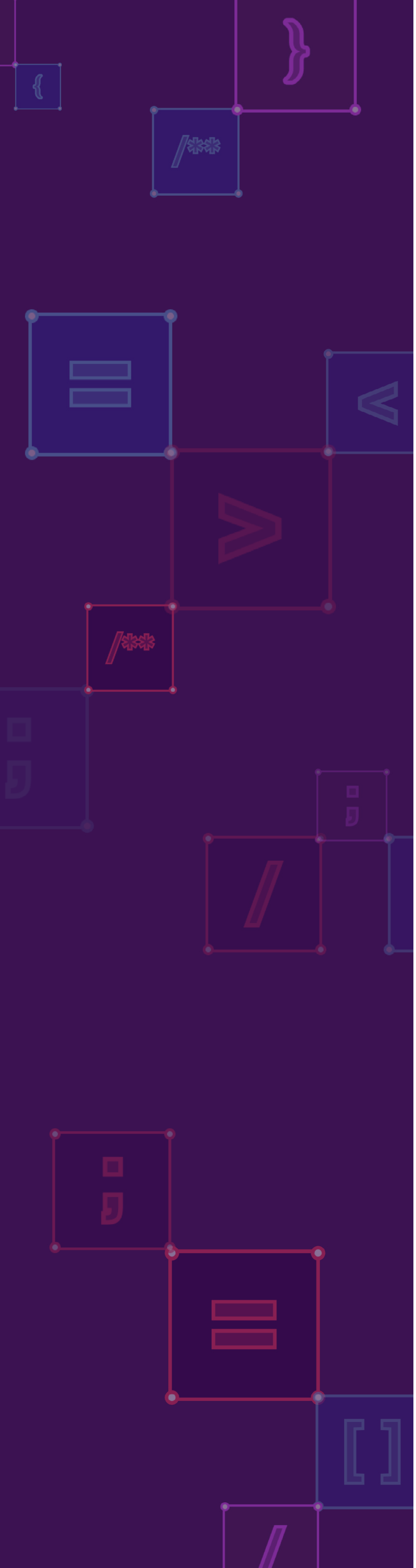


Clean as You Code

The essential approach to Clean Code

what is Clean as You Code?

Clean as You Code from Sonar is vital for achieving a Clean Code state - when your codebase has reached a problem-free state and is fit for development and fit for production. This approach enables developers and organizations to optimize the quality of their codebase by solely focusing on code that's added or changed. This simple yet powerful methodology progressively improves the overall quality of the entire codebase with minimal cost and effort.

why is Clean as You Code important?

When teams dedicate less time to addressing old issues or reworking newly created issues, they can accelerate new features, avoid unnecessary rework costs, and foster talent growth and retention. Enabling developers to use Clean Code practices as they code helps achieve these results. Developers can own the quality of their new code while simultaneously improving the existing code they touch in the process. As time passes, old issues get corrected without adding any new ones, all while work on new projects continues with forward momentum. That means teams are delivering what matters most to the business and they get to keep things interesting.

The Clean as You Code methodology can be leveraged across your organization regardless of software maturity, level of developer experience, and internal complexity. By creating and operating on consistent standards with recommended quality gates, the entire development organization can keep its future code clean, regardless of language or platform, project age or size, or existing code complexity. This approach ensures that the future code does not introduce critical security issues, or blocker bugs, and has low technical debt.

what you achieve with Clean as You Code

THE STATE OF CLEAN CODE

Systematically achieve the state of Clean Code, making all code fit for development and fit for production while reducing the burden of technical debt.

DEVELOPER OWNERSHIP OF THE CODEBASE

Enable developers to take full ownership of the quality of the code they write with a forward-thinking mentality and leave behind the stress of addressing legacy issues all at once.

ORGANIZATION-WIDE STANDARD FOR CLEAN CODE

The only expectation across the organization is that new code – added or changed – sticks to Clean Code standards and does not introduce new issues. The approach is simple, effective, and quickly adopted by all.

REDUCED EFFORT ON REWORK

Slowly remediate issues and improve quality when touching old code to make new edits. It's an effortless way to yield the best results.

Companies change on average 20% of their code each year

20%

of the overall code is clean after 1 year

35%

of the overall code is clean after 2 years

50%

of the overall code is clean after 5 years

Source: https://github.com/erikbern/git-of-theseus

what makes Clean as You Code different?

Addressing the quality of your entire codebase can be overwhelming for everyone involved. It can also introduce additional risk if certain parts of legacy code is addressed without knowing its true status. Instead of drowning in never-ending hardening sprints, focusing on today's code is the best opportunity to make the most significant impact and keep the team's motivation high. In developing new features, teams inevitably find and fix existing code to make changes. Then, this updated code must pass the Quality Gate in place with Sonar. There's no need to dedicate resources and time to a single non-standardized effort that may not yield desired results.

Clean as You Code will:

- Elevate the overall quality of your codebase by correcting old issues over time without adding new ones.
- Make your code maintainable by ensuring it's easy to understand, repair, and enhance at any time by any developer.
- Ensure long-term reliability by staying continuously operable and avoiding costly interruptions to the business.

Clean Code helps organizations achieve more, reduce risks, and increase the value of their software. Clean as You Code enables them to do this predictably without increasing overhead for development teams.

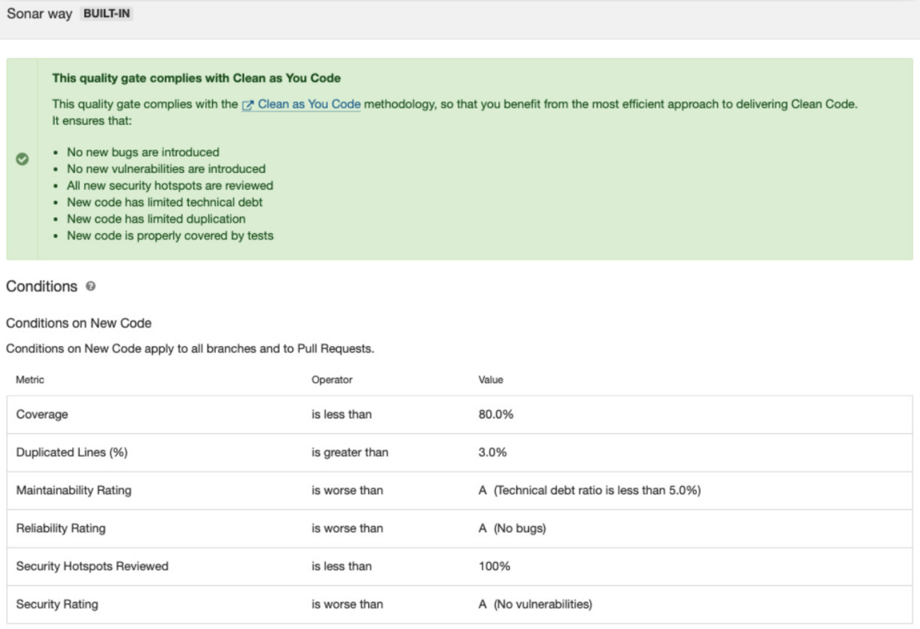
how to get started

IN YOUR IDE

Install Sonar's free IDE extension, SonarLint, from your favorite IDE's marketplace to help find and fix issues from the moment developers write the code. Addressing issues as you code helps you shift left and saves precious time because it's the easiest to remediate.

IN YOUR CI/CD WORKFLOW

Start by ensuring your project is using a Clean as You Code compliant Quality Gate, such as the built-in "Sonar way" option that is recommended by Sonar. A compliant Quality Gate focuses on metrics for new code - added or changed. Then, set a new code period that is relevant for your project. Once completed, respect and enforce your quality by only promoting code that passes the Quality Gate. It's that simple.



Sonar way BUILT-IN

This quality gate complies with Clean as You Code

This quality gate complies with the Clean as You Code methodology, so that you benefit from the most efficient approach to delivering Clean Code.
It ensures that:

- No new bugs are introduced
- No new vulnerabilities are introduced
- All new security hotspots are reviewed
- New code has limited technical debt
- New code has limited duplication
- New code is properly covered by tests

Conditions

Conditions on New Code

Conditions on New Code apply to all branches and to Pull Requests.

Metric	Operator	Value
Coverage	is less than	80.0%
Duplicated Lines (%)	is greater than	3.0%
Maintainability Rating	is worse than	A (Technical debt ratio is less than 5.0%)
Reliability Rating	is worse than	A (No bugs)
Security Hotspots Reviewed	is less than	100%
Security Rating	is worse than	A (No vulnerabilities)

how to define new code

Defining new code is an essential part of Sonar's Clean as You Code approach. You can define new code as changes from a previous version, a specific analysis, a reference branch, or within a specific period (number of days):

- **PREVIOUS VERSION:** Available at the global, project, and branch levels and works well for projects with regular versions or releases. Defines new code as any code that has changed since the project's most recent version.
- **SPECIFIC ANALYSIS:** Choose a previous analysis as your new code definition. Any changes made since that analysis are considered new code.
- **REFERENCE BRANCH:** Available at the project and branch levels. Any changes made between your branch and the reference branch are considered new code.
- **NUMBER OF DAYS:** Available at the global, project, and branch levels. Specify the number of days for a floating new code period.

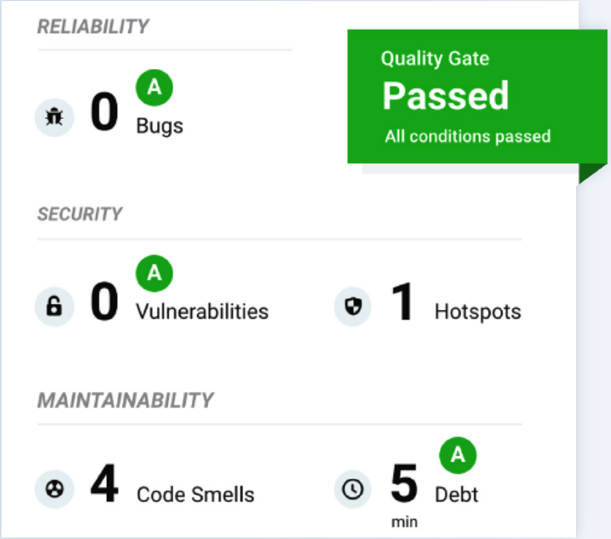
You can define new code at the global, project, or branch level.

- **GLOBAL LEVEL:** What you define as new code at the global level will be the default for your projects.
- **PROJECT LEVEL:** What you define as new code at the project level will be the default for the project's branches if you use an edition that supports multiple branches.
- **BRANCH LEVEL:** You can define new code for each branch from the Actions column of the branches table on the project's new code settings page if you're using an edition that supports multiple branches.

always go for green

The only rule that needs to be applied is the organizational understanding that no project will be released if it's failing its Quality Gate.

Clean as You Code continuously reinforces Clean Code best practices embedded within the development workflow so that teams can clearly understand issues, deliver with expediency, and avoid complications. With Clean As You Code, you can start reaching your Clean Code goals today.



RELIABILITY

0 A Bugs

Quality Gate **Passed** All conditions passed

SECURITY

0 A Vulnerabilities

1 Hotspots

MAINTAINABILITY

4 Code Smells

5 min A Debt

SONAR IS THE HOME OF CLEAN CODE, TRUSTED BY MORE THAN 7 MILLION DEVELOPERS AND MORE THAN 400 THOUSAND ORGANIZATIONS WORLDWIDE.

BARCLAYS AIRFRANCE IBM NASA

Microsoft Alphabet dyson vmware

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