

Some Principles of Object Oriented Design

The Good, the Bad and the Ugly

Bad Design

- Rigide
- Fragile
- Immobile

Good Design

- Flexible
- Robust
- Reusable

Six Principles of Class Design

Single Responsibility

A class should have one, and only one, reason to change.

Open Close

You should be able to extend a classes behavior, without modifying it.

Liskov Substitution

Derived classes must be substitutable for their base classes.

Dependency Inversion

*Depend on abstractions, not
on concretions.*

Interface Segregation

Make fine grained interfaces that are client specific.

Single Level of Abstraction

A method lives at a single level of abstraction.

Six Principles of Package Design

Release/Reuse Equivalence

Only components that are released through a tracking system can be effectively reused.

Common Reuse

The classes in a package are reused together. If you reuse one of the classes in a package, you reuse them all.

Common Closure

The classes in a package should be closed together against the same kinds of changes. A change that affects a package affects all the classes in it.

Acyclic Dependencies

There must be no cycles in the dependency structure between packages.

Stable Dependencies

A package should only depend upon packages that are more stable than it is.

Stable Abstractions

The abstraction of a package should be in proportion to its stability.

To Summarize

Two Key Ideas

- Low Coupling
- High Consistency

Two Key Mechanisms

- Abstraction
- Polymorphism

That's all folks!