Deep Dive Kotlin: du Hello World au ByteCode

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Qu'est-ce que le ByteCode Java ?

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Introduction Kotlin

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Développé par JetBrains

- 2016:

  <mark>v1.0</mark>

  Supporté par Spring Framework

- 2017:

  <mark>v1.1</mark>: coroutines, …

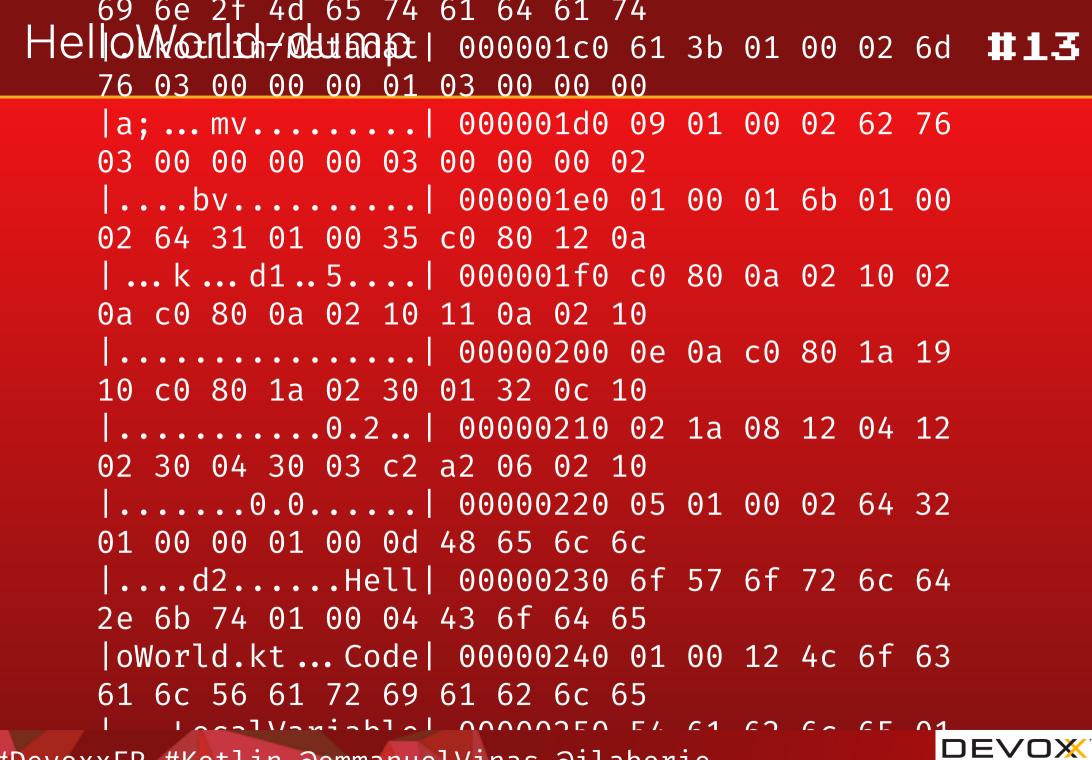 Officiellement supportee par Google

  <mark>v1.2</mark>: multiplatform

```
package _00_helloworld

fun main(args: Array<String>) {
    println("Hello Devoxx")
}
```

```
                                69 6e 2f 4d 65 74 61 64 61 74
|Kotlin/Metadat|  000001c0 61 3b 01 00 02 6d
76 03 00 00 00 01 03 00 00 00
|a;...mv..........|  000001d0 09 01 00 02 62 76
03 00 00 00 00 03 00 00 00 02
|....bv...........|  000001e0 01 00 01 6b 01 00
02 64 31 01 00 35 c0 80 12 0a
|...k...d1..5....|  000001f0 c0 80 0a 02 10 02
0a c0 80 0a 02 10 11 0a 02 10
|................|  00000200 0e 0a c0 80 1a 19
10 c0 80 1a 02 30 01 32 0c 10
|............0.2..|  00000210 02 1a 08 12 04 12
02 30 04 30 03 c2 a2 06 02 10
|.......0.0......|  00000220 05 01 00 02 64 32
01 00 00 01 00 0d 48 65 6c 6c
|....d2......Hell|  00000230 6f 57 6f 72 6c 64
2e 6b 74 01 00 04 43 6f 64 65
|oWorld.kt...Code|  00000240 01 00 12 4c 6f 63
61 6c 56 61 72 69 61 62 6c 65
|...LocalVariable|  00000250 54 61 62 6c 65 01
```

final class _00_helloworld.HelloWorldKt minor version
#1 = Utf8 _00_helloworld/HelloWorldKt #2 = Class #1 /
java/lang/Object #5 = Utf8 main #6 = Utf8 ([Ljava/lan
= String #8 // args #10 = Utf8 kotlin/jvm/internal/In
checkParameterIsNotNull #13 = Utf8 (Ljava/lang/Object
(Ljava/lang/Object;Ljava/lang/String;)V #15 = Methodr
(Ljava/lang/Object;Ljava/lang/String;)V #16 = Utf8 He
= Class #18 // java/lang/System #20 = Utf8 out #21 =
out:Ljava/io/PrintStream; #23 = Fieldref #19.#22 // j
= Class #24 // java/io/PrintStream #26 = Utf8 println
(Ljava/lang/Object;)V #29 = Methodref #25.#28 // java
#31 = Utf8 Lkotlin/Metadata; #32 = Utf8 mv #33 = Inte
Utf8 k #39 = Utf8 d1 #40 = Utf8 \n\n \n\n \n \n (
Code #45 = Utf8 LocalVariableTable #46 = Utf8 LineNum
SourceFile #49 = Utf8 SourceDebugExtension #50 = Utf8
main(java.lang.String[]); descriptor: ([Ljava/lang/St
args_size=1 0: aload_0 1: ldc #9 // String args 3: in
kotlin/jvm/internal/Intrinsics.checkParameterIsNotNul
8: astore_1 9: getstatic #23 // Field java/lang/Syste

```java
package _00_helloworld;

import kotlin.Metadata;
import kotlin.jvm.internal.Intrinsics;
import org.jetbrains.annotations.NotNull;

@Metadata(
    mv = {1, 1, 9},
    bv = {1, 0, 2},
    k = 2,
    d1 = {"\u0000\u0012\n\u0000\n\u0002\u0010\u0002\n\u0000\n\u000
    d2 = {"main", "", "args", "", "", "([Ljava/lang/String;)V"}
)
public final class HelloWorldKt {
    public static final void main(@NotNull String[] args) {
        Intrinsics.checkParameterIsNotNull(args, "args");
        String var1 = "Hello Devoxx";
        System.out.println(var1);
    }
}
```

Les bases

NULL-SAFETY

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Fonction

Lambda

Class

Types

Extension de fonction

Structure

Pause

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ByteCode Android

Collection

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Delegate

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Plus sur les fonctions

Serialization

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Coroutines

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DSL

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Conclusion