BEM VINDO AO KOTLIN

QUEM SOU EU

LARISSA

DEV MOBILE @DBSERVER

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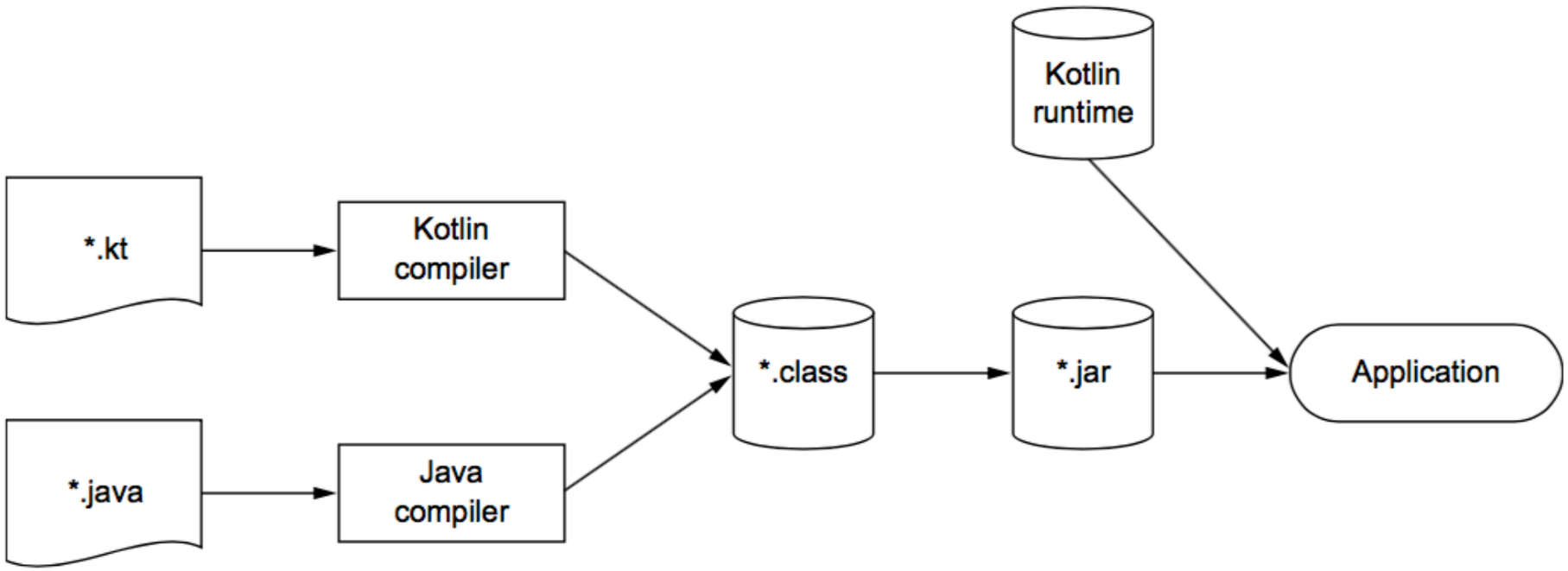
INTRO


Kotlin
runtime
*.kt
Kotlin
compiler
*.class
*.jar
Application
*.java
Java
compiler

FUNÇÕES

```
fun maxOf(a: Int, b: Int): Int {
    if (a > b) {
        return a
    } else {
        return b
    }
}
```

```
fun max(a: Int, b: Int): Int
{ return if (a > b) a else
    b
}
```

```
fun max(a: Int, b: Int): Int = if (a > b) a else b
```

```
fun max(a: Int, b: Int) = if (a > b) a else b
```

VARIÁVEIS

- ***val*** (value) - Imutável
- ***var*** (variable) - Mutável

```
val a: Int = 1
val b = 2
val c: Int
c = 3

var x = 5
x += 1
```

NULOS

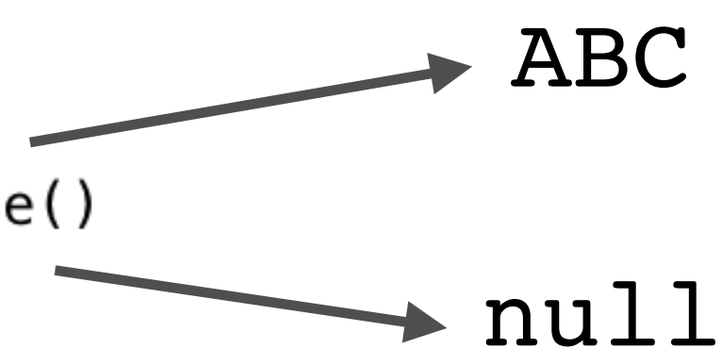
```
var a: String = "abc"
a = null // error

var b: String? = "abc"
b = null // ok

val l = b?.length

val l = b!!.length //NPE se b == null
```

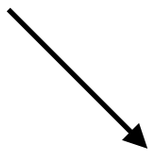
```
fun printAllCaps(s: String?) {
    val allCaps: String? = s?.toUpperCase()
    println(allCaps)
}
```



ELVIS OPERATOR ?:

```
val l = b?.length ?: -1
```

`== null` ⟶ `-1`



`!= null` ⟶ `b?.lenght`

CLASSES

```
class Person(var name: String, var lastName: String, var age: Int)
```

```
class Person(var name: String, var lastName: String? = null, var age: Int = 0)
```

```
var p1 = Person("John")
var p2 = Person("John", "Doe")
var p3 = Person("John", "Doe", 30)
println("${p1.name} ${p1.lastName ?: "no last name" } - Age: ${p1.age}")
println("${p2.name} ${p2.lastName ?: "no last name" } - Age: ${p2.age}" )
println("${p3.name} ${p3.lastName ?: "no last name" } - Age: ${p3.age}")
```

```
John no last name - Age: 0
John Doe - Age: 0
John Doe - Age: 30
```

```
class Person(var name: String) {
    var age: Int = 0
    set(value) {
        field = if (value <= 0) 0 else value
    }

    var lastName: String? = null

    constructor(name: String, lastName: String, age: Int) : this(name) {
        this.name = name
        this.age = age
        this.lastName = lastName
    }
}

fun main(args: Array<String>) {
    var p1 = Person("John")
    var p2 = Person("John", "Doe", -2)
    var p3 = Person(lastName = "John", name = "Doe", age = 30)
    println("${p1.name} ${p1.lastName ?: "no last name" } - Age: ${p1.age}")
    println("${p2.name} ${p2.lastName ?: "no last name" } - Age: ${p2.age}" )
    println("${p3.name} ${p3.lastName ?: "no last name" } - Age: ${p3.age}")
}
```

```
John no last name - Age: 0
John Doe - Age: 0
Doe John - Age: 30
```

EXTENSION FUNCTIONS

AgeHelper.kt

```
fun Int.faixaEtaria(): String {
    return when {
        this < 12 -> "criança"
        this < 18 -> "adolescente"
        this < 60 -> "adulto"
        else -> "velho"
    }
}

fun Int.maiorDeIdade() = this > 18


var p1 = Person("John", "Doe", 35)
var p2 = Person(lastName = "Doe", name = "Mary", age = 11)
println("${p1.name} é ${p1.age.faixaEtaria()}")
println("${p2.name} é maior de idade? ${p2.age.maiorDeIdade()}")
```

```
John é adulto
Mary é maior de idade? false
```

LOOPS

```
for (i in 0..4) print(i)
```

```
01234
```

```
for (i in 0 until 4) print(i)
```

```
0123
```

```
for (i in 0...4 step 2) print(i)
```

```
for (i in 4 downTo 0 step 2) print(i)
```

LOOPS IN COLLECTIONS

```
val list = arrayOf("Android", "Kotlin", "JetBrains", "Russia")
for(i in list){
    print("$i; ")
}
```

```
list.forEach { print("$it; ") }
```

```
Android; Kotlin; JetBrains; Russia;
```

```
list.filter { it.length > 6 }.forEach { print("$it; ") }
```

```
Android; JetBrains;
```

WHEN

```kotlin
val list = arrayOf("Android", "Kotlin", "JetBrains", "Russia")

when {
    "Android" in list -> println("Google")
    "Kotlin" in list -> println("A ilha?")
}
```

```kotlin
fun describe(obj: Any): String =
        when (obj) {
            in 1..5 -> "From one to five"
            "Hello" -> "Greeting"
            is Long -> "Long"
            !is String -> "Not a string"
            else -> "Unknown"
        }
```

```kotlin
println(describe(3))
println(describe("Hello"))
println(describe(100L))
println(describe(10))
println(describe("other"))
```

```
From one to five
Greeting
Long
Not a string
Unknown
```

REFERÊNCIAS

Kotlin in Action (2016) : Dmitry Jemerov, Svetlana Isakova

https://kotlinlang.org

https://try.kotlinlang.org/

https://fabiomsr.github.io/from-java-to-kotlin/index.html