

# Design Pattern & Clean Code

## Zero Impact Injection

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# Goals

- Refactor Brownfield Project
- Single Responsibility Principle
- Interface Segregation Principle
- Dependency Injection
- Zero Impact Injection
- Testable Code.

# Steps

- Extract Code (Method → Class → Project)
- Create Single Dependency ( `new()` )
- Inject Dependency
- Null-Object Pattern.

# Extract code [SRP]

- Extract method
  - Move to class
  - Introduce field
- 💡 Namespace indicates dependencies
- 💡 Create a documentation of the class without "and"

**vs Demo: Barcode Code**

# [Zero Impact Injection]

- Add interface to class
- Inject as interface into class
- Use `??` for default implementation

**vs Demo: Barcode class**

# [Null-Object Pattern]

- Reduces null-checks
- "Identity Element" for an interface
- Empty implementation
- Returns `default`
- IFooBar --> EmptyFooBar
- Implemented along with Interface

**vs Demo: Empty logger class**