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Laws of Software Engineering

Ref: [Laws of Software Engineering](#)

A collection of principles and patterns that shape software systems, teams, and decisions.

Conway's Law

Organizations design systems that mirror their own communication structure.

Premature Optimization (Knuth's Optimization Principle)

Premature optimization is the root of all evil.

Hyrum's Law

With a sufficient number of API users, all observable behaviors of your system will be depended on by somebody.

The Boy Scout Rule

Leave the code better than you found it.

YAGNI (You Aren't Gonna Need It) YAGNI

Don't add functionality until it is necessary.

Brooks's Law

Adding manpower to a late software project makes it later.

Gall's Law

A complex system that works is invariably found to have evolved from a simple system that worked.

The Law of Leaky Abstractions

All non-trivial abstractions, to some degree, are leaky.

Tesler's Law (Conservation of Complexity)

Every application has an inherent amount of irreducible complexity that can only be shifted, not eliminated.

CAP Theorem

A distributed system can guarantee only two of: consistency, availability, and partition tolerance.

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