Better Code Hub[BETA] SIGN OUT

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Compliance 6 of 10

ei12134/summernote

Last analysis: an hour ago

Write Short Units of Code

Guideline

- Small units are easier to understand, reuse, and test.
- When writing new units, don't let them grow above 15 lines of code.
- When a unit grows beyond 15 lines of code, you need to shorten it by splitting it in smaller units of no longer than 15 lines of code.
- The list on the right side contains the top 30 of units that violate this guideline, sorted by severity. The severity is indicated by the colors of the checkboxes.
- Further reading: Chapter 2 of Building Maintainable Software

Refactoring candidates

✓ Unit

- summernote.js:DefaultUnit
- summernote.js:Buttons.addToolbarButtons
- Buttons.js:Buttons.addToolbarButtons
- settings.js:DefaultUnit
- Gruntfile.js:exports
- summernote.js:Editor
- Editor.js:Editor
- summernote-en-US.js:DefaultUnit
- summernote-ca-ES.js:DefaultUnit

at most 15 lines of code | more than 15 lines of code | more than 30 lines of code | more than 60 lines of code

Write Simple Units of Code

Guideline

- Keeping the number of branch points (if, for, while, etc.) low makes units easier to modify and test.
- Try to keep the number of branch points in a unit below 5.
- You can reduce complexity by extracting sub-branches to separate units of no

Refactoring candidates

✓ Unit

- summernote.js:DefaultUnit
- summernote.js:Editor
- Editor.js:Editor
- ui.js:DefaultUnit

more than 5 branch points.

- The list on the right side contains the top 30 of units that violate this guideline, sorted by severity. The severity is indicated by the colors of the checkboxes.
- Further reading: Chapter 3 of Building Maintainable Software

- summernote.js:VideoDialog.createVideoNode
- VideoDialog.js:VideoDialog.createVideoNode
- summernote.js:Editor.initialize
- Editor.js:Editor.initialize

- at most 5 branch points
- more than 10 branch points
- more than 5 branch points
- more than 25 branch points

Write Code Once

Guideline

- When code is copied, bugs need to be fixed in multiple places. This is both inefficient and error-prone.
- Avoid duplication by never copy/pasting blocks of code.
- Reduce duplication by extracting shared code, either to a new unit or to a superclass.
- The list on the right side contains the top 30 sets of modules (grouped by highlighting) which contain the same duplicated code block.
- Further reading: Chapter 4 of Building Maintainable Software

Refactoring candidates

✓ Module

- summernote.js
- Buttons.js
- summernote.js
- dom.js
- summernote.js
- range.js
- summernote.js
- Editor.js
- summernote-ext-specialchars.js

- non-duplicated code
- duplicated code

Keep Unit Interfaces Small

Guideline

- Keeping the number of parameters low makes units easier to understand and reuse.
- Limit the number of parameters per unit to at most 4.
- The number of parameters can be reduced by grouping related parameters into objects.
- The list on the right side contains the top 30 of units that violate this guideline, sorted by severity. The severity is indicated by the colors of the checkboxes.

Refactoring candidates

✓ Unit

- summernote.js:Table.createTable
- summernote.js:splitTree
- summernote.js:Editor.resizeTo
- dom.js:splitTree
- Table.js:Table.createTable
- Editor.js:Editor.resizeTo
- summernote.js:$anonymousobject.create
- range.js:$anonymousobject.create

- Further reading: Chapter 5 of Building Maintainable Software

- [ ] at most 2 parameters
- [ ] more than 4 parameters
- [ ] more than 2 parameters
- [ ] more than 6 parameters

Separate Concerns in Modules

Guideline

- Keep the codebase loosely coupled, as it makes it easier to minimize the consequences of changes.
- Identify and extract responsibilities of large modules to separate modules and hide implementation details behind interfaces.
- Strive to get modules to have no more than 10 incoming calls.
- The list on the right side contains the top 30 of modules that violate this guideline, sorted by severity. The severity is indicated by the colors of the checkboxes.
- Further reading: Chapter 6 of Building Maintainable Software

Refactoring candidates

- ✓ Module

- [ ] at most 10 incoming calls
- [ ] more than 20 incoming calls
- [ ] more than 10 incoming calls
- [ ] more than 50 incoming calls

Couple Architecture Components Loosely

Guideline

- Having loose coupling between top-level components makes it easier to maintain components in isolation.
- Do this by minimising the amount of interface code; that is, code in modules that are both called from and call modules of other components (throughput), and code in modules that are called from modules of other components (incoming).
- You can hide a component's implementation details through various means, e.g. using the "abstract factory" design pattern.
- The list on the right side contains the top 30 of modules that violate this guideline, starting with the modules that contain throughput code.

Refactoring candidates

- ✓ Module

- [ ] hidden code
- [ ] interface code

- Further reading: Chapter 7 of Building Maintainable Software

Keep Architecture Components Balanced

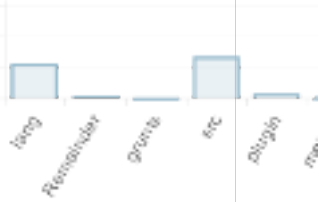
Guideline

- Balancing the number and relative size of components makes it easier to locate code.
- Organize source code in a way that the number of components is between 2 and 12, and ensure the components are of approximately equal size (keep component size uniformity less than 0.71).
- Organising components based on functionality makes it easier to divide your code into components.
- Further reading: Chapter 8 of Building Maintainable Software

Components overview

0.61
Component size uniformity

7
Components



Component size (lines of code)

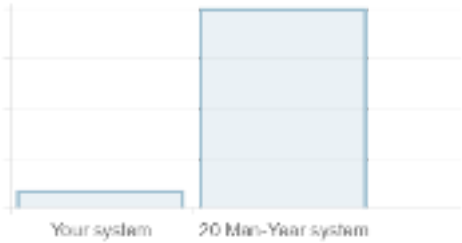
Keep Your Codebase Small

Guideline

- Keeping your codebase small improves maintainability, as it's less work to make structural changes in a smaller codebase.
- Avoid codebase growth by actively reducing system size.
- Refactor existing code to achieve the same functionality using less volume, and prefer libraries and frameworks over "homegrown" implementations of standard functionality.
- Strive to keep volume below 20 Man-years.
- Further reading: Chapter 9 of Building Maintainable Software

Volume overview

21
Man-months



System volume (man-years)

Automate Tests

Guideline

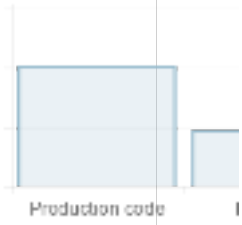
- Automating tests for your codebase makes development more predictable

Testing overview

and less risky.

- Add tests for existing code every time you change it.
- For small systems (less than 1,000 lines of code), you should have at least some test code and one assertion (currently only checked for Java and C# systems).
- For medium systems (less than 10,000 lines of code), the total lines of test code should be at least 50% of the total lines of production code, and the assert density (percentage of lines of test code containing assertions) should be at least 1% (currently only checked for Java and C# systems).
- For large systems (more than 10,000 lines of code), the total lines of test code should be at least 50% of the total lines of production code, and the assert density should be at least 5% (currently only checked for Java and C# systems).
- Further reading: Chapter 10 of Building Maintainable Software

20,440	47%
Lines of production code	Test code percentage
9,580	0%
Lines of test code	Assert density



Lines of code

Write Clean Code ✓

Guideline

- Clean code is more maintainable.
- Proactively search and remove code smells.
- Remove useless comments, commented code blocks, and dead code. Refactor poorly handled exceptions, magic constants, and poorly names units or variables.
- The list on the right side contains a selection of violations for this guideline.
- Further reading: Chapter 11 of Building Maintainable Software

Refactoring candidates

✓ Module
☐ summernote-ext-databasic.js
☐ summernote.js
☐ summernote.js
☐ summernote-ext-databasic.js
☐ range.js
☐ settings.js

✓

☐ clean code ☐ code smell