

# How to convert a kotlin source file to a java source file

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I have a Kotlin source file, but I want to translate it to Java.

293

How can I convert Kotlin to Java source?

[java](#)[kotlin](#)[code-conversion](#)

41

edited Oct 13 '17 at 12:37



[Vadim Kotov](#)

4,981 6 35 49

asked Jan 22 '16 at 23:07



[activedecay](#)

3,681 3 21 39

7 I'm pretty sure no automated tool has been built for this yet. You can build it first! – [Eric Cochran](#) Jan 22 '16 at 23:37

34 Might be easier to teach them to read Kotlin – [tim\\_yates](#) Jan 22 '16 at 23:43

7 It's very likely that you will end up with an ugly and unmaintainable Java class which won't run if you don't have the Kotlin standard library in the classpath. What's the point? – [yole](#) Jan 23 '16 at 8:08

2 Consider the j2objC translator. Would be great if you could do kotlin -> Java -> objC – [Patrick](#) Apr 1 '16 at 18:44

3 The goal of the "Decompile" button is to help people understand how the Kotlin compilation works. The Java code it generates is not intended for use as actual production code (and is quite poorly suited for that - to begin with, it does not

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## 7 Answers



302



As @Vadzim said, in IntelliJ or Android Studio, you just have to do the following to get java code from kotlin:

1. Menu > Tools > Kotlin > Show Kotlin Bytecode
2. Click on the `Decompile` button
3. Copy the java code

### Update:

With a recent version (1.2+) of the Kotlin plugin you also can directly do `Menu > Tools > Kotlin -> Decompile Kotlin to Java`.

edited Aug 6 '18 at 9:17

answered Nov 23 '16 at 11:06



**Louis CAD**

6,256 2 23 39

- 
- 31 Is the Java output not ugly? – [Pacerier](#) Jun 17 '17 at 7:31
- 
- 13 @Pacerier Just like most decompiling outputs, it is, of course – [Louis CAD](#) Jun 17 '17 at 12:27
- 
- 3 converted from kotlin to java. But its showing extra code. the code that i even never wrote or heard – [Nauman Ash](#) Jul 20 '17 at 10:42
- 
- 14 that option is not enabled, it is coloured grey. How do i enable it. – [Vikas Pandey](#) Jul 12 '18 at 6:07
- 
- 5 @VikasPandey, Decompile Kotlin to Java is currently enabled only for [compiled Kotlin classes](#). – [Onik](#) Sep 28 '18

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You can compile Kotlin to bytecode, then use a Java disassembler.

36



The decompiling may be done inside IntelliJ Idea, or using FernFlower <https://github.com/fesh0r/fernflower> (thanks @Jire)

There was no automated tool as I checked a couple months ago (and no plans for one AFAIK)

edited May 5 at 14:27



Gastón Saillén

4,241 4 13 35

answered Jan 23 '16 at 6:39



voddan

17k 3 42 59

- 
- 2 As a side note, be aware that generics in generated code can cause compiler warnings, since Kotlin allows some things that the java compiler doesn't. It still works in byte code, though. – [Jacob Zimmerman](#) Jan 23 '16 at 17:03

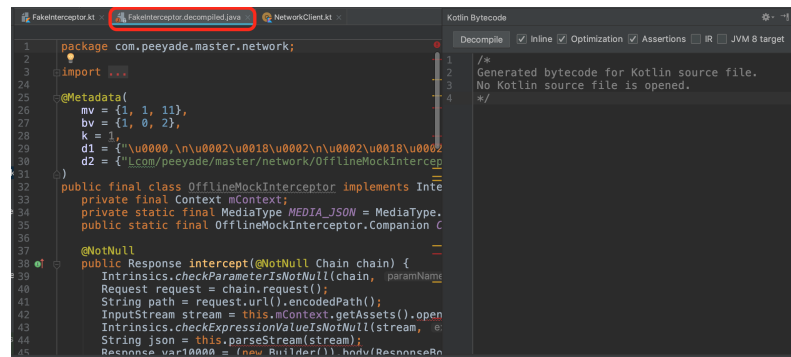
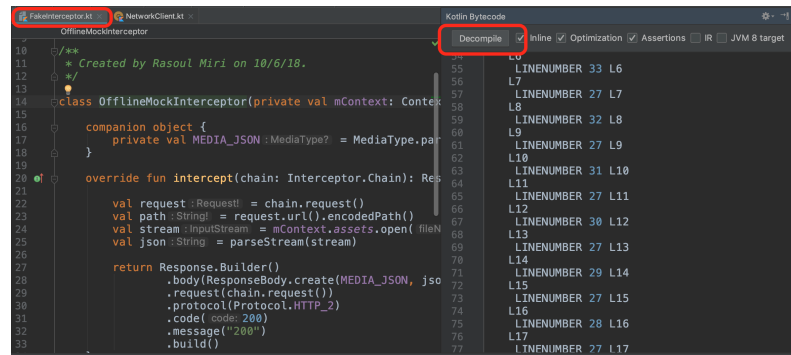
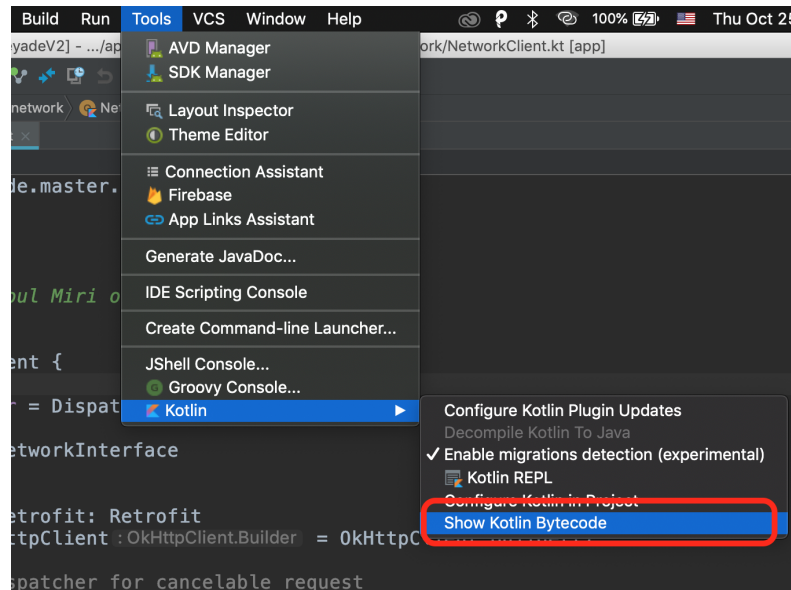
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@JacobZimmerman Wow, never heard of that. Some examples? – [voddan](#) Jan 23 '16 at 21:39

- 
- 1 @Jire reified generics are always inlined, so from Java they look like normal class references – [voddan](#) Jan 24 '16 at 9:45
- 
- 3 This is what I'm talking about [stackoverflow.com/questions/34762029/...](https://stackoverflow.com/questions/34762029/...) – [Jacob Zimmerman](#) Jan 25 '16 at 2:30
- 
- 4 IntelliJ IDEA 2016.2: Menu / Tools / Kotlin / Show Kotlin Bytecode, then click Decompile button – [Vadzim](#) Jul 23 '16 at 11:36
- 

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15



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Rasoul Miri

2,169 19 32



As @louis-cad mentioned "Kotlin source -> Java's byte code -> Java source" is the only solution so far.

3



But I would like to mention the way, which I prefer: using [Jadx decompiler for Android](#).

It allows to see the generates code for *closures* and, as for me, resulting code is "cleaner" then one from IntelliJ IDEA decompiler.

Normally when I need to see Java source code of any Kotlin class I do:

- Generate apk: `./gradlew assembleDebug`
- Open apk using Jadx GUI: `jadx-gui`  
`./app/build/outputs/apk/debug/app-debug.apk`

In this GUI basic IDE functionality works: class search, click to go declaration. etc.

Also all the source code could be saved and then viewed using other tools like IntelliJ IDEA.

edited Apr 11 '18 at 13:08

answered Apr 11 '18 at 13:03



Alex

179 1 6

3

3. in the new window that open beside your kotlin file ,  
click the decompile button . it will create java  
equivalent of your kotlin file .

answered May 5 '18 at 10:54  
user8961393

3

I compile Kotlin to byte code and then de-compile that to  
Java. I compile with the Kotlin compiler and de-compile  
with [cfr](#).

My project is [here](#).

This allows me to compile this:

```
package functionsiiiandiilambdas.functions.p01tailiirecu
tailrec fun findFixPoint(x: Double = 1.0): Double =
    if (x == Math.cos(x)) x else findFixPoint(Math.cos
```

To this:

```
package functionsiiiandiilambdas.functions.p01tailiirecu

public final class ExampleKt {
    public static final double findFixPoint(double x) {
        while (x != Math.cos(x)) {
            x = Math.cos(x);
        }
        return x;
    }

    public static /* bridge */ /* synthetic */ double findFi:
        double d, int n, Object object) {
        if ((n & 1) != 0) {
            d = 1.0;
        }
    }
```

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answered Aug 21 '18 at 8:16



Tomas Bjerre

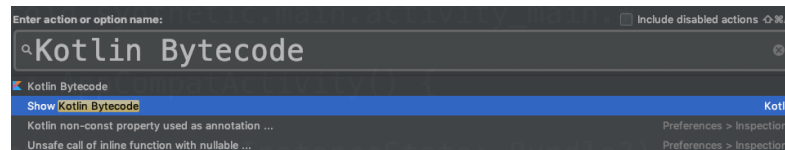
1,609 11 18

3

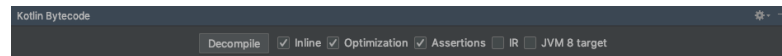
To convert a Kotlin source file to a Java source file you need to (when you in Android Studio):

1. Press `Cmd` - `Shift` - `A` on a Mac, or press `Ctrl` - `Shift` - `A` on a Windows machine.

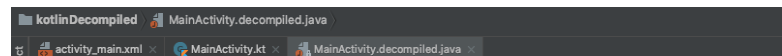
2. Type the action you're looking for: Kotlin Bytecode and choose Show Kotlin Bytecode from menu.



3. Press `Decompile` button on the top of Kotlin Bytecode panel.



4. Now you get a Decompiled Java file along with Kotlin file in a adjacent tab:



Hope this helps.

answered Jan 9 at 18:19

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