



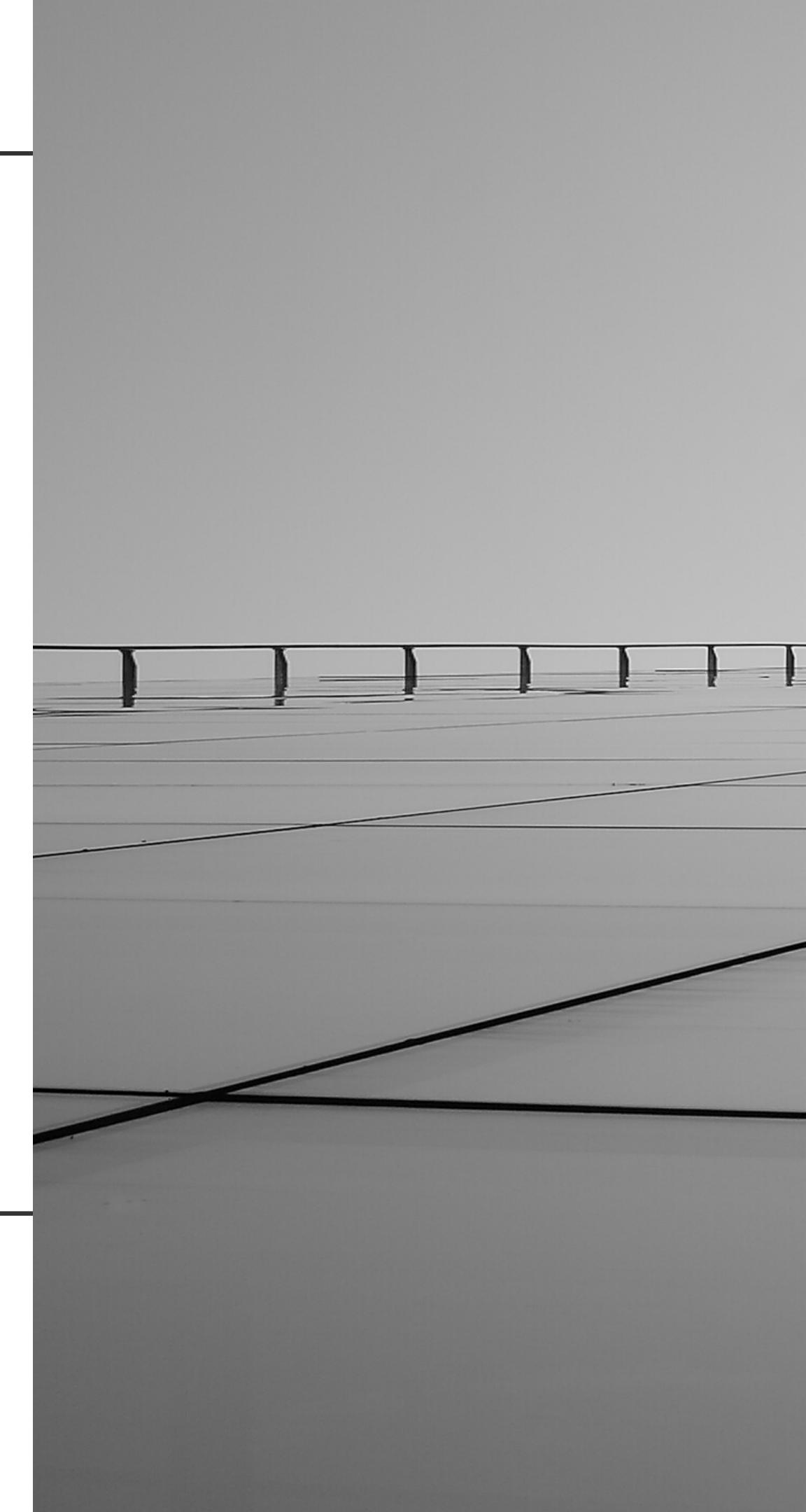
Software Code Quality

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01

02

Good Code Quality Has a Fundamental Business Meaning



03

Why Code Quality Matters



Code quality is important for overall software quality. And quality impacts how safe, secure, and reliable your codebase is

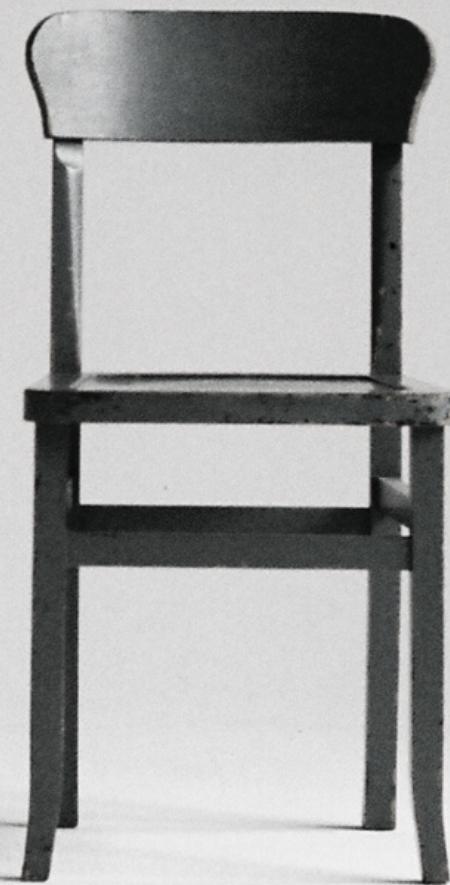
High quality is critical for many development teams today

5

Code Quality Factors



- 1-Does what it should.
- 2-Follows a consistent style.
- 3-Is easy to understand.
- 4-Has been well-documented.
- 5-Can be tested.



07

Testing Isn't Enough!

Programmers aren't perfect.
Manual code reviews and testing will never
find every error in the code.
Found that individual programmers are less
than 50% efficient at finding bugs in their
own software. And most forms of testing
are only 35% efficient.

09

Quality Is Everyone's Responsibility



How to Measure Code Quality



Reliability

static analysis tool.

Reliability measures the probability that a system will run without failure over a specific period of operation

Maintainability

Maintainability measures how easily software can be maintained. It relates to the size, consistency, structure, and complexity of the codebase

And ensuring maintainable source code relies on a number of factors, such as testability and understandability

Testability

Testability measures how well the software supports testing efforts. It relies on how well you can control, observe, isolate, and automate testing

Testability can be measured based on how many test cases you need to find potential faults in the system

Portability

Portability measures how usable the same software is in different environments. It relates to platform independency.

There isn't a specific measure of portability. But there are several ways you can ensure portable code. It's important to regularly test code on different platforms

Reusability

Reusability measures whether existing assets — such as code — can be used again. Assets are more easily reused if they have characteristics such as modularity or loose coupling.

Reusability can be measured by the number of interdependencies

How to Improve Code Quality



1. Use a Coding Standard

A coding standard makes sure everyone uses the right style.

2. Analyze Code – Before Code Reviews

In DevOps, code analysis takes place during the create phase.

3. Follow Code Review Best Practices

Manual code reviews are still important for verifying the intent of the code

4. Refactor Legacy Code

Refactoring legacy code can help you clean up your codebase

Tips For Developers



1. Use SOLID and Design Patterns

Learn satander code styles to imporve Code Quality

2. Learn Teasting and TDD

Improve Quality by using Test cases and code Coverage

3. Use Static code analyiser

PHP Stan for example

4. Write Clean and Standed Code

Clean code and standards is one of the best quality improvements



Good luck!