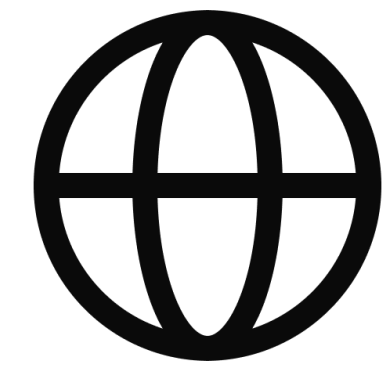
Kotlin/Native



Kotlin/JS



Kotlin/Wasm



Building Web Apps

**Directly work with
DOM / Browser APIs**

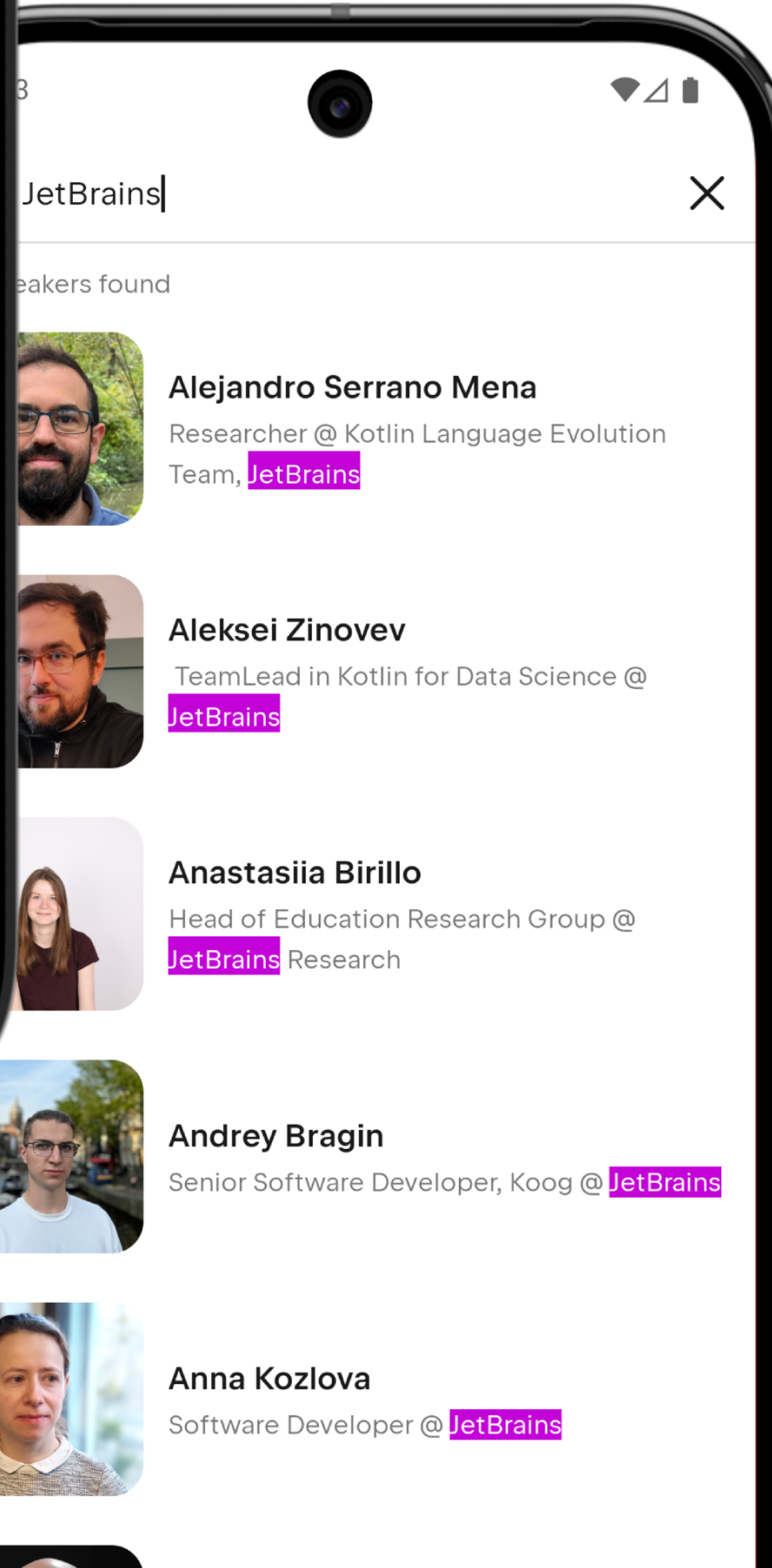
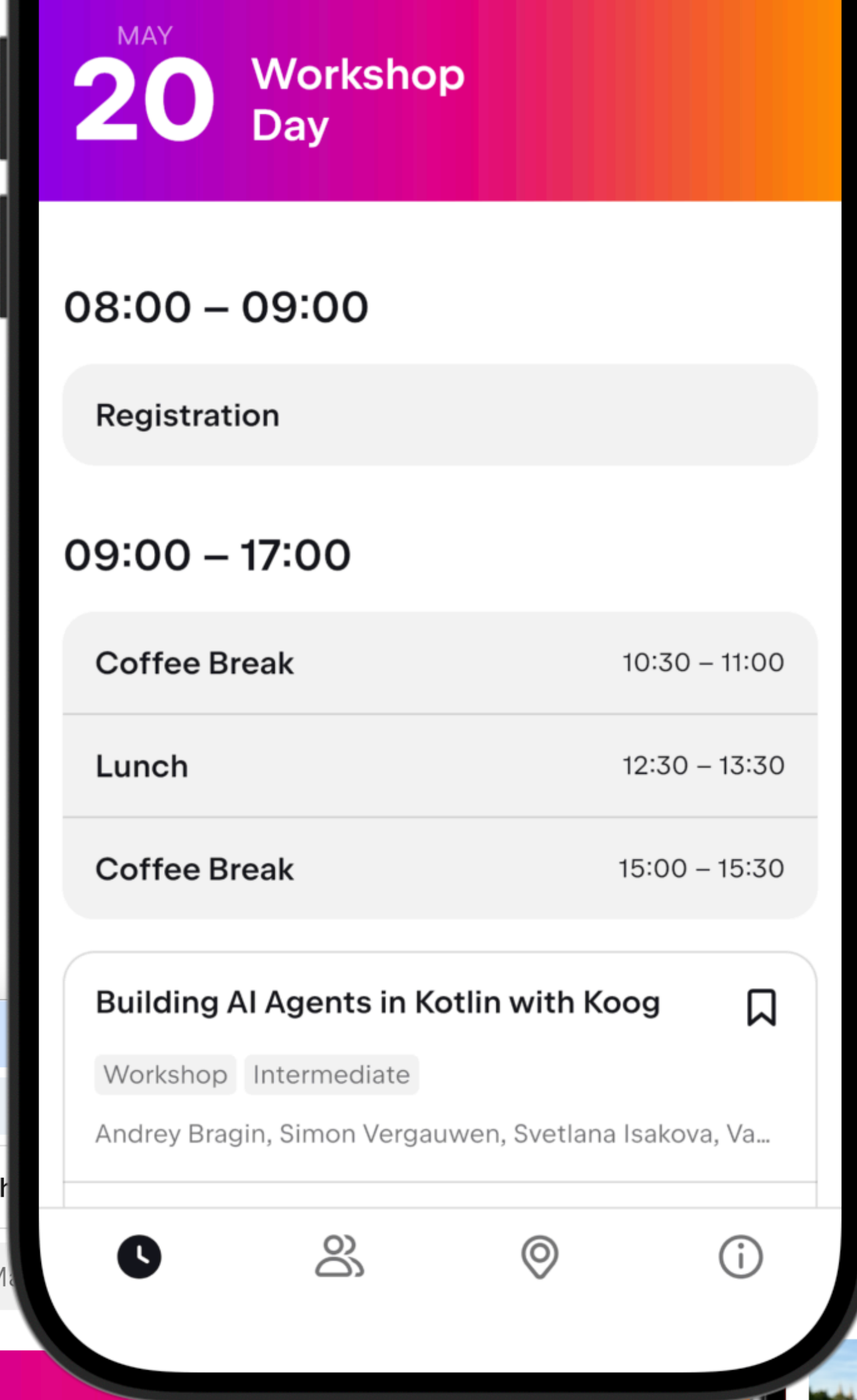
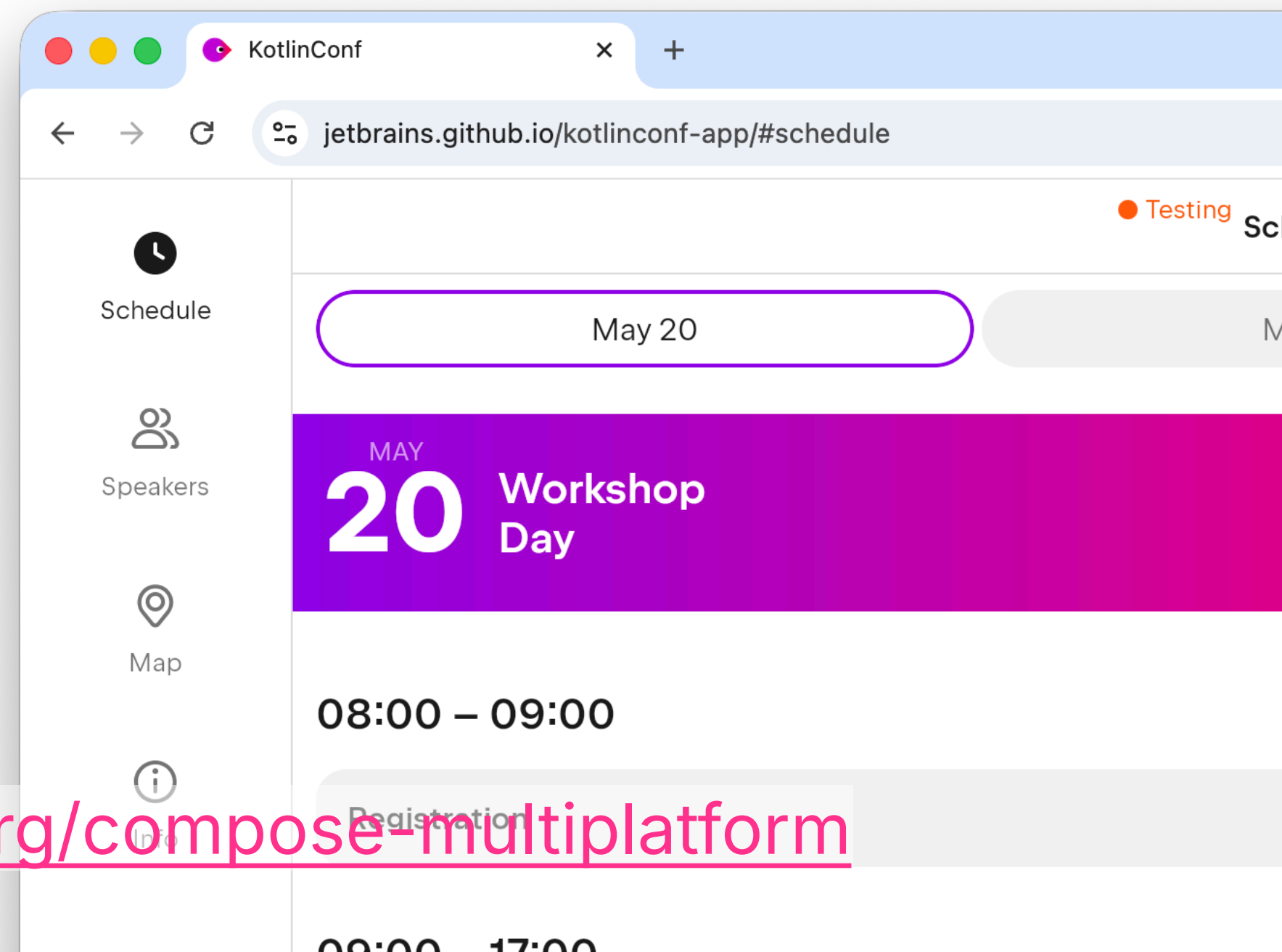


Demo

* github.com/Kotlin/kotlin-wasm-browser-template

* Debug it in DevTools 🖱️ wasmdemo.github.io

Compose Multiplatform



* kotlinlang.org/compose-multiplatform



Demo

- * play.kotl.in/compose
- * github.com/Kotlin/kotlin-wasm-compose-template
- * kotlinconf.com/app
- * github.com/JetBrains/kotlinconf-app

Compose HTML



Demo

Overview

	Browser API / Direct DOM manip.		
Size of distribution	++		
Performance	!+		
Declarative	X		
Maintainability	X		
Shared UI Code	X		

Overview

	Browser API / Direct DOM manip.	Compose web (Canvas-based)	
Size of distribution	++	x	
Performance	!+	++	
Declarative	x	+	
Maintainability	x	++	
Shared UI Code	x	+	

Overview

	Browser API / Direct DOM manip.	Compose web (Canvas-based)	Compose HTML (DOM-based)
Size of distribution	++	X	+
Performance	!+	++	+
Declarative	X	+	+
Maintainability	X	++	?+
Shared UI Code	X	+	X



Kotlin

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The Best UX for end users

The Best DX for developers

Current and Future Works

Areas

Active exploration

Compilation Hints

Branch Hints

SIMD

Multithreading [[wa](#)][[kt](#)]

ESM Integration

Component Model [[wa](#)][[kt](#)]

JSPI

Interop with JS / Browser APIs

Memory Control

Multi-module output [[kt](#)]

Stack Switching [[wa](#)][[kt](#)]

Compact imports

Type Imports

Multibyte Array Access

Areas

Future Work

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Branch Hints [[wa](#)][[kt](#)]

SIMD

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Component Model

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Areas

Under consideration (Follow)

Compilation Hints

Branch Hints

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Multi-module output

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Compact imports [[wa](#)]

Type Imports [[wa](#)]

Multibyte Array Access [[wa](#)]

Here's what we covered:

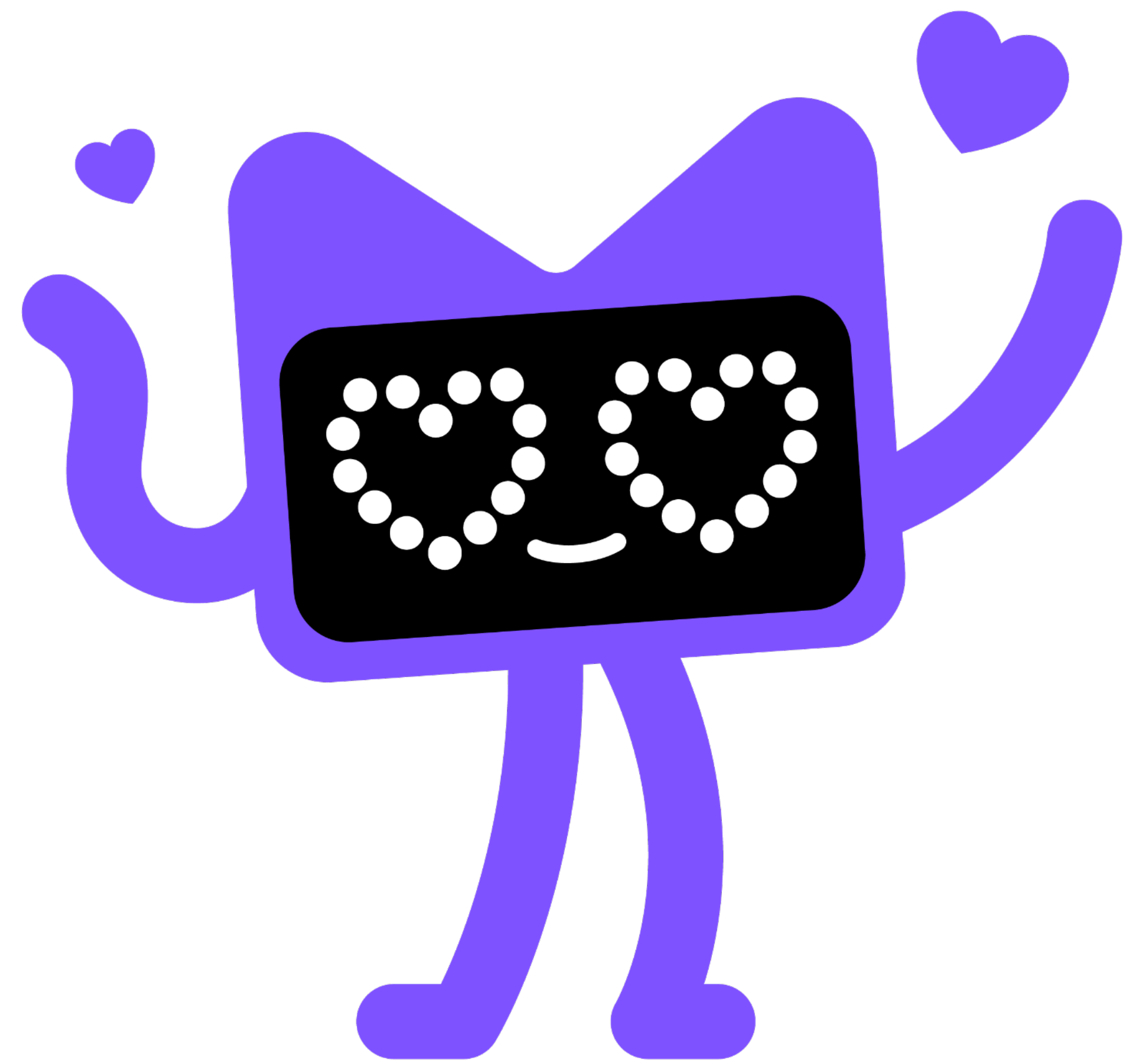
- Ways to build UI for Web apps
- Tooling, IDE, Debugger
- Size of different applications
- Current and future works

kotlin.in/wasm

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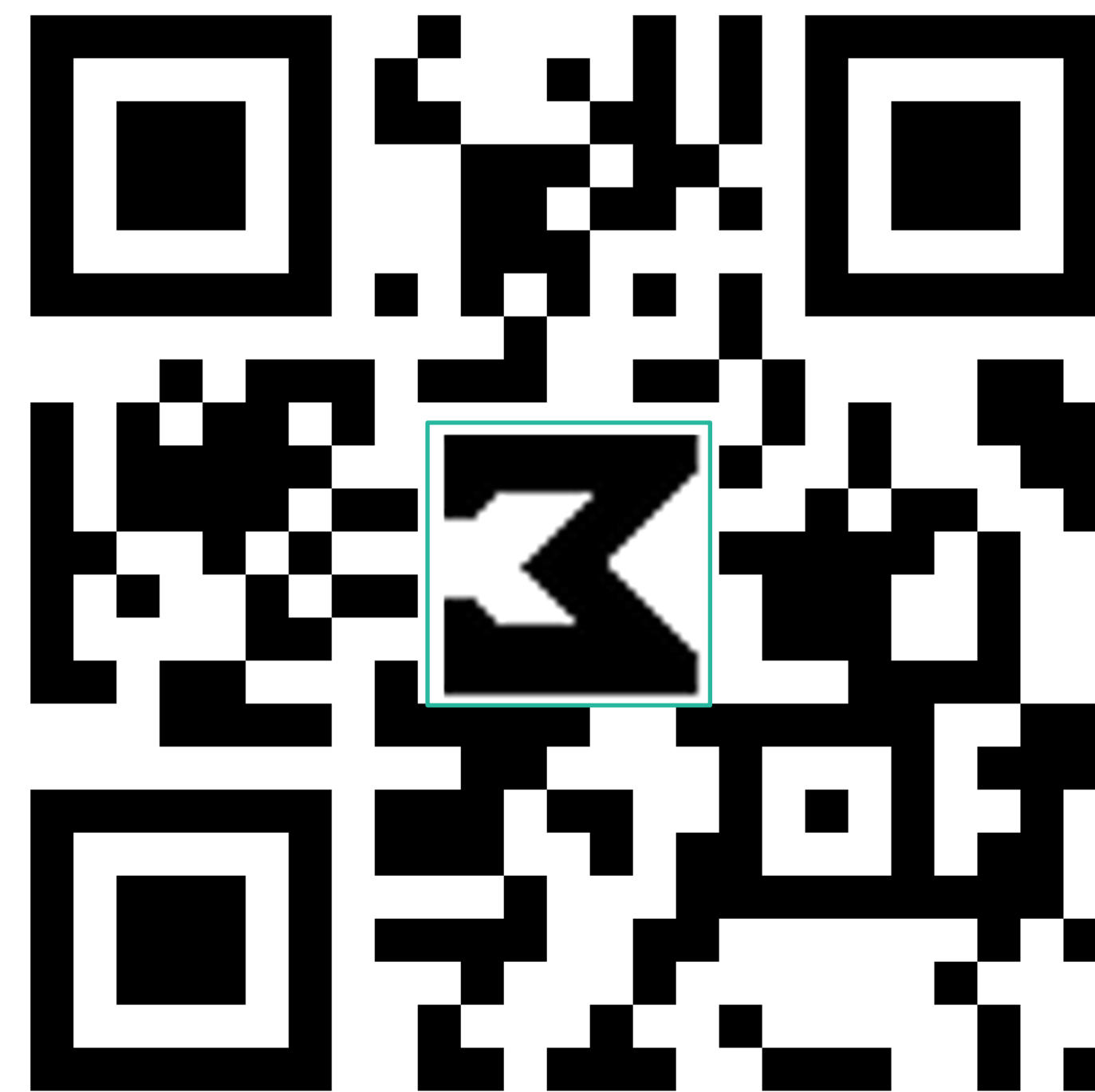
Thank you!

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