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View Source: Design Patterns in the Wild

Inversion of Control

Today

- Inversion of Control
- Dependency Injection
- The Adapter Pattern

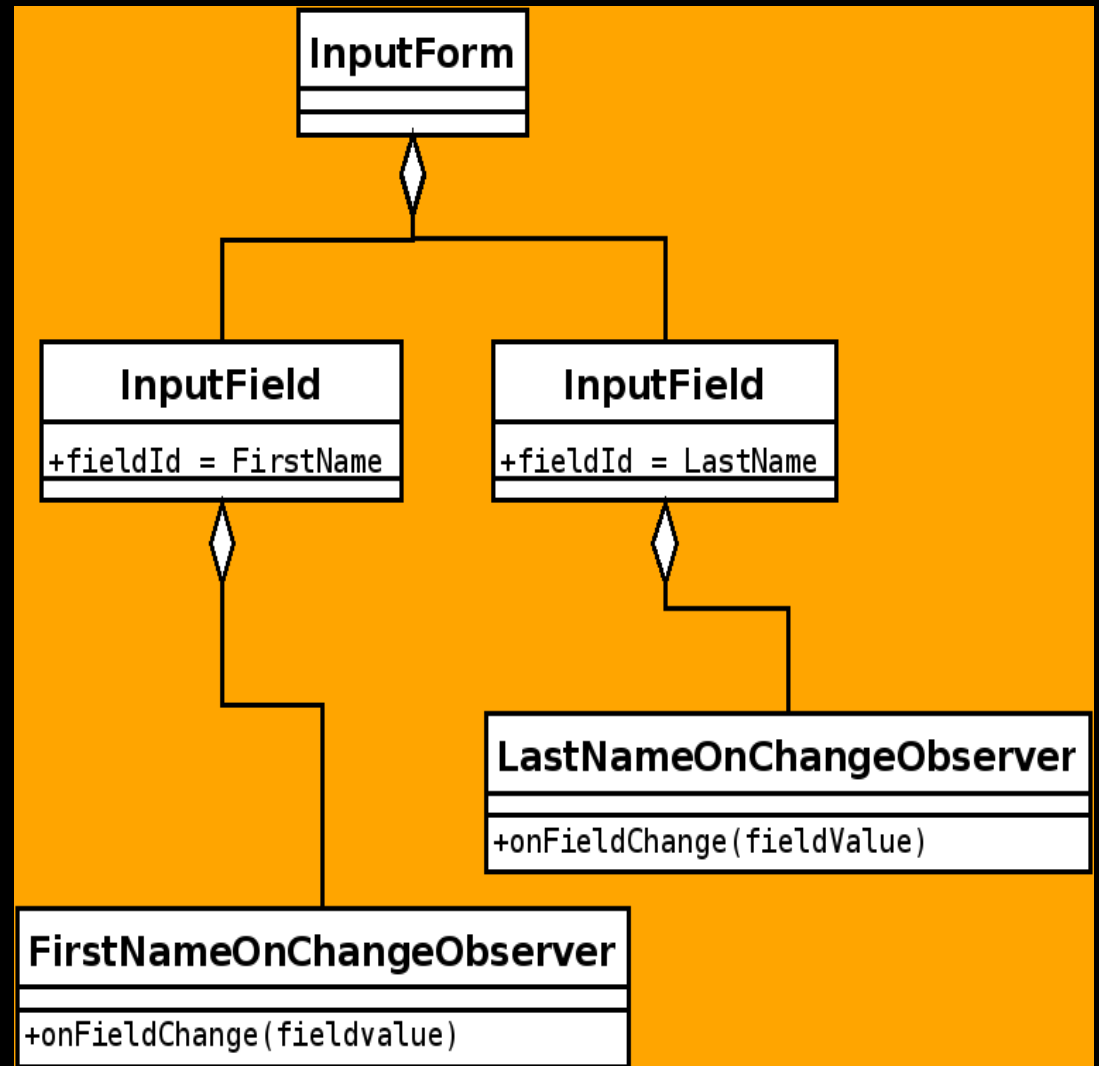
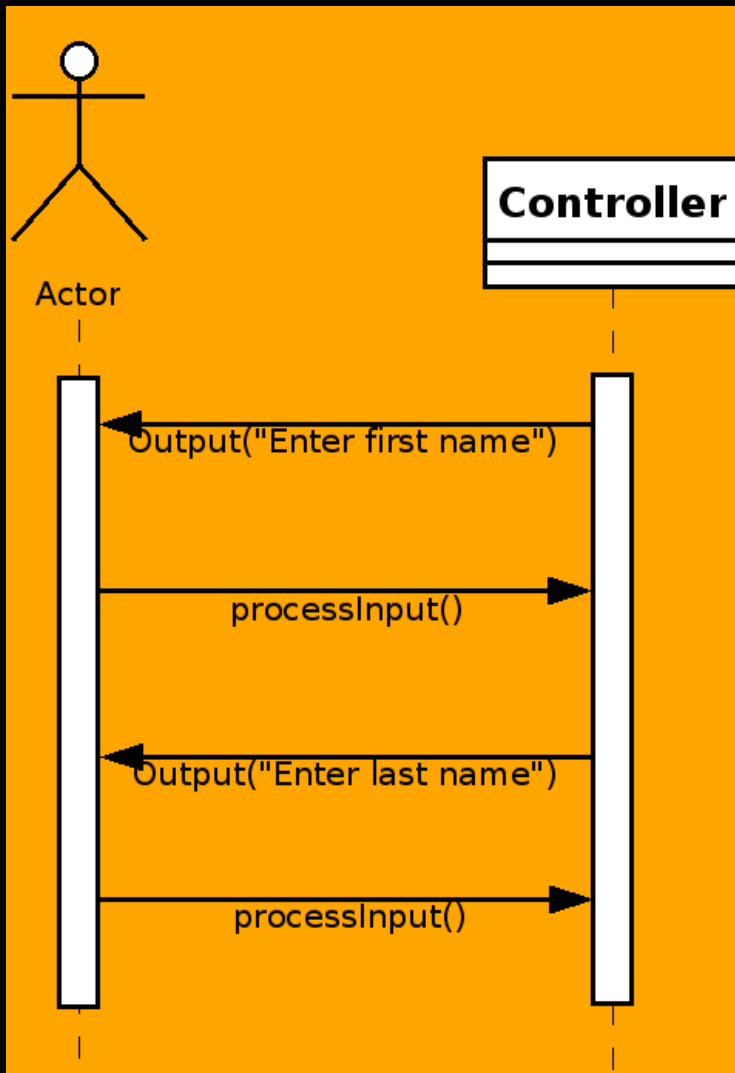
Don't Call Us, We'll Call You



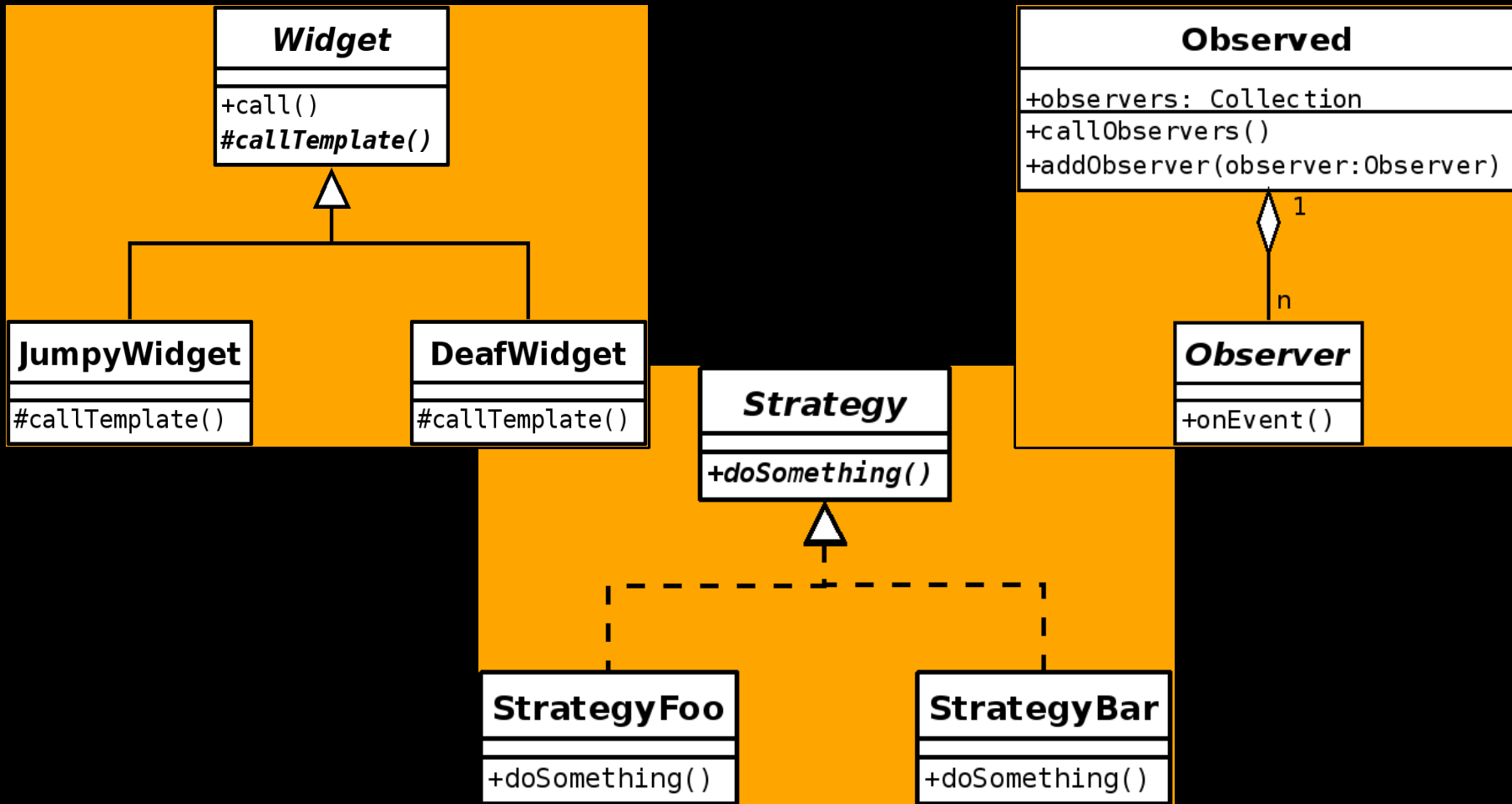
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Inversion of Control a.k.a. The Hollywood Principle

Inverting Control



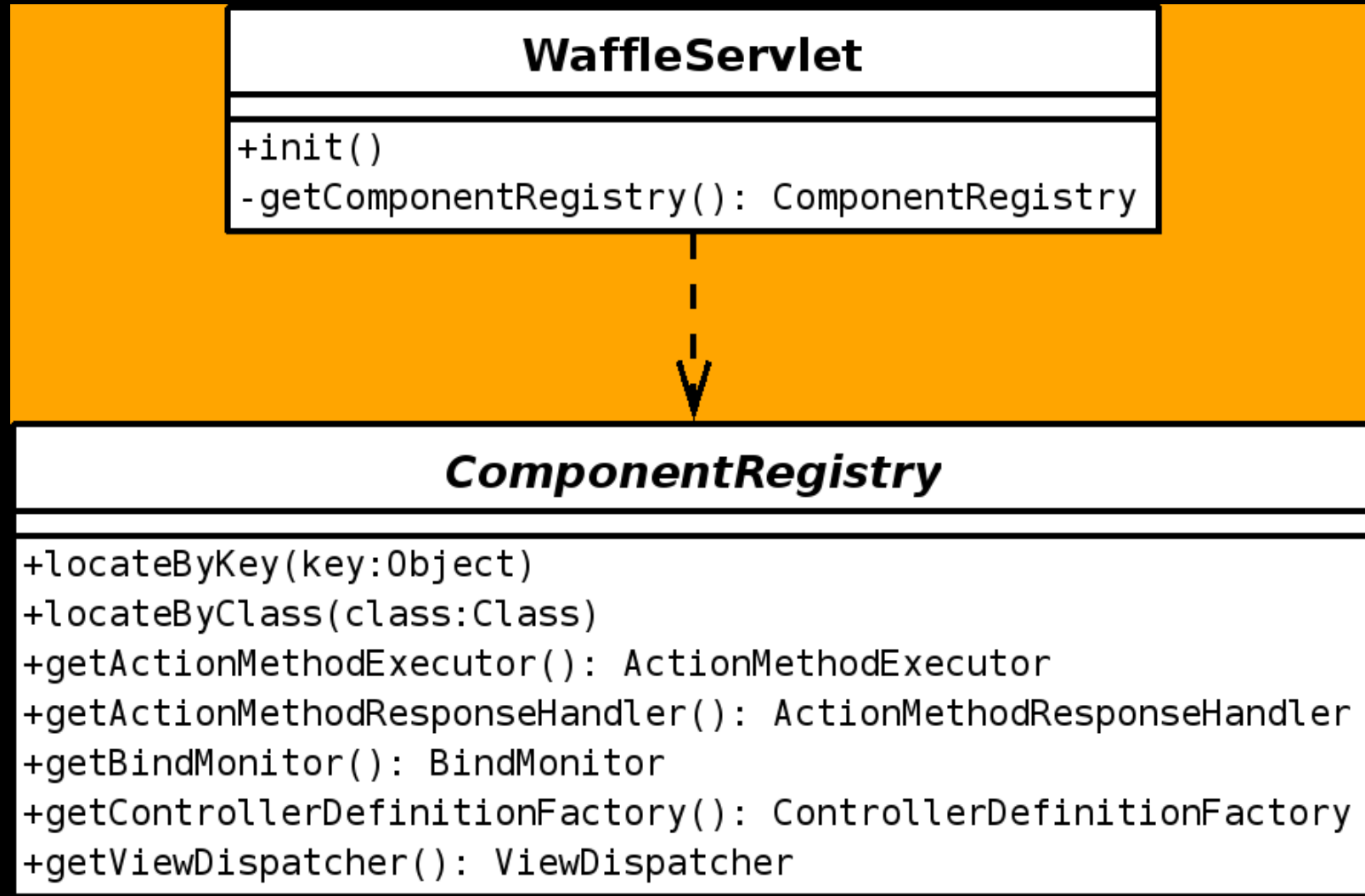
Examples of IoC



Service Locator

- Components explicitly look up services
- All components reference Service Locator
- Service Locator is a central registry of services

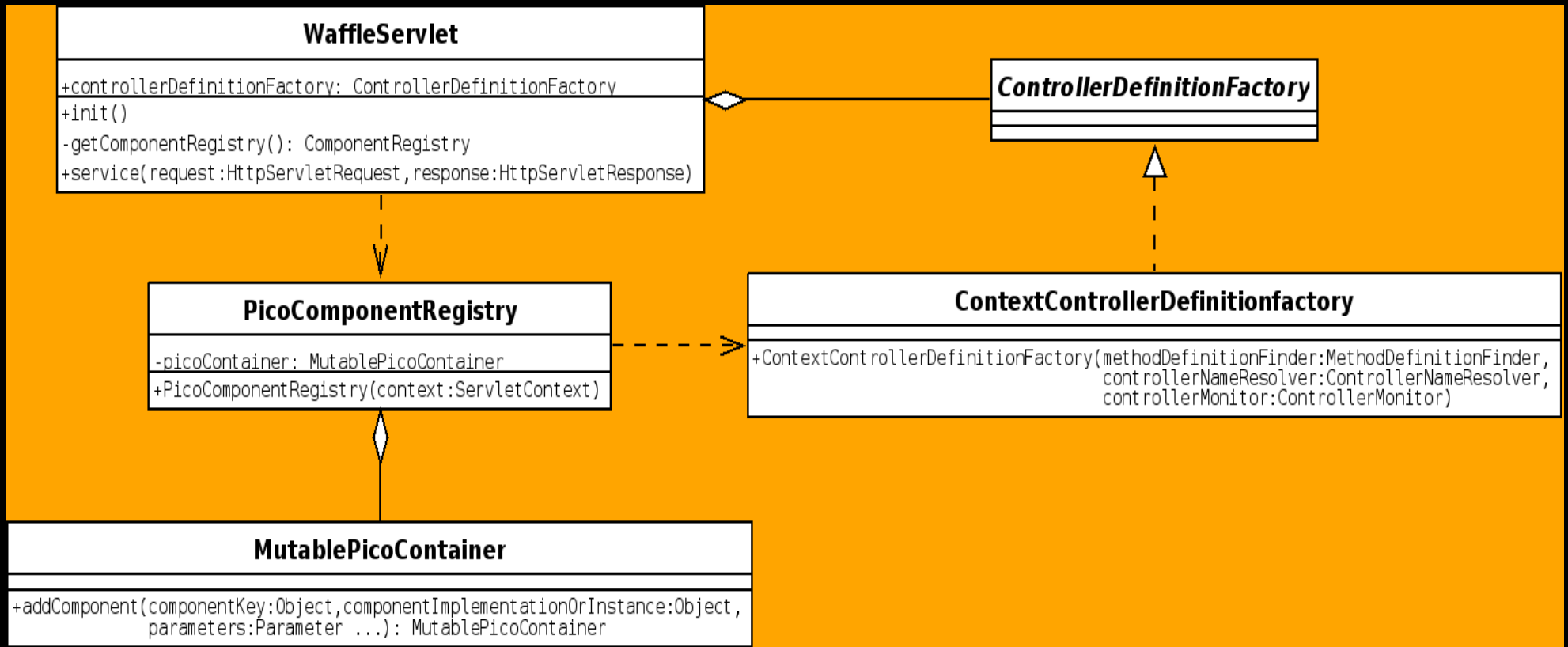
Service Locator in Waffle



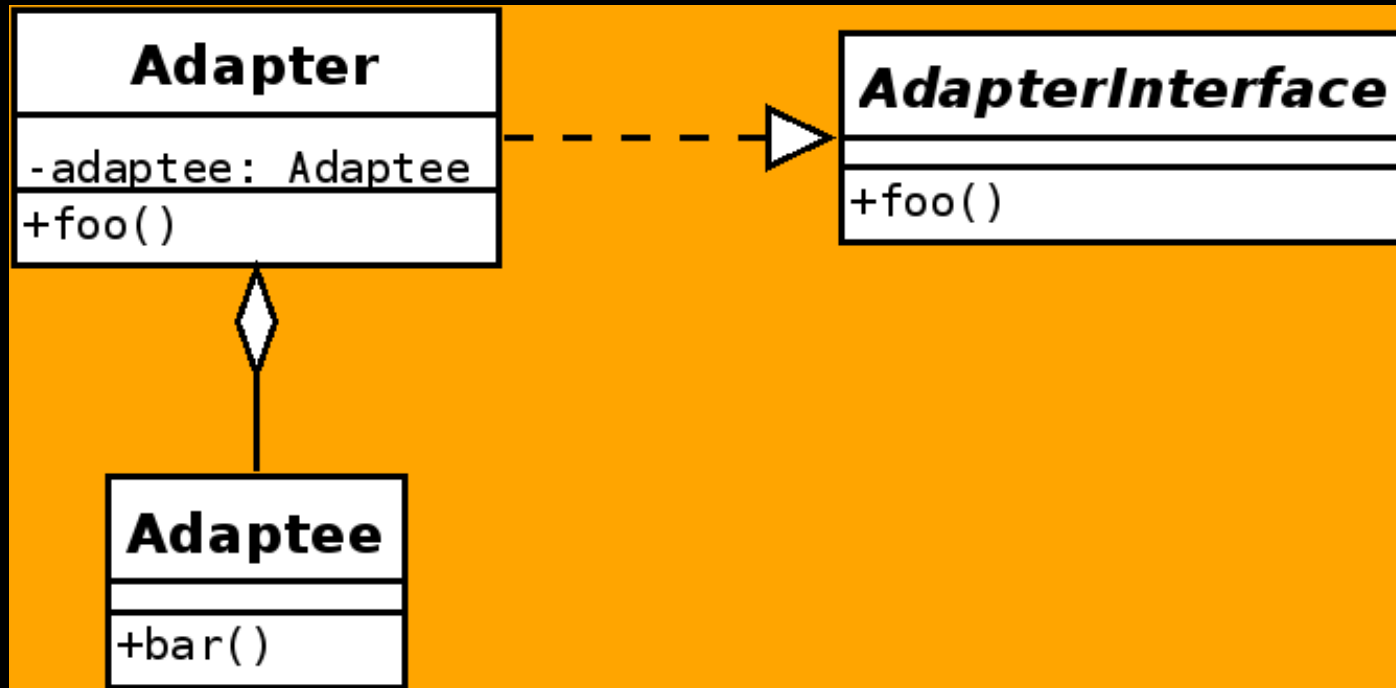
Dependency Injection

- IoC in locating component implementations
- Inject dependent components prior to execution by “auto-wiring”
- Forms of Dependency Injection
 - Constructor Injection
 - Setter Injection
 - Interface Injection

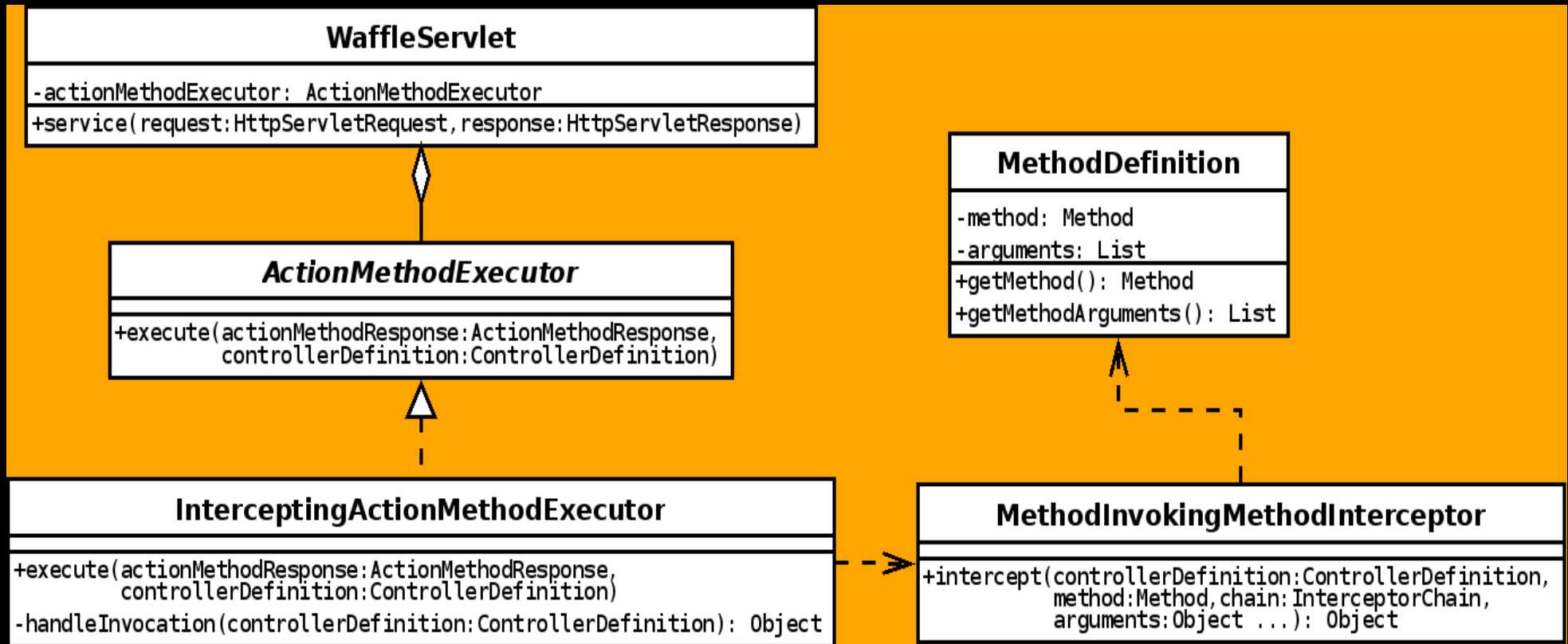
DI in Waffle



Adapter



Adapter in Waffle



DI Cures Code Smells!

- Propagating Dependency
- Long Constructor Argument List
- Container Dependency
- Tests Use Container
- Singleton