

SOLID Principles

- (S) SRP Single Responsibility Principle
- (O) OCP Open Closed Principle
- (L) LSP Liskov's Substitution Principle
- (I) ISP Interface Segregation Principle
- (D) DIP Dependency Inversion Principle

Sources

- ▶ [Unite Austin 2017 - S.O.L.I.D. Unity](#)
- ▢ [SOLID \(object-oriented design\)](#)

Interesting quotes

*Keep everything (non-programmers) **designer friendly** when needed.*

*If your code is **too tough to test**, it probably means **that's not SOLID**.*

1. Dependency Inversion Principle

Using classes with shared logic but different features...

Use **polymorphism** instead of hard references, through interfaces or abstract classes.

In Unity Editor

Use **Abstract classes or Scriptable Objects** if you want something in the inspector (since interfaces aren't supported).

2. Interface Segregation Principle

Large interfaces are time expensive

Break them into small, focused ones.

Use only **one member or member purpose** per interface.

Keep in mind that one class can implement many interfaces.

In Unity Editor

The Inspector doesn't support interfaces, but you can use them for **internal methods or third party logic**.

3. Single Responsibility Principle

That 1% error prone classes with 99% of the total game logic...

Split the game logic into **small classes** with **simple code**.

*One class **does only one thing** and **has only one reason to failure**.*

In Unity

Prefer tiny components.

4. Open/Closed Principle

New features broke old ones

Classes open for extension, but close for modification.

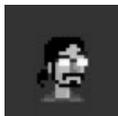
Use abstracts to extends features and define how it'll works.

5. Liskov's Substitution Principle

Extending the classes broke them

*If **two different types** have the **same base type**, **they should both works** for all members that **use the base type**.*

Trust the type as the base type.



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