

# Demystifying Dependency Injection

Hi, my name is

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“Dependency injection separates the creation of a client's dependencies from the client's behavior, which allows program designs to be loosely coupled and to follow the dependency inversion and single responsibility principles.”

- “Dependency Injection”, Wikipedia, 2016

**S**ingle Resp

**O**pen/Clos

**L**iskov Subs

**I**nterface Seg

**D**ependency Inversion Principle



# Why do we want loosely coupled code?



Easier to  
maintain



Easier to  
write tests  
against



Flexible  
Configuration



Teams can  
work in  
parallel



# Consequences of using DI



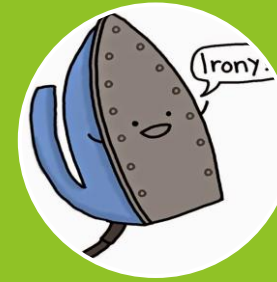
More  
difficult to  
trace



Takes extra  
effort



Explosion of  
types



Can create a  
dependency  
on an DI  
framework



# Types of Dependency Injection

Constructor Injection

Property Injection

Other

- Method Injection
- Service Locator
- Interface Injection

Ninject

Castle Windsor

Unity

# What is a DI Container?

StructureMap

Autofac



The background features abstract, overlapping geometric shapes in various shades of green, primarily concentrated on the right side of the frame. These shapes include triangles and polygons of different sizes and orientations, creating a dynamic, layered effect. The colors range from light, pale greens to deep, forest greens. The overall composition is clean and modern, with the text 'Demo Time' centered on a white background.

# Demo Time

# Demo App Layout

## Application Layers

- View
- Presentation
- Repository
- Service

## Other

- Shared Components

# References

## Web Articles

- Inversion of Control Containers and the Dependency Injection pattern  
Martin Fowler, <http://www.martinfowler.com/articles/injection.html>
- Developer's Guide to Dependency Injection Using Unity  
Microsoft Patterns & Practices, <https://msdn.microsoft.com/en-us/library/dn223671>

## Books

- Dependency Injection in .NET - Mark Seeman

## Pluralsite Courses

- Dependency Injection On-Ramp - Jeremy Clark

# Thank you

Follow me on twitter  
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Slides and code available on my github  
**[github.com/brentestewart](https://github.com/brentestewart)**