State of Kotlin

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Introduction

Kotlin is a statically typed programming language that runs on the **JVM**

- Inter-operable with Java
- Clean syntax
- Higher order Functions and Extension Functions
- Null safety
- Default and named arguments
- Data classes, better suited for DSLs ...

Code Sample I

```kotlin
data class Ninja(val name: String, val weapons: List)

val ninja = Ninja("Fujibayashi", listOf("Sheriuken", "Katana"))
println("$ninja")
println("$ninja.name")
```

```
Ninja(name=Fujibayashi, weapons=[Sheriuken, Katana])
Fujibayashi
```

```kotlin
ninja.weapons.forEach { w -> w.holster() }
```

Code Sample II

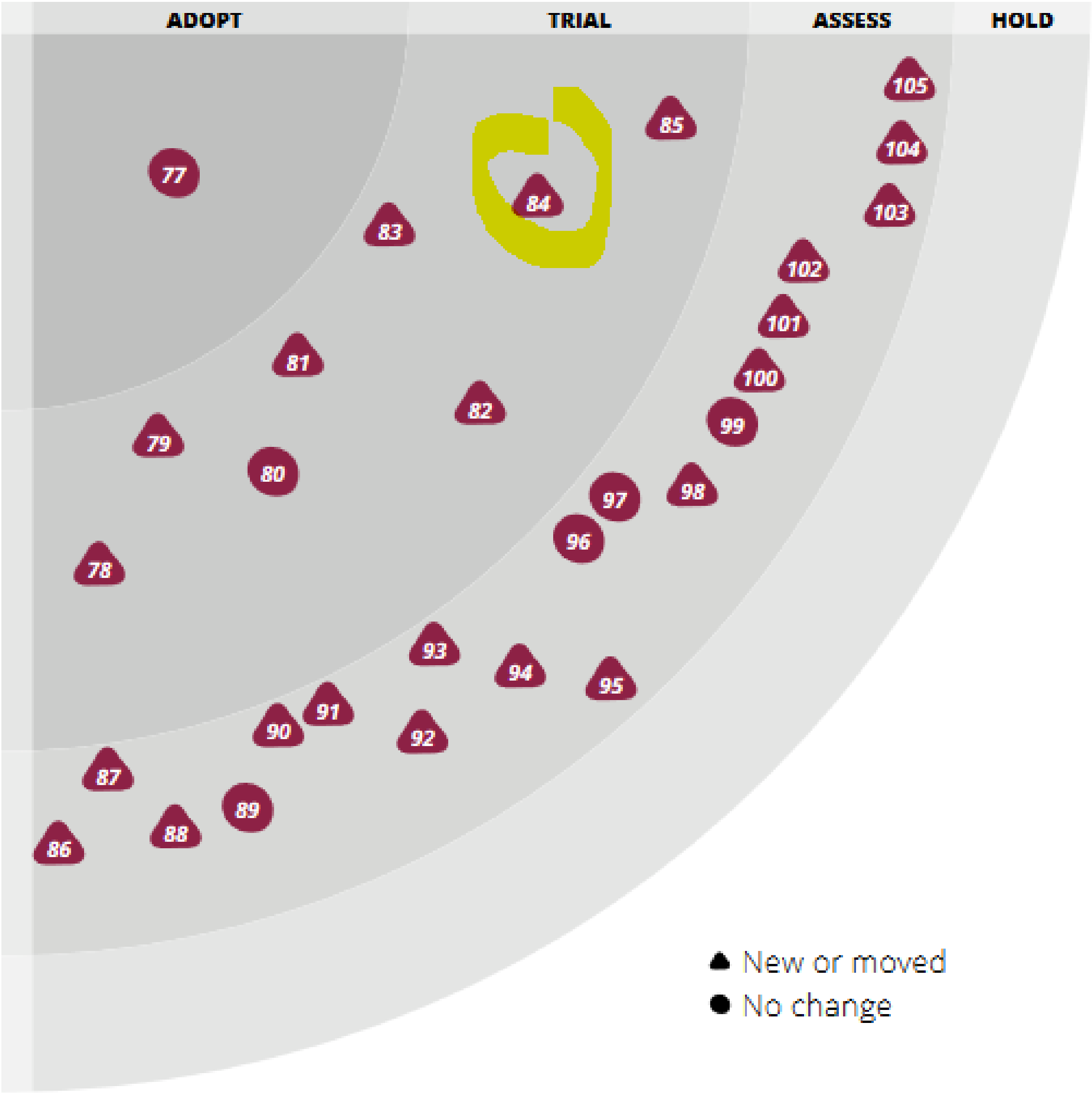
```kotlin
// == Dojo.kt
interface Dojo {
  @GET("dojo/ninjas/{name}")
  fun getNinja(@Path("name") name: String): Ninja
}

// == Repository.kt
val ninja = dojo.getNinja("Kumawakamaru")
log.info("I see $ninja") // Requirements?!
```

Code Sample III (Null Safety)

```
var a: String = "abc"
a = null // compilation error

var b: String? = "abc"
b = null
a = b // compilation error

b?.length // safe call

val l: Int
l = b?.length ?: -1 // Elvis operator
```

Code Sample IV (DSL)

```
val v = village {
          house {
              person {
                  name = "Kumawakamaru"
                  age = 31
              }
              person {
                  name = "Bob"
                  age = 45
              }
              gold {
                  amount = 500
              }
          }
        }
```


ADOPT
TRIAL
ASSESS
HOLD
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105
▲ New or moved
● No change

Strenghts

- Many improved features over Java
- Can be gradually adopted
- Very good IDE support (JetBrains)
- Pushed by Google (Android)
- First class Spring support

Weaknesses

- Devs need training (to profit from new concepts) -> cost
- Customer acceptance still low (it's still "risky" in the Java World)
- Some dark areas, not all frameworks integrate nicely with Kotlin
- New Best-Pracices still need to be established (well understood)

Scenarios

devs:

```
kotlin.try{ it.rocks() }
```

projects:

Use Kotlin in wherever developer and customer acceptance is given. Projects may need bigger initial efford, will yield better quality over time.

Kotlin