

JETBRACK COMPOSE ДЛЯ DESKTOP: ДЕЛАТЬ UI ПРОСТО И ПРИЯТНО

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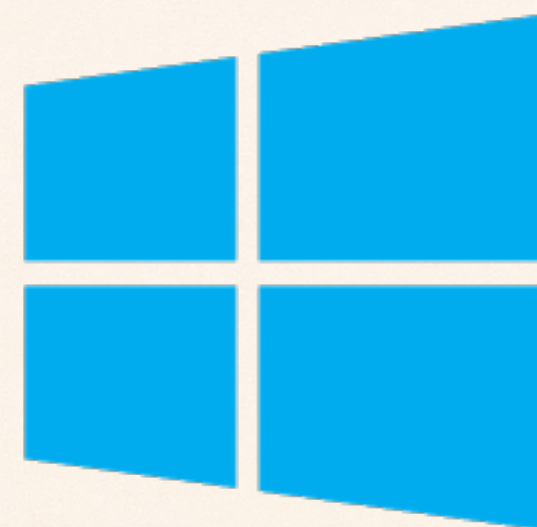
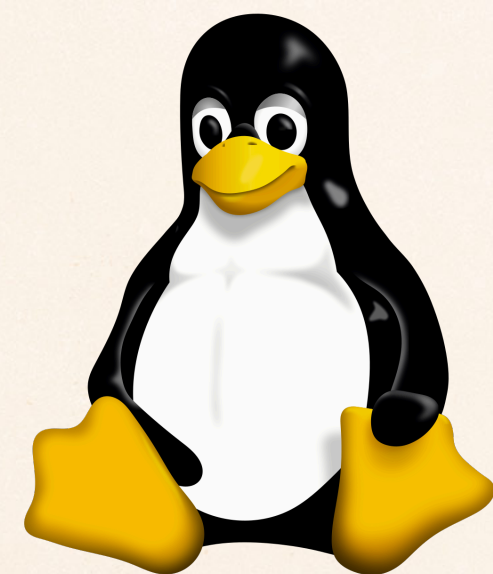
JETRACK COMPOSE
КОТОРЫЙ МЫ ЗНАЕМ И
ЛЮБИМ...



ЧТО МЫ ХОТИМ СОЗДАТЬ?



ДЛЯ ВСЕХ ОСНОВНЫХ DESKTOP (И НЕ ТОЛЬКО) ПЛАТФОРМ



СОВРЕМЕННЫЙ DSL ДЛЯ СОЗДАНИЯ UX/UI НА КОТЛИН



ДЕКЛАРАТИВНЫЙ И РЕАКТИВНЫЙ ФРЕЙМВОРК, УДОБНЫЙ ДЛЯ РАЗРАБОТЧИКА



БЫСТРЫЙ И КРАСИВЫЙ U1



С УДОБНОЙ МИГРАЦИЕЙ И ИНТЕРОПЕРАБЕЛЬНОСТЬЮ С SWING И JAVAFX



ПРИМЕР КОДА

```
fun main() = Application {  
    val content = remember { ContentState.applyContent() }  
    val icon = remember(::icAppRounded)  
    if (content.isAppReady()) {  
        ComposableWindow(  
            size = getPreferredWindowSize(800, 1000),  
            icon = icon  
        ) {  
            BuildAppUI(content)  
        }  
    } else {  
        ComposableWindow(  
            size = getPreferredWindowSize(800, 300),  
            undecorated = true,  
            icon = icon,  
        ) {  
            SplashUI()  
        }  
    }  
}
```

АРХИТЕКТУРНЫЕ РЕШЕНИЯ

ОБЩАЯ КОДОВАЯ БАЗА С ANDROID COMPOSE. KOTLIN MULTIPLATFORM



ПЛАГИН КОМПИЛЯТОРА КОТЛИН ІR БЕКЭНД JVM, JS И NATIVE



```
fun main() {  
    val s = "Hello Mobius"  
    println(s.split('o'))  
}
```

```
-----  
-- IR for <program> after Expect declarations removing  
MODULE_FRAGMENT name:<program>  
FILE fqName:<root> fileName:/tmp/a.kt  
FUN name:main visibility:public modality:FINAL <> () returnType:kotlin.Unit  
BLOCK_BODY  
VAR name:s type:kotlin.collections.List<kotlin.String> [val]  
CALL 'public final fun split (vararg delimiters: kotlin.Char, ignoreCase: kotlin.Boolean, limit: kotlin.Int): List<kotlin.String>'  
  $receiver: CONST String type=kotlin.String value="Hello Mobius"  
  delimiters: VARARG type=kotlin.CharArray varargElementType=kotlin.Char  
  CONST Char type=kotlin.Char value='o'  
CALL 'public final fun println (message: kotlin.Any?): kotlin.Unit declared in kotlin.io' type=kotlin.Unit original  
message: GET_VAR 'val s: kotlin.collections.List<kotlin.String> [val] declared in <root>.main' type=kotlin.collections.List
```

FILE fqName:<root> fileName:/tmp/a.kt

FUN name:main visibility:public modality:FINAL <> () returnType:kotlin.Unit

BLOCK_BODY

VAR name:s type:kotlin.collections.List<kotlin.String> [val]

CALL 'public final fun split\$default (vararg delimiters: kotlin.Char, ignoreCase: kotlin.Boolean, limit: kotlin.Int, \$receiver: CONST String type=kotlin.String value="Hello Mobius"

delimiters: BLOCK type=kotlin.CharArray origin=null

VAR IR_TEMPORARY_VARIABLE name:tmp0_\$elem type:kotlin.Char [var]

CONST Char type=kotlin.Char value='o'

VAR IR_TEMPORARY_VARIABLE name:tmp1_\$array type:kotlin.CharArray [var]

CONSTRUCTOR_CALL 'public constructor <init> (size: kotlin.Int) declared in kotlin.CharArray' type=kotlin.CharArray
size: CONST Int type=kotlin.Int value=1

CALL 'public final fun set (index: kotlin.Int, value: kotlin.Char): kotlin.Unit [external] declared in kotlin.CharArray
\$this: GET_VAR 'var tmp1_\$array: kotlin.CharArray [var] declared in <root>.main' type=kotlin.CharArray origin=null
index: CONST Int type=kotlin.Int value=0

value: GET_VAR 'var tmp0_\$elem: kotlin.Char [var] declared in <root>.main' type=kotlin.Char origin=null

GET_VAR 'var tmp1_\$array: kotlin.CharArray [var] declared in <root>.main' type=kotlin.CharArray origin=null

ignoreCase: CALL 'internal final fun reinterpret <T, R> (): R of kotlin.native.internal.reinterpret [external] declared in kotlin.Boolean
<T>: kotlin.Boolean
<R>: kotlin.Boolean

\$receiver: CONST Boolean type=kotlin.Boolean value=false

limit: CALL 'internal final fun reinterpret <T, R> (): R of kotlin.native.internal.reinterpret [external] declared in kotlin.Int
<T>: kotlin.Int
<R>: kotlin.Int

\$receiver: CONST Int type=kotlin.Int value=0

\$mask0: CONST Int type=kotlin.Int value=6

CALL 'public final fun println (message: kotlin.Any?): kotlin.Unit declared in kotlin.io' type=kotlin.Unit origin=null
message: GET_VAR 'val s: kotlin.collections.List<kotlin.String> [val] declared in <root>.main' type=kotlin.collections.List

RETURN type=kotlin.Nothing from='public final fun main (): kotlin.Unit declared in <root>'

GET_OBJECT 'CLASS OBJECT name:Unit modality:FINAL visibility:public superTypes:[kotlin.Any]' type=kotlin.Unit





















ОТРИСОВКА ЧЕРЕЗ SKIA



АВТОМАТИЧЕСКОЕ СОЗДАНИЕ САМОДОСТАТОЧНЫХ ПРИЛОЖЕНИЙ JLINK + JPACKAGE












УДОБНОЕ СОЗДАНИЕ НОВЫХ ПРОЕКТОВ ЧЕРЕЗ ВИЗАРД В IDEA





-  Java
 -  Maven
 -  Gradle
 -  Java FX
 -  Android
 -  IntelliJ Platform Plugin
-
-  Java Enterprise
 -  Spring Initializr
 -  Quarkus
 -  Micronaut
 -  MicroProfile
-
-  Groovy
 -  Grails
 -  Application Forge
-
-  **Kotlin**
 -  Web
 -  Rust
 -  Python
 -  JavaScript
 -  Empty Project

Name:

Location:

- Project Template:
-  Application
 -  Library
 -  Native Application
 -  Full-Stack Web Application
-
- Kotlin/JS**
-  Browser Application
 -  React Application
 -  Node.JS Application
-
- Jetpack Compose for Desktop (Experimental)**
-  **Desktop uses Kotlin 1.4.30**
 -  Multiplatform uses Kotlin 1.4.30

A Compose application targeting the desktop JVM platform (Windows, Linux, macOS)

Build System:  Gradle Kotlin  Gradle Groovy  IntelliJ
 Maven

Project JDK:

▶ Artifact Coordinates

ТЕХНОЛОГИЯ

ИНТЕГРАЦИЯ С АУТ НА НИЗКОМ УРОВНЕ

SWING BHYTRI COMPOSE

SwingComposeWindow

NORTH

WEST

WestClicks: 0

West

NorthClicks: 0

North

EastClicks: 0

East

EAST

SOUTH/REMOVE COMPOSE



COMPOSE BИУТPIИ SWING

- Project
- Project
- > test1 [test1:main] ~/IdeaProjects/test1
- > External Libraries
- > Scratches and Consoles

Search Everywhere **Double** ⇧

Go to File ⇧⌘O

Recent Files ⌘E

Navigation Bar ⌘↑

Drop files here to open



ОТРИСОВКА 60/120 FPS
С VSYNC



Files ←

- ✓ Nikolay.Igotti
 - > AndroidStudioProjects
 - > Applications
 - > Desktop
 - > Documents
 - > Downloads
 - > IdeaProjects
 - > Library
 - > Movies
 - > Music
 - > Pictures
 - > Public
 - > PycharmProjects
 - > VirtualBox VMs
 - > bin
 - > compose
 - > homebrew
 - > near
 - > vms
 - <> Sample.kt
 - <> TestInner.kt
 - <> TestOuter.kt
 - 📄 apple-one-time.txt
 - 📄 setupvpn.txt
 - 📄 token.txt



To view file open it from the file tree

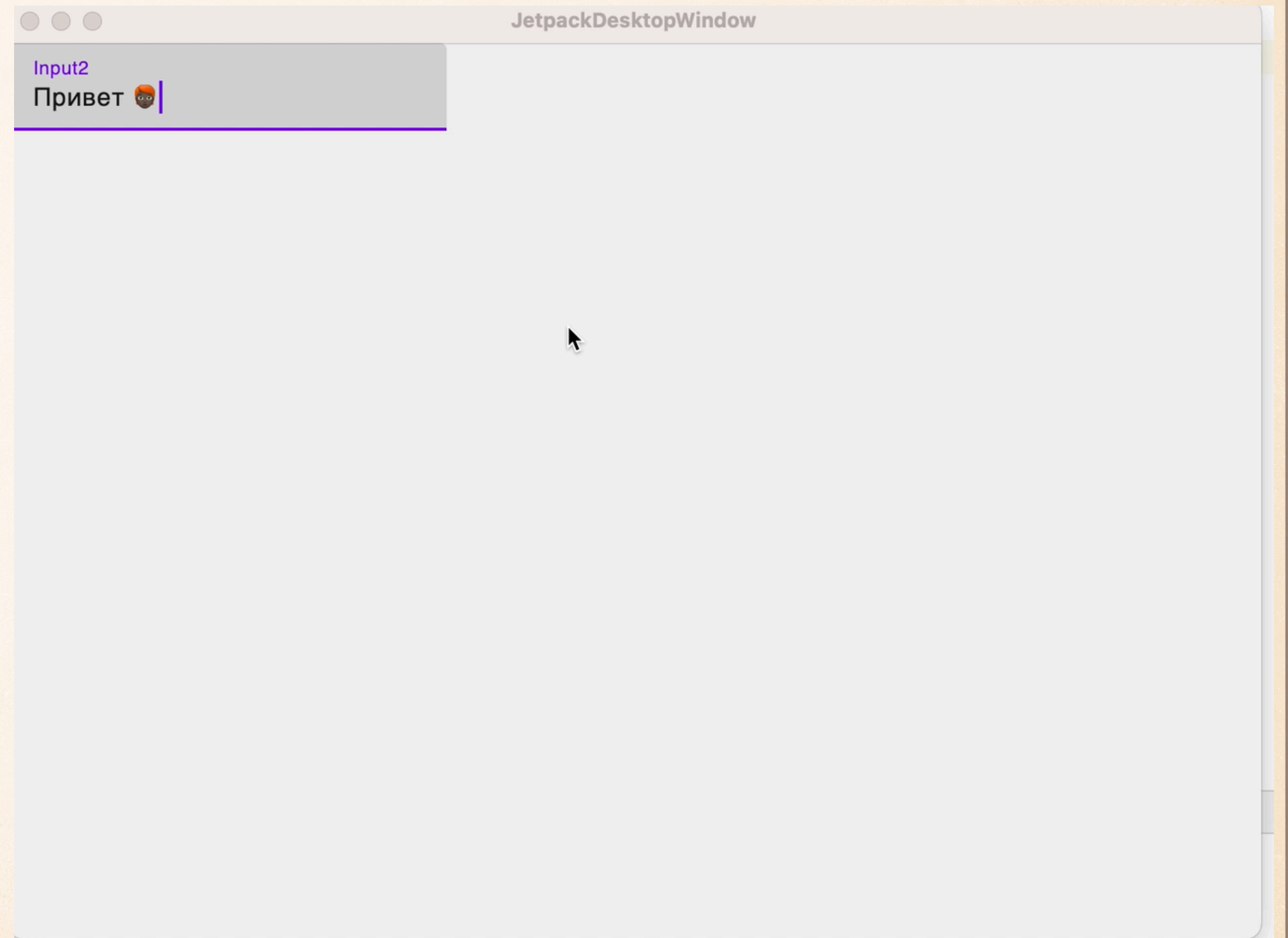
СКРОЛЛБАРЫ

MACOS: *METAL*
WINDOWS: *DX12, OPENGL*
LINUX: *OPENGL*
ALL: *SOFTWARE*

ПОЛНОСТЬЮ
ПЕРЕРАБОТАННЫЙ
TEXT FIELD

```
fun main() = Window {  
    var text by remember { mutableStateOf("Hello, World!") }  
}
```

```
MaterialTheme {  
    val text = remember {  
        mutableStateOf("Привет \uD83E\uDDD1\uD83C\uDFFF\u200D\uD83E\uDDB0")  
    }  
    TextField(  
        value = text.value,  
        onValueChange = { text.value = it },  
        label = { Text(text = "Input2") },  
        placeholder = {  
            Text(text = "Important input")  
        },  
        maxLines = 10,  
        modifier = Modifier.shortcuts {  
            on(Key.MetaLeft + Key.Enter) {  
                text.value = "Cleared!"  
            }  
        }  
    )  
}
```



УПАКОВКА ПРИЛОЖЕНИЙ

QuickTime Player File Edit View Window Help

imageviewer – DesktopContentState.kt [imageviewer.common.desktopMain]

imageviewer:desktop [clean] | Pixel_3a_API_30_x86

Project: imageviewer ~/compose/compose-jb/examples/imageviewer

- .gradle
- .idea
- .run
- android
 - src
 - main
 - java
- build
- common
 - build
 - src
 - androidMain
 - kotlin
 - res
 - commonMain
 - kotlin [commonMain] sources root
 - example.imageviewer
 - core
 - EventLocker
 - FilterType
 - Repository
 - model
 - style
 - utils

```
220 val fullSizePicture = LoadFullImage(
221     fullSizePicture.id = picture.id
222     wrapPictureIntoMainImage(fullSizePicture)
223     onContentLoaded()
224 }
225 } else {
226     invokeLater {
227         showPopupMenu(
228             text: "${ResString.noInternet}\n${ResString
229         }
230     wrapPictureIntoMainImage(picture)
231     onContentLoaded()
232 }
233 }
234 }
235 }
236 }
237 private fun onContentLoaded() {
238     GlobalScope.async { this: CoroutineScope
239         delay( timeMillis: 1000)
240         isContentLoaded.value = true
241         isAppReady.value = true
242     }
243 }
244 }
245 private fun wrapPictureIntoMainImage(picture: Picture) {
246     mainImageWrapper.wrapPicture(picture)
247 }
```

Run: imageviewer:desktop [clean] x

imageviewer:desktop [clean]: successful At 05.02.2021, 10:44 891 ms

```
> Configure project :common
Kotlin Multiplatform Projects are an Alpha feature. See: https://kotlinlang.org/docs/reference/evolution/components-stability.html. To hide this message, add 'kotlin.mpp.stability.nowarn=true' to the Gradle properties.

> Task :desktop:cleanJvmTest UP-TO-DATE
> Task :desktop:cleanAllTests UP-TO-DATE
> Task :desktop:clean

BUILD SUCCESSFUL in 474ms
```

Gradle build finished in 586 ms (a minute ago)

```
71 private class PanelState {
72     val collapsedSize = 24.dp
73     var expandedSize by mutableStateOf(300.dp)
```

Device File Explorer Emulator

Event Log Database Inspector Layout Inspector

231:25 master

Cannot reach ADB server, attempting to reconnect. (5 minutes ago)

48:44 (5 chars) LF UTF-8 4 spaces master


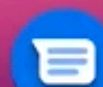


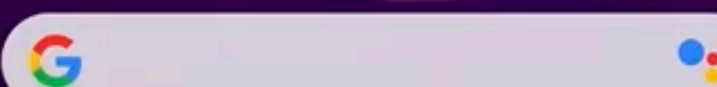
РАЗДЕЛЕНИЕ КОДА С АНДРОИД




QuickTime Player File Edit View Window Help

11:17📶 🔋

Friday, Feb 5







imageviewer - Draggable.kt [imageviewer.common.commonMain]

```
src > commonMain > kotlin > example > imageviewer > view > Scalable.kt
```

```
android
├── android
├── common
│   ├── commonMain
│   │   ├── kotlin
│   │   │   ├── example.imageviewer
│   │   │   │   ├── core
│   │   │   │   │   ├── EventLocker
│   │   │   │   │   ├── FilterType
│   │   │   │   │   └── Repository
│   │   │   │   ├── model
│   │   │   │   │   ├── ImageRepository
│   │   │   │   │   ├── Miniatures.kt
│   │   │   │   │   └── ScreenType.kt
│   │   │   │   ├── style
│   │   │   │   │   ├── Palette.kt
│   │   │   │   │   └── utils
│   │   │   │   │       ├── Coroutines.kt
│   │   │   │   │       ├── Network.kt
│   │   │   │   │       └── view
│   │   │   │   │           ├── Clickable.kt
│   │   │   │   │           ├── Draggable.kt
│   │   │   │   │           ├── PointerMoveFilter.kt
│   │   │   │   │           ├── Scalable.kt
│   │   │   │   │           └── SplashUI.kt
│   │   ├── commonTest
│   │   ├── desktopMain
│   │   ├── desktopTest
│   │   ├── manifests
│   │   └── java (generated)
└── commonTest
```

```
22         dragobserver = onDrag,
23         canStartDragging = { true }
24     }
25     ) {
26         children()
27     }
28 }
29
30 class DragHandler : DragObserver {
31
32     private val amount = mutableStateOf(Point( x: 0f, y: 0f ))
33     private val distance = mutableStateOf(Point( x: 0f, y: 0f ))
34     private val locker: EventLocker = EventLocker()
35
36     fun getAmount(): Point {
37         return amount.value
38     }
39
40     fun getDistance(): Point {
41         return distance.value
42     }
43
44     override fun onStart(downPosition: Offset) {
45         distance.value = Point(Offset.Zero)
46         locker.unlock()
47     }
48
49     override fun onStop(velocity: Offset) {
50         distance.value = Point(Offset.Zero)
51         locker.unlock()
52     }
53 }
```

- imageviewer
- ├── Tasks
- ├── android
- │ ├── Tasks
- │ │ ├── android
- │ │ ├── build
- │ │ ├── cleanup
- │ │ ├── help
- │ │ └── install
- │ ├── installDebug
- │ ├── installDebugAndroid Test
- │ ├── uninstallAll
- │ ├── uninstallDebug
- │ ├── uninstallDebugAndroid Test
- │ └── uninstallRelease
- └── other
- └── verification
- └── Dependencies
- └── Run Configurations
- └── common
- └── desktop

Run: android

```
updateForNightMode. Skipping. Night mode: -1 for host:example.imageviewer.MainActivity@402989e
D/HostConnection: HostConnection::get() New Host Connection established 0xf6bdf730, tid 19123
D/HostConnection: HostComposition ext ANDROID_EMU_CHECKSUM_HELPER_v1 ANDROID_EMU_native_sync_v2 ANDROID_EMU_native_sync_v3 ANDROID_EMU_native_sync_v4 ANDROID_EMU_dma_v1 ANDROID_I
W/OpenGLRenderer: Failed to choose config with EGL_SWAP_BEHAVIOR_PRESERVED, retrying without...
D/EGL_emulation: eglCreateContext: 0xf6be0a00: maj 3 min 0 rcv 3
D/EGL_emulation: eglMakeCurrent: 0xf6be0a00: ver 3 0 (tinfo 0xf6f26810) (first time)
I/Gralloc4: mapper 4.x is not supported
D/HostConnection: createUnique: call
    HostConnection::get() New Host Connection established 0xf6be06f0, tid 19123
D/goldfish-address-space: allocate: Ask for block of size 0x100
    allocate: ioctl allocate returned offset 0x3f7cc3000 size 0x2000
D/HostConnection: HostComposition ext ANDROID_EMU_CHECKSUM_HELPER_v1 ANDROID_EMU_native_sync_v2 ANDROID_EMU_native_sync_v3 ANDROID_EMU_native_sync_v4 ANDROID_EMU_dma_v1 ANDROID_I
I/OpenGLRenderer: Davey! duration=1819ms; Flags=1, IntendedVsync=39970679136309, Vsync=39970679136309, OldestInputEvent=9223372036854775807, NewestInputEvent=0, HandleInputStai
I/Choreographer: Skipped 39 frames! The application may be doing too much work on its main thread.
```

Success: Operation succeeded (19 minutes ago)

Event Log Layout I

1:1 LF UTF-8 4 spaces master

JetIssues

ASC

Open

Closed

3 недели назад #2398``Route.param()`` is not work*1 месяц назад* #2378

Ktor/Netty hang up while Ktor/Jetty is fine

8 месяцев назад #2020

Is there any way to check connectionState on android device with ktor WebSocket lib?

feature

8 месяцев назад #2019

What's the correct pattern for testing authenticated routes?

feature

8 месяцев назад #2009

Incorrect max-age and s-max-age usage in HttpCache feature

bug

8 месяцев назад #2007

Get certificate from compiled project

feature

8 месяцев назад #2006

Ktor show startup duration

feature

9 месяцев назад #1999

Content negotiation module is ignoring Accept directives

bug

9 месяцев назад #1995

PartialContent need responed content length when respcode = 206

Select issue

KOTLIN MULTIPLATFORM

Сделал проект возможным!

ГДЕ МЫ СЕЙЧАС?

ФЕВРАЛІЬ 2021: M3

M3 (Feb 2021)

- Improve [TextField](#)
- Support [SVG](#)
- Support [vsync](#), [sync composition with rendering frames](#)
- Support [DirectX on Windows by default](#)
- Support [software rendering fallback](#)
- Implement [signing and notarization for macOS](#)
- Improve Swing interoperability support [Swing component in Compose hierarchy](#)
- Support using [Compose in IntelliJ plugins](#)
- Skiko native binaries are now signed on macOS (x64 and arm)
- Fix [Ambients are not transferred across pop ups](#)
- Fix [Laggy UI on Linux](#)
- Fix [Using AndroidX Compose specific dependencies for Android target](#)

РАБОТАЕМ НАД М4

ЧТО ДАЛЬШЕ?

РАЗВИТИЕ ФРЕЙМВОРКА

ВЫПУСК 1.0!

ПОДДЕРЖКА В IDE

COMPOSE FOR WEB

COMPOSE FOR NATIVE

ПОЛЬЗОВАТЕЛИ



ПРИСОЕДИНЯЙТЕСЬ!!!



ВОПРОСЫ?