Code Review

brian plummer

What is code review?

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- Process that is formal and written

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- Reviewer provides feedback on changelist

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What is code review?

- Process that is formal and written

- Participants

- Reviewer provides feedback on changelist

- Author incorporates feedback

- Changelist is merged into codebase

Sounds pretty easy?

Most people I know have anxiety

What if I don't find anything wrong?

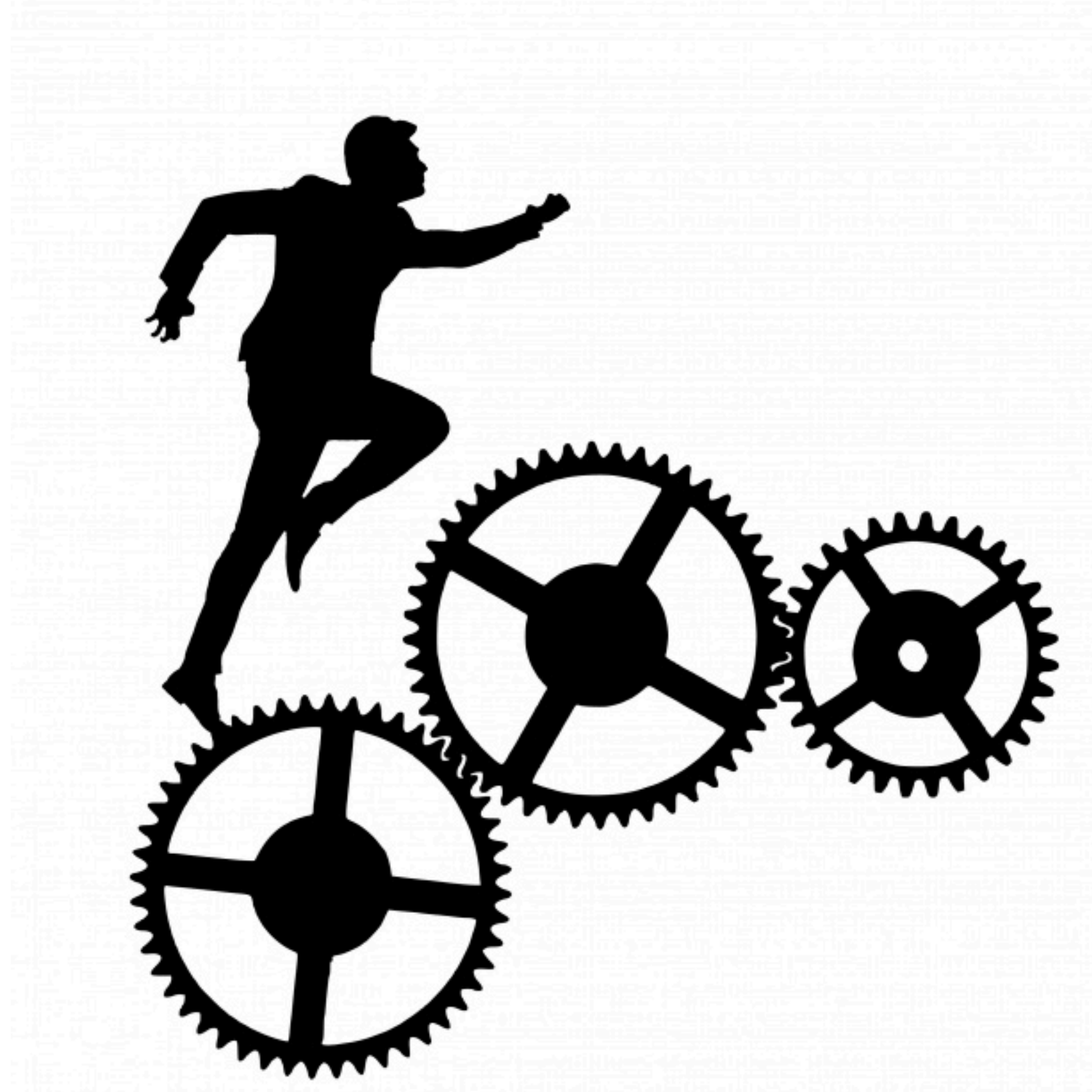# What if my suggestions are too trivial?

I don't understand everything that this code is doing

What am I looking for anyways?

What can we do to get rid of that anxiety?

Leverage Automation

Code format

Code format

- **Format source through gradle**
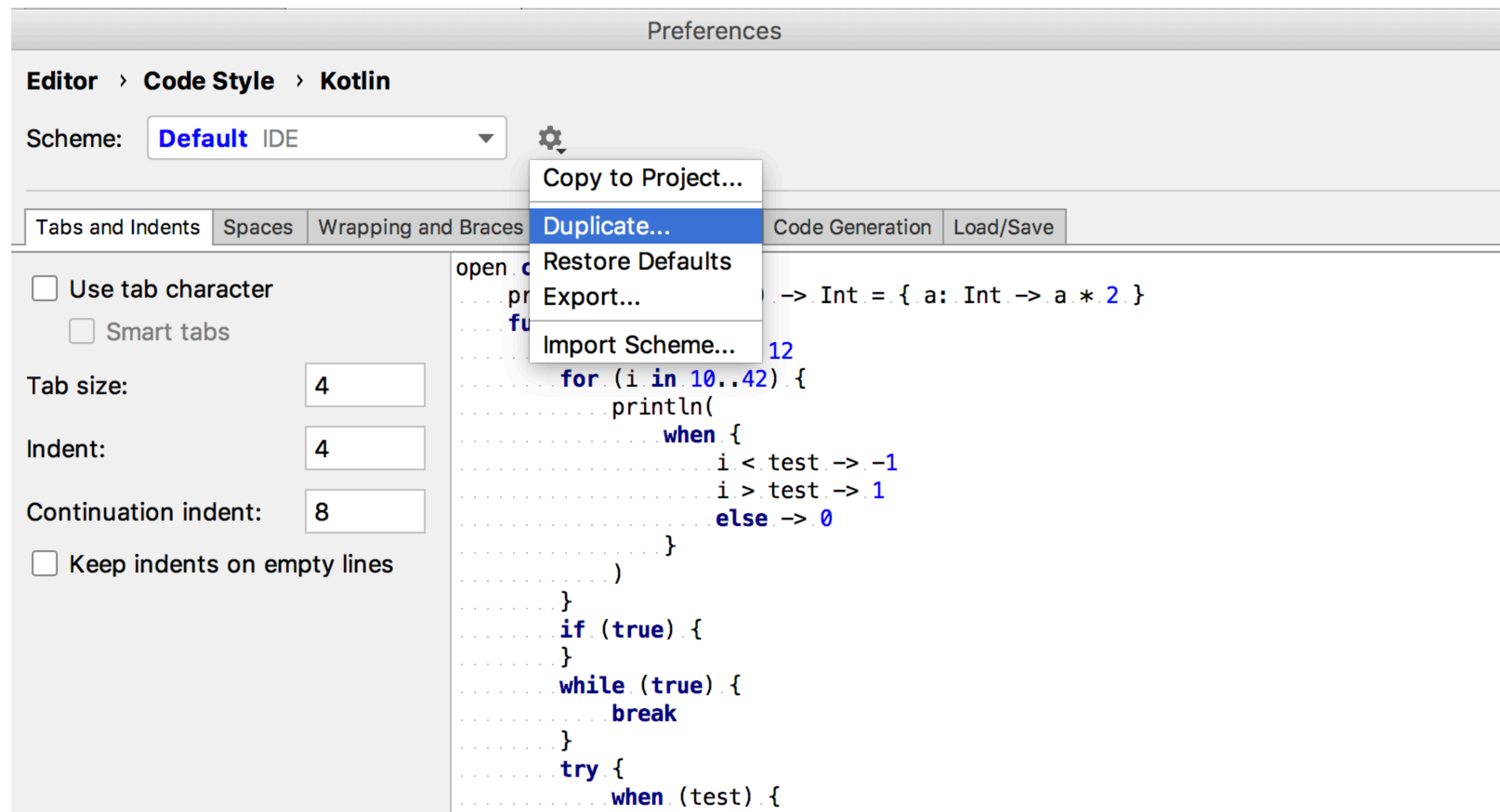
google / google-java-format

pinterest / ktlint

Code format

- Format source through Android Studio

square / java-code-styles

Code format

- **Format source through Android Studio**

Continuous Integration

Continuous Integration

- Code builds

Continuous Integration

- Code builds

- Tests pass

Continuous Integration

- Code builds

- Tests pass

- Linting

Style Guide

Style Guide

- Consistency

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- Consistency

- "superficial stuff" naming conventions

Style Guide
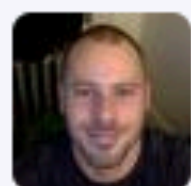
- Consistency

- "superficial stuff" naming conventions

- Higher level, no int defs

Never say you

```
 12    12        }
       13     +
       14     +  interface ErrrHandler {
```

sophiavanvalkenburg a minute ago   + 😀 ⋯

you spelled Error wrong

Reply...

Resolve conversation

```
 12   12      }
      13   +
      14   + interface ErrrHandler {
```

sophiavanvalkenburg just now

ErrrHandler -> ErrorHandler

Reply...

Resolve conversation

```
11   +
12   +        if (inputValue > 0 ) {
13   +            calclulatedValue = inputValue + 1
14   +        }
15   +
16   +        if (inputValue == 1) {
17   +            calclulatedValue = calclulatedValue + 1
```

sophiavanvalkenburg 14 seconds ago   + 😀 •••

you should move this to the conditional above

Reply...

Resolve conversation

```
11   +
12   +      if (inputValue > 0 ) {
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14   +      }
15   +
16   +      if (inputValue == 1) {
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```

sophiavanvalkenburg a minute ago   + 😃 ···

this can be moved to conditional above

Reply...

Resolve conversation

Requests, not commands!

```
2   +
3   + class MyHelperClass {
```

sophiavanvalkenburg 3 minutes ago   + 😃 •••

rename this

Reply...

Resolve conversation

```
2  +
3  + class MyHelperClass {
```

sophiavanvalkenburg just now

consider renaming, functionality unclear

Reply...

Resolve conversation

Review Early, Review Often

Principles! Not opinions

Single responsibility principle[6]

A class should have only a single responsibility, that is, only c

Open–closed principle[7]

"Software entities ... should be open for extension, but closed

Liskov substitution principle[8]

"Objects in a program should be replaceable with instances o

Interface segregation principle[9]

High level, then down

Code examples

```
6  +      val fileData = ImmutableMap.builder<String, List<String>>()
```

sophiavanvalkenburg 3 minutes ago • edited ▾

Kotlin offers Immutable map by default! This can be rewritten as:

```
mapOf(
    "/foo/bar.txt" to listOf("dljfkj", "SSDffsdf", "lWERSDs"),
    "/foo/bar/baz.xyz" to listOf("sdf", "ssSSDffawtrrtsdf", "yoilWERSsdfDs"),
)
```

Reply...

Resolve conversation

Limit response on repeated issues

Limit response on repeated issues

sophiavanvalkenburg 31 seconds ago

use camel case here

Limit response on repeated issues

sophiavanvalkenburg 15 seconds ago

another one to fix!

sophiavanvalkenburg 31 seconds ago

use camel case here

sophiavanvalkenburg 15 seconds ago   + 🙂 ⋯

another one to fix!

sophiavanvalkenburg a minute ago   + 🙂 ⋯

use camel case!

LLM response on repeated issues

sophiavanvalkenburg 31 seconds ago   + 🙂 ⋯

use camel case here

sophiavanvalkenburg 15 seconds ago

another one to fix!

sophiavanvalkenburg a minute ago

use camel case!

LLMM response on repeated

sophiavanvalkenburg a minute ago

camel case!

sophiavanvalkenburg 31 seconds ago

use camel case here

sophiavanvalkenburg 15 seconds ago

another one to fix!

sophiavanvalkenburg a minute ago

use camel case!

LLM response on repeated

sophiavanvalkenburg a minute ago

camel case!

sophiavanvalkenburg a minute ago

more variables NOT in camel case!

so

use camel case here

sophiavanvalkenburg 15 seconds ago

another one to fix!

sophiavanvalkenburg a minute ago

use camel case!

Ehhh response un rereated

sophiavanvalkenburg 2 minutes ago

bruh, camel case!

sophiavanvalkenburg a minute ago

more variables NOT in camel case!

so

use camel case here

Offer praise

Bring up a letter grade

18-20	A
17-17.9	A
16-16.9	A
15-15.9	A
14-14.9	A
13-13.9	B+
12-12.9	B+
11-11.9	B
10.5-10.9	B-
10.1-10.4	C+
10	C
9-9.9	C-
8-8.9	D
7-7.9	F
6-6.9	F
5-5.9	F
4-4.9	F
1-3.9	F
0-0.9	F

Split up large changes

Respect scope of review

Use Labels

Apply labels to this pull request

Filter labels

🟦 Kotlin

🟪 reviewed

🟥 Status: DO NOT MERGE

🟩 Status: help wanted

⬜ Status: Invalid

🟥 Status: On Hold

🟧 Status: Review Needed

🟥 Type: Bug

🟦 Type: Enhancement

🟦 Type: Feature

🟩 Type: Quality Matters

🟪 Type: Question

✏️ Edit labels

☐ ⑂ **Update README.md** ✔️ `Status: Review Needed` `Type: Enhancement` `Type: Quality Matters`
  #363 by jemaystermind was merged on Jul 27, 2018 • Approved   ⚓ 3.0

☐ ⑂ **Use implementation instead of compile** ✔️ `Type: Enhancement` `Type: Quality Matters`
  #362 by jemaystermind was merged on Jul 21, 2018 • Approved   ⚓ 3.0

Approve when issues are trivial

```
4  +
5  +    fun calculateKmToMiles(km: Float) : Float {
6  +        return km * 0.621371f
7  +    }
```

sophiavanvalkenburg a minute ago • edited ▾

nitpick, this can be `fun calculateKmToMiles(km: Float) = km * 0.621371f`

Reply...

Handle stalemates

Merci!