

SAN ANTONIO JUG

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**POLYGLOT DEVELOPMENT**

WHAT?

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## ALTERNATE JVM LANGUAGES

- ▶ Kotlin
- ▶ Groovy
- ▶ Scala
- ▶ Clojure

## WHY?

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- ▶ Because devs like to try new stuff!
- ▶ Less code: easier to write
- ▶ Less code: easier to read
- ▶ It all turns into java bytecode and can be run in existing environments

## HOW?

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- ▶ IntelliJ: built-in Groovy and Kotlin support
- ▶ Put the classes inline with your Java code, or put them in their own `src/groovy` or `src/kotlin` folders
- ▶ Build! It all ends up as `.class` files to be executed by any JVM

## THE GOOD STUFF: EXAMPLES!

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- ▶ Kotlin for POJOs
- ▶ Groovy for unit testing

# A LITTLE BIT ABOUT KOTLIN

- ▶ JetBrains baby: wanted language features of Scala, with the fast compile time of Java
- ▶ Fully supported in Android Studio 3.0, for creating Java 6-or Java 8-compatible bytecode
- ▶ Can also be compiled to JavaScript source
- ▶ My favorite feature: ? (No more ugly null checks!)
  - ▶ ?. safe navigation operator
  - ▶ ?: null coalescing operator (Elvis operator)

# KOTLIN EXAMPLES!

## KOTLIN POJO

```
package models
```

```
data class MinMaxPair(val min: String, val max: String)
```

Just like Java!

Class name

Constructor with properties

Automatically creates:

- ▶ equals()/hashCode()
- ▶ toString()
- ▶ getters for all fields
- ▶ setters for var fields
- ▶ copy()



# NO MORE NULL CHECKS

```
var a: String = "abc"  
a = null // error  
val l = a.length
```

```
var b: String? = "abc"  
b = null // ok  
val l = b.length // error: variable 'b' can be null  
val l = b?.length  
val l = b?.length ?: -1 // Elvis operator
```

```
bob?.department?.head?.name
```

# A LITTLE BIT ABOUT GROOVY

- ▶ Dynamic
- ▶ More concise than Java
- ▶ Most Java is valid Groovy - so if you don't know how to do it in Groovy, just do it in Java!
- ▶ Language of Gradle, the bestest, most superiorist build tool, please stop using Maven ... or Ant

# GROOVY EXAMPLES!

# GROOVY SPOCK UNIT TESTING

“Spock unit tests are the best thing ever, and whomever is still writing JUnit tests are a bunch of neanderthals”

– my husband, who gave up his coding career to instead be a novelist

## GROOVY SPOCK UNIT TESTING

[HTTPS://GITHUB.COM/SPOCKFRAMEWORK/SPOCK-EXAMPLE](https://github.com/spockframework/spock-example)

**QUESTIONS?**