



Курс Kotlin Jetpack Compose

Лекция 2

Lecture 2

Практикум

Practice Session

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JetpackCompose <= (Kotlin && Android)



Целевая аудитория / Target audience

- Энтузиасты программирования на Kotlin для Android, желающие следовать современным принципам разработки пользовательских интерфейсов (UI) с использованием библиотеки Jetpack Compose
- Kotlin enthusiasts who target their applications to Android OS following modern Jetpack Compose UI principles

Девиз (Motto):

Machen Sie es mit uns, machen Sie es wie wir, machen Sie es besser als wir!



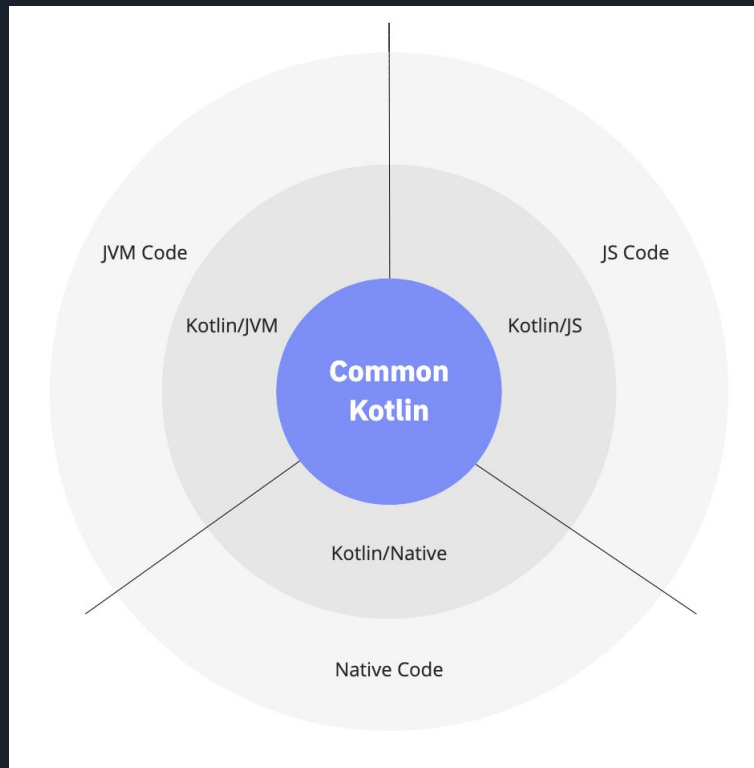
План практикума / The Practice Session Plan

- Демонстрация работы компиляторов на Windows 11
- Демонстрация работы компиляторов на Linux Ubuntu
- Демонстрация работы компиляторов на MacOS Mojave
- Демонстрация работы компиляторов на MacOS BigSur

- Demo of Kotlin compilers on Windows 11
- Demo of Kotlin compilers on Linux Ubuntu
- Demo of Kotlin compilers on MacOS Mojave
- Demo of Kotlin compilers on MacOS BigSur



Триединство компиляторов Kotlin / The Trinity of Kotlin Compilers



(см. <https://kotlinlang.org/docs/multiplatform.html#how-kotlin-multiplatform-works>)



Тестирование компиляторов / Testing Compilers

`kotlinc -version` or `kotlinc-jvm -version` // Kotlin/JVM

`kotlinc-js -version` //Kotlin/JS

`kotlinc-native -version` or `konanc -version` //Kotlin/Native

Тестирование / Testing: demo_compilers/show_compilers.sh

github.com/DmitryMakar/demo-compilers

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DmitryMakar / demo-compilers Public

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main 1 branch 0 tags Go to file Add file <> Code

DmitryMakar kotlin_native/run.sh corrected 3c09c52 3 days ago 4 commits

kotlin_js	All project files and folders added	last week
kotlin_jvm	All project files and folders added	last week
kotlin_native	kotlin_native/run.sh corrected	3 days ago
.gitignore	Initial commit	last week
README.md	kotlin_native/run.sh corrected	3 days ago
build_all.sh	All project files and folders added	last week
clean_all.sh	All project files and folders added	last week
run_all.sh	All project files and folders added	last week
show_compilers.sh	All project files and folders added	last week

README.md

demo-compilers

A simple Kotlin environment demo and test tool checking Kotlin compiler's status on Linux / MacOS / Windows To build test Hello World applications with Kotlin/JVM, Kotlin/JS, and Kotlin/Native and then output corresponding system information, start the utility with

1. Install and run (Windows) GitBash or the like command-line environment:

<https://git-scm.com/downloads>

2. git clone
<https://github.com/DmitryMakar/demo-compilers.git>
3. cd demo_compilers
4. ./show_compilers.sh

Тестирование: примеры исходников

Testing: Source Code Examples

```
hello.kt x hello.kt x misc.xml x workspace.xml x Hi
fun main() {
    println("Hello from Windows Kotlin/Native!")
    println("Please introduce yourself:")
    println("Have a nice day, ${readln()}!")
    println("\nPress any key to return")
    readln()
}
```

```
hellojs.kt x misc.xml x workspace.xml x Hi
fun main() {
    println("Hello from Windows Kotlin/JS!")
}
```



Необходимые опции компиляторов / Mandatory Compiler Options

Компилятор Compiler	Пример строки сборки Build command example	Строка запуска Run command
Kotlin/JVM	<code>kotlinc-jvm -include-runtime hello.kt -d hello.jar</code>	<code>java -jar hello.jar</code>
Kotlin/JS	<code>kotlinc-js hellojs.kt -Xuse-deprecated-legacy-compiler -module-kind commonjs -output hello.js npm install kotlin</code>	<code>node hello.js</code>
Kotlin/Native	<code>kotlinc-native hello.kt -o hello</code>	<code>hello.exe, ./hello.exe, ./hello.kexe</code>

Тестирование: сгенерированный архив hello.jar

Testing: helo.jar Archive Generated

```
ArcLite:zip:hello.jar
n      Name
..
kotlin
META-INF
HelloKt.class

Up 07.02.23 13:50
Bytes: 1,04 K, files: 1, folders: 2

ArcLite:zip:hello.jar:\kotlin
n      Name
..
annotation
collections
comparisons
concurrent
contracts
coroutines
enums
experimental
internal
io
jdk7
js
jvm
math
properties
random
ranges
reflect
sequences
streams
system
text
time
_Assertions.class
_ArrayIntrinsicsKt.class
_BuilderInference.class
_CharCodeJVMKt.class
_CharCodeKt.class
_CompareToKt.class
_ContextFunctionTypeParams.cla}
_DeepRecursiveFunction.class
_DeepRecursiveKt.class
_DeepRecursiveScope.class
_DeepRecursiveScopeImpl$crossF}
_DeepRecursiveScopeImpl.class
_Deprecated.class
_DeprecatedSinceKotlin.class
_DeprecationLevel.class
_DslMarker.class
_ExceptionsKt.class
_ExceptionsKt__ExceptionsKt.cl}
_ExperimentalMultiplatform.cla}
_ExperimentalStdlibApi.class
_ExperimentalSubclassOptIn.cla}
_ExperimentalUnsignedTypes.cla}

Up 07.02.23 13:50
Bytes: 280 K, files: 113, folders: 23

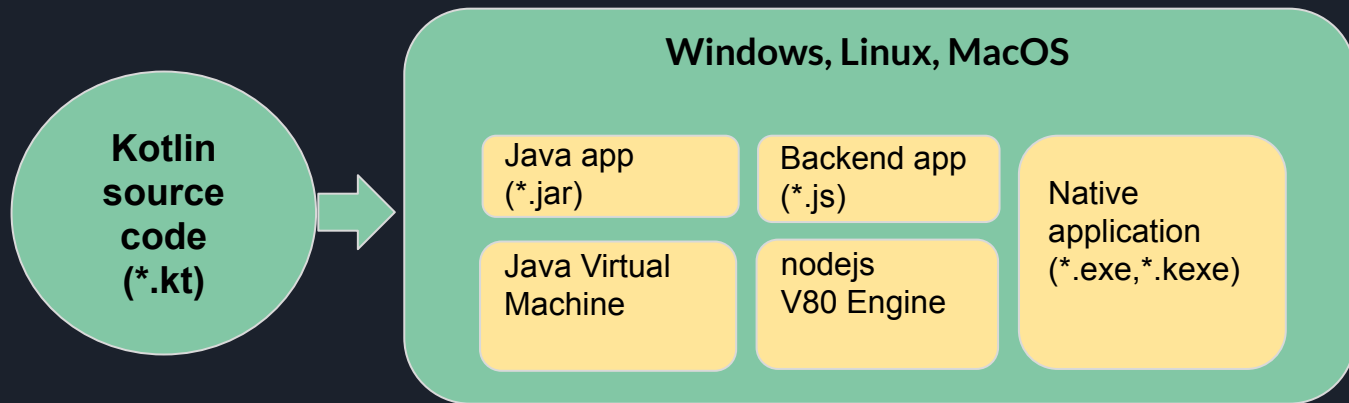
\kotlin>
1Help 2UserMn 3View 4Edit 5Copy 6RenMov 7MkFold 8Delete 9ConfMn 10Quit 11Plugin 12Screen
```

Тестирование: сгенерированный JavaScript / Testing: JavaScript Generated

K: > Kotlin > Compilers > JS hello.js > ...

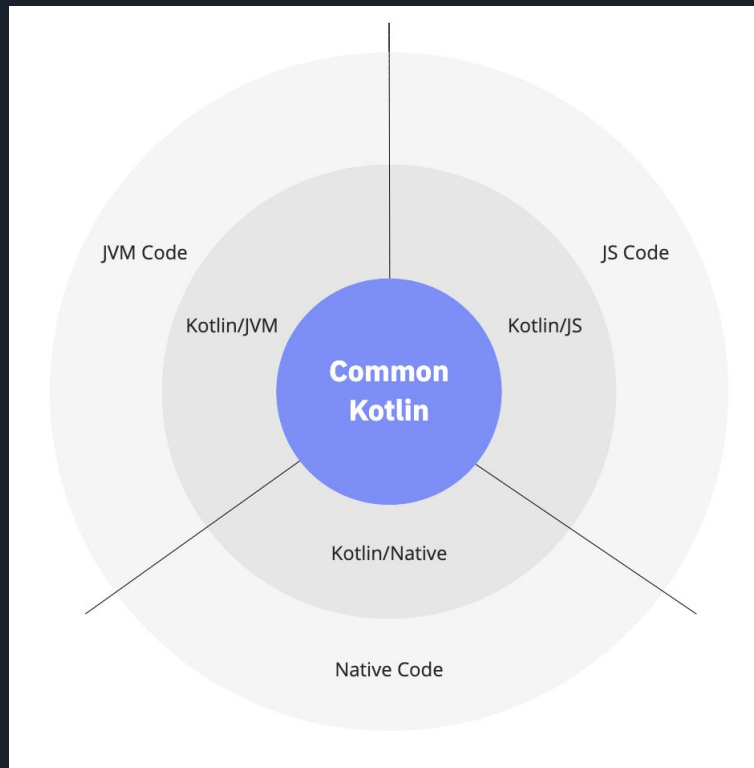
```
1  (function (_, Kotlin) {  
2      'use strict';  
3      var println = Kotlin.kotlin.io.println_s8jyv4$;  
4      function main() {  
5          println('Hello from Windows Kotlin/JS!');  
6      }  
7      _.main = main;  
8      main();  
9      Kotlin.defineModule('hello', _);  
10     return _;  
11 }(module.exports, require('kotlin'));  
12
```

Кросс- и мультиплатформенность Kotlin / Cross- and Multi-Platform Kotlin Builds



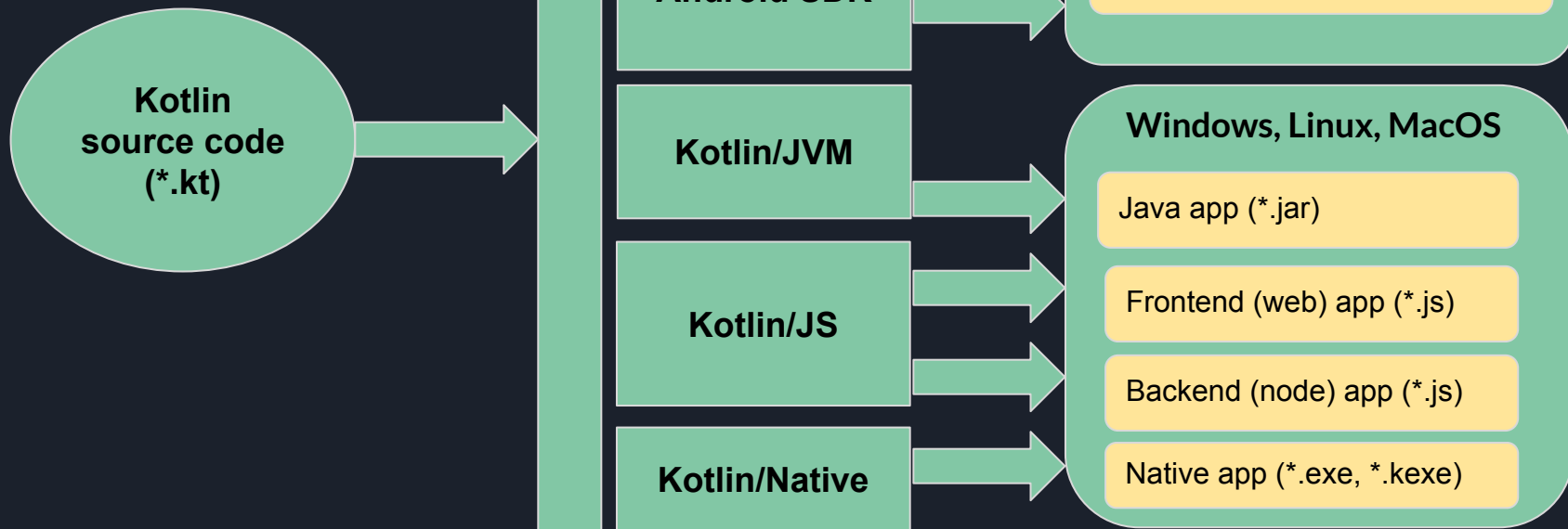


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Варианты сборки / Build Variants





Следующее видео / Video to Follow

- Лекция 3 Основы Gradle и Git (Lecture 3 Gradle & Git Basics)

P.S. Презентация доступна для скачивания здесь:

P.S. Download this presentation from:

https://dmpsy.club/references/Kotlin/lesson_002_compilers_practice.pdf

<https://dmpsy.club>

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