

Workhiro Kotlin

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Growth Session #3 - May 18-19 2017



- What is this project about?
 - Converting our Workhiro project (Android version) from Java into Kotlin

But DO NOT BREAKING ANYTHING!!!!

Why and What is Kotlin?



Concise

Drastically reduce the amount of boilerplate code.



Safe

Avoid entire classes of errors such as null pointer exceptions.



Interoperable

Leverage existing libraries for JVM, Android and the browser.



Tool-friendly

Choose any Java IDE or build from the command line.

- Official announced to be supported by Google.

What does it look like?

Concise, simple and very easy to read (and write)

```
package hello
```

Optional package header

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

Package-level function,
which takes an Array of
strings as a parameter

Have you noticed?
Semicolons are optional

[More examples in the full language documentation](#)

```
val person: Person? = null;  
person.sayHello() //Compile error
```

```
val person: Person? = null;  
  
if (person != null) {  
    person.sayHello() //No compile error  
}
```

```
val person: Person? = null  
person?.sayHello()
```

```
data class Car(var model: String, var brand: String, var maxSpeed: Int)

fun main(args: Array<String>) {
    val car = Car("P95", "Tesla", 240)
    println(car)
    //prints: Car(model=P95, brand=Tesla, maxSpeed=240)
}
```

Default arguments and named parameters

```
public String foo(String name, int number, boolean toUpperCase) {  
    return (toUpperCase ? name.toUpperCase() : name) + number;  
}  
public String foo(String name, int number) {  
    return foo(name, number, false);  
}  
public String foo(String name, boolean toUpperCase) {  
    return foo(name, 42, toUpperCase);  
}  
public String foo(String name) {  
    return foo(name, 42);  
}
```

```
fun foo(name: String, number: Int = 42, toUpperCase: Boolean = false) =  
    (if (toUpperCase) name.toUpperCase() else name) + number
```

```
foo("c", toUpperCase = true)
```


Replace ButterKnife with android extensions

```
import kotlinx.android.synthetic.main.activity_main.*

class MyActivity : Activity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        textView.setText("Hello, world!")
        // Instead of findViewById(R.id.textView) as TextView
    }
}
```

Show me some examples

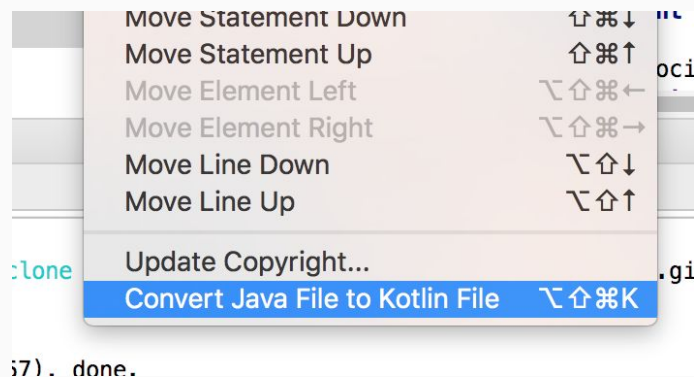
```
public static String inputStreamToString(InputStream in) throws IOException {  
    BufferedReader reader = new BufferedReader(new InputStreamReader(in));  
    StringBuilder out = new StringBuilder();  
    String line;  
    while ((line = reader.readLine()) != null) {  
        out.append(line);  
        out.append("\r\n");  
    }  
    return out.toString();  
}
```

```
fun inputStreamToString(inputStream: InputStream): String {  
    return inputStream.bufferedReader().use { it.readText() }  
}
```

Show me some examples

```
fun setEducation(educations: List<Education>) {  
    if (educations.isEmpty()) {  
        candidateNoEducationLabel.visibility = View.VISIBLE  
    } else {  
        candidateNoEducationLabel.visibility = View.GONE  
        educations  
            .map { CandidateEducationView.create(this).bindData(it) }  
            .forEach { candidateEducationList.addView(it) }  
    }  
}
```

The magical Cmd + Alt + Shift + K shortcut



App.java x

```
1 public class App {
2     public static void main(String[] args) {
3         System.out.println("Hello, World!");
4     }
5 }
```

App.kt x

```
1 object App {
2     @JvmStatic fun main(args: Array<String>) {
3         println("Hello, World!")
4     }
5 }
```

First we had to review & merge
some open pull requests :/

Summary



[\[#131606495\] New Message UI 2.0](#) → `feature/create-not`

Rossukhon Leagmongkol - #65, last updated on 09 Mar 2017



[\[#131606495\] Floating button UI 2.0](#) → `feature/create-no`

Rossukhon Leagmongkol - #66, last updated on 09 Mar 2017



[\[#127152387\] New Note UI 2.0](#) → `feature/new-message`

Rossukhon Leamonakol - #67, last updated on 08 Mar 2017

This is the most
important takeaway
that everyone has to
remember. -> Beer
after 5 o'clock

So is it worthy for switching to Kotlin?

Thanks!

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