

CLEAN CODE

Clean Code

“ The goal of all software-design techniques is to **break** a complicated problem into simple pieces

Steve McConnell

Separation of concerns

Eliminate the tight-coupling

Clean Code Principle

Clean Code

Separate construction & when using it

“ Software system should separate the startup process, when the application objects are constructed and the dependencies are "wired", from the runtime logic that takes over after startup

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Separation of Concerns



Software systems are unique compared to physical systems. Their architectures can grow incrementally, if we maintain the proper **separation of concerns**

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Getting Clean via Emergent Design

The 4 simple design rules

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Getting Clean via Emergent Design

Simple Design Rule 1

Run All the Tests

- Systems that aren't testable aren't verifiable
- A system that cannot be verified should never be deployed

Make a testable system:

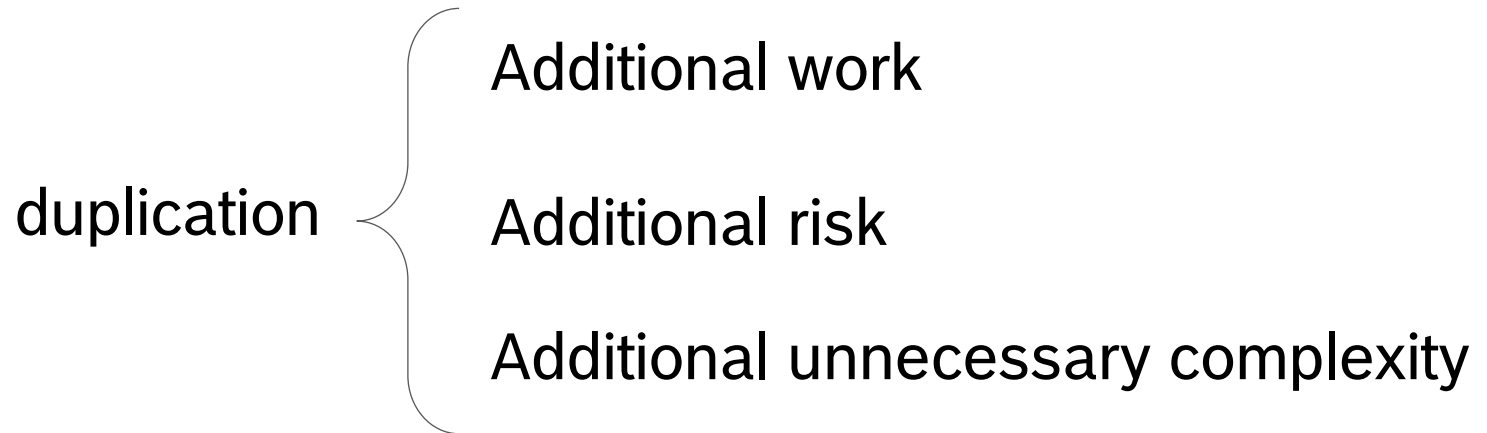
- Conform to the SRP: small and single purpose class/function
- Loose coupling and high cohesion

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Simple Design Rule 2

No Duplication



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Simple Design Rule 3

Expressive

- ***We are*** deep in an understanding of the problem we're trying to solve at the time we write code.
- ***Other maintainers*** of the code aren't going to have so deep an understanding

- ✓ Choosing good names, using standard nomenclature!
- ✓ Keeping your functions and classes small!
- ✓ Using well-written unit tests as documentation!

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Simple Design Rule 4

Minimal Classes and Methods

this rule has the lowest priority

Our goal is to keep our overall system small while we are also keeping
our functions and classes small.

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System Emergence: Conclusion

Your simple system today can become a complex system tomorrow

Keep in mind: **Separation of Concerns**

Keep the rules: **(1) Run All the Tests**

(2) No Duplication

(3) Expressive

(4) Minimal Classes and Methods