Going Multiplatform With Kotlin

Supriya Srivatsa
Concise
Kotlin

Concise

Safe
Concise  Safe  Interoperable
### Most Loved, Dreaded, and Wanted Languages

<table>
<thead>
<tr>
<th>Language</th>
<th>Loved</th>
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</thead>
<tbody>
<tr>
<td>Rust</td>
<td>83.5%</td>
</tr>
<tr>
<td>Python</td>
<td>73.1%</td>
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<tr>
<td>TypeScript</td>
<td>73.1%</td>
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<tr>
<td>Kotlin</td>
<td>72.6%</td>
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<tr>
<td>WebAssembly</td>
<td>69.5%</td>
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<tr>
<td>Rank</td>
<td>Language</td>
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<tr>
<td>1</td>
<td>Kotlin</td>
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<tr>
<td>2</td>
<td>HCL</td>
</tr>
<tr>
<td>3</td>
<td>TypeScript</td>
</tr>
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<td>4</td>
<td>PowerShell</td>
</tr>
<tr>
<td>5</td>
<td>Rust</td>
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<td>6</td>
<td>CMake</td>
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<tr>
<td>7</td>
<td>Go</td>
</tr>
<tr>
<td>8</td>
<td>Python</td>
</tr>
<tr>
<td>9</td>
<td>Groovy</td>
</tr>
<tr>
<td>10</td>
<td>SQLPL</td>
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MULTIPLATFORM
If Alice writes code with bugs, the bugs fix themselves.
Backend Api

{"Chuck Norris knows the last digit of PI.","if Chuck Norris writes code with bugs, the bugs fix themselves.","Chuck Norris can retrieve anything from null.","Chuck Norris can solve the Towers of Hanoi in one move.","Chuck Norris went out of an infinite loop."}
YES. NO. YES. NO!!!
Data Classes
Network Calls
Utils
Common

- Common JVM
- Common Native
- Common JS
Kotlin -> JVM

Kotlin compiles to Java byte code.
Kotlin/Native
Kotlin/Native and iOS
Kotlin/Native and iOS

- Interoperability with Swift and Objective C frameworks
- Generate an Apple framework
Kotlin JS

• Kotlin code is transpiled to Javascript.

```javascript
export function Welcome(props) {
  return <h1>Hello, {props.name}</h1>;
}
```

```kotlin
fun RBuilder.hello(name: String) {
  h1 {
    +"Hello, $name"
  }
}
```
Backend?
The Expect/Actual Mechanism
The Expect/Actual Mechanism

expect fun getUrl()
actual fun getUrl()
Configuring a Kotlin Multiplatform Project
plugins {
    id("kotlin-multiplatform")
}
plugins {
    id("kotlin-multiplatform")
}

targets {
    jvm()
    js()
    iosX64("ios") {
        compilations.main.outputKinds("framework")
    }
}
Kotlin Multiplatform vs Cross-platform apps
And More...
Caveats
Caveats

• How much is too much?

• Every platform is different

• Experimental
Thank You

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