

# Code Metrics

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# Software Quality / Software Security

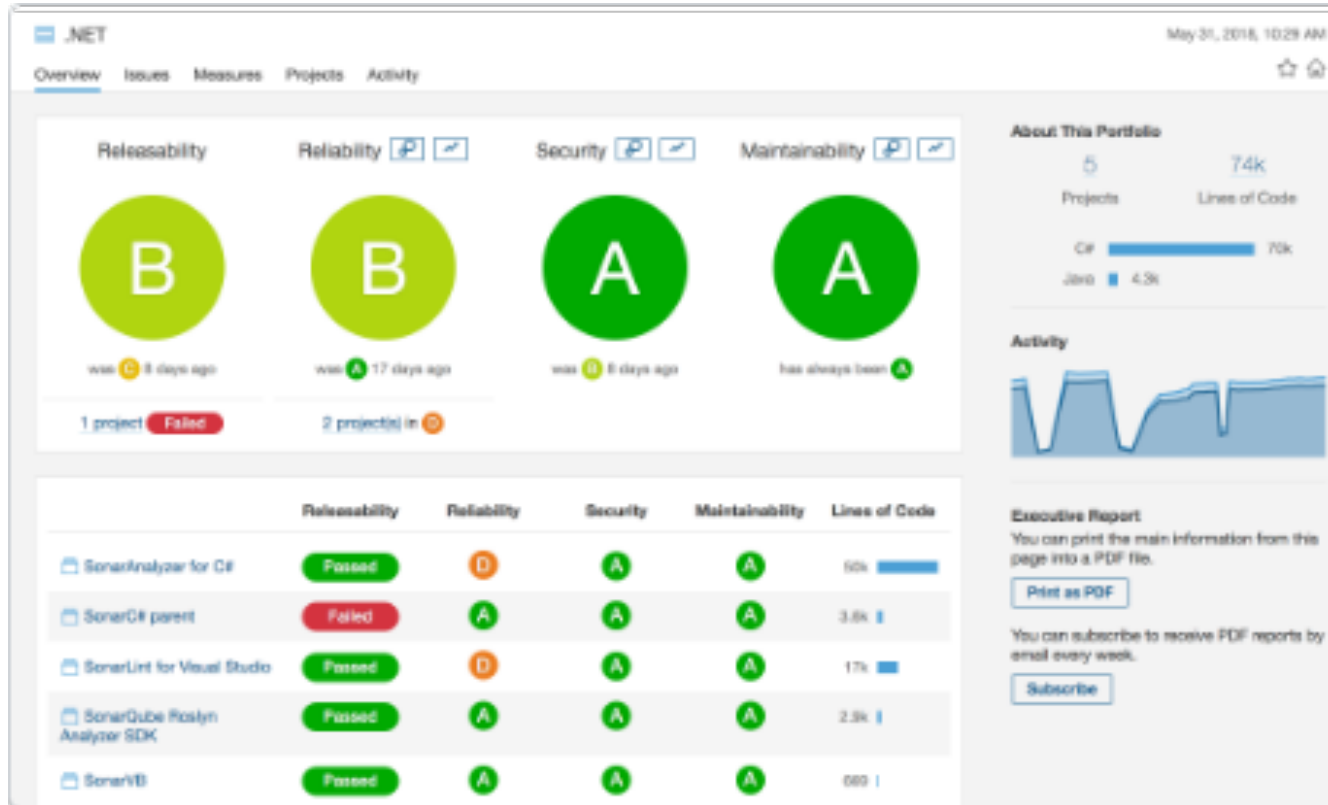
## Metrics to check

- ?
- ?
- ?
- ?
- ?

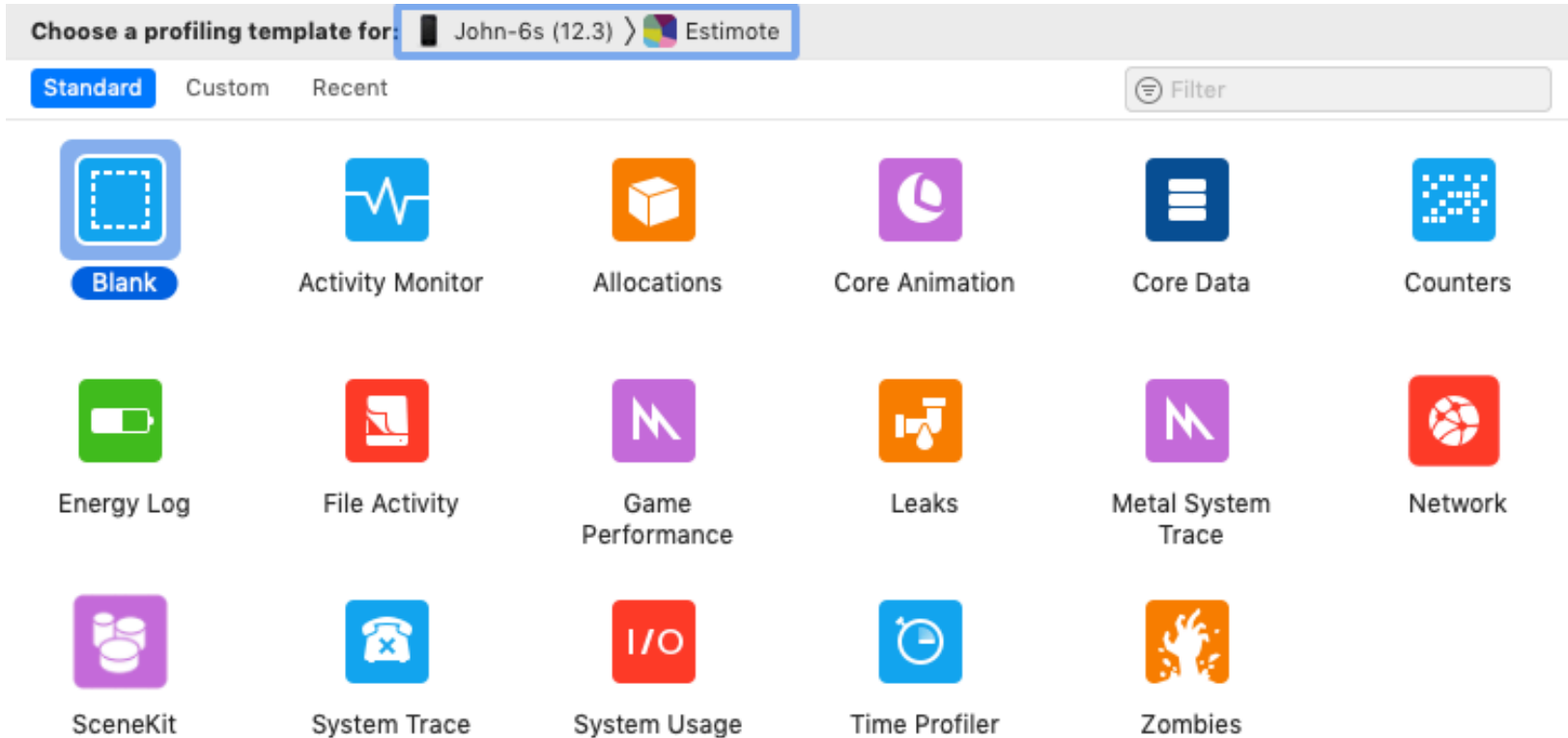
# Software Quality / Software Security

Metrics to check:

- statistics
- documentation
- code beauty
- quality and security
- accessibility, usability, ...



# SonarQube



# Instruments

Examples of Code Metrics	useless?	nice	relevant(!)
Simple	Lines of Code, Comments, ...	memory footprint, ...	...
Complex	...	McCabe: Cyclomatic Complexity, Efferent Coupling, ...	...
Quality	Duplicated Code, Weighted Method per Class, ...	Bad Smells,...	Bugs, Changes, Concurrency errors...
Security	History, Min/Max Cost of Attacks,...	Code Coverage,...	Vulnerabilities, Code Evolution (graphs),...
A11Y, Usability	...	...	...

# Tools

- Checkstyle, ...
- FindBugs, Flawfinder, ...
- PMD Copy/Paste Detection, ..
- Dependency Finder, ...
- Coverity, ...
- KCachgrind,
- LLVM Address Sanatiser, ...
- SonarQube...

# Tools for TypeScript (JavaScript)

Check out static/dynamic analysis tools

- TSLint (JSHint/JSLint)
- SonarTS
- ...

```
npm install tslint -g
```

<https://github.com/SonarSource/SonarTS>

**Configure** tools to report only RELEVANT aspects!



# Automation

**Integrate into your toolchain**

- **within IDE**
- **during compilation**
- **during deployment**