

# Dependencies



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# What Are We Covering?

Dependencies

Dependency  
Injection

Stubs

Mocks

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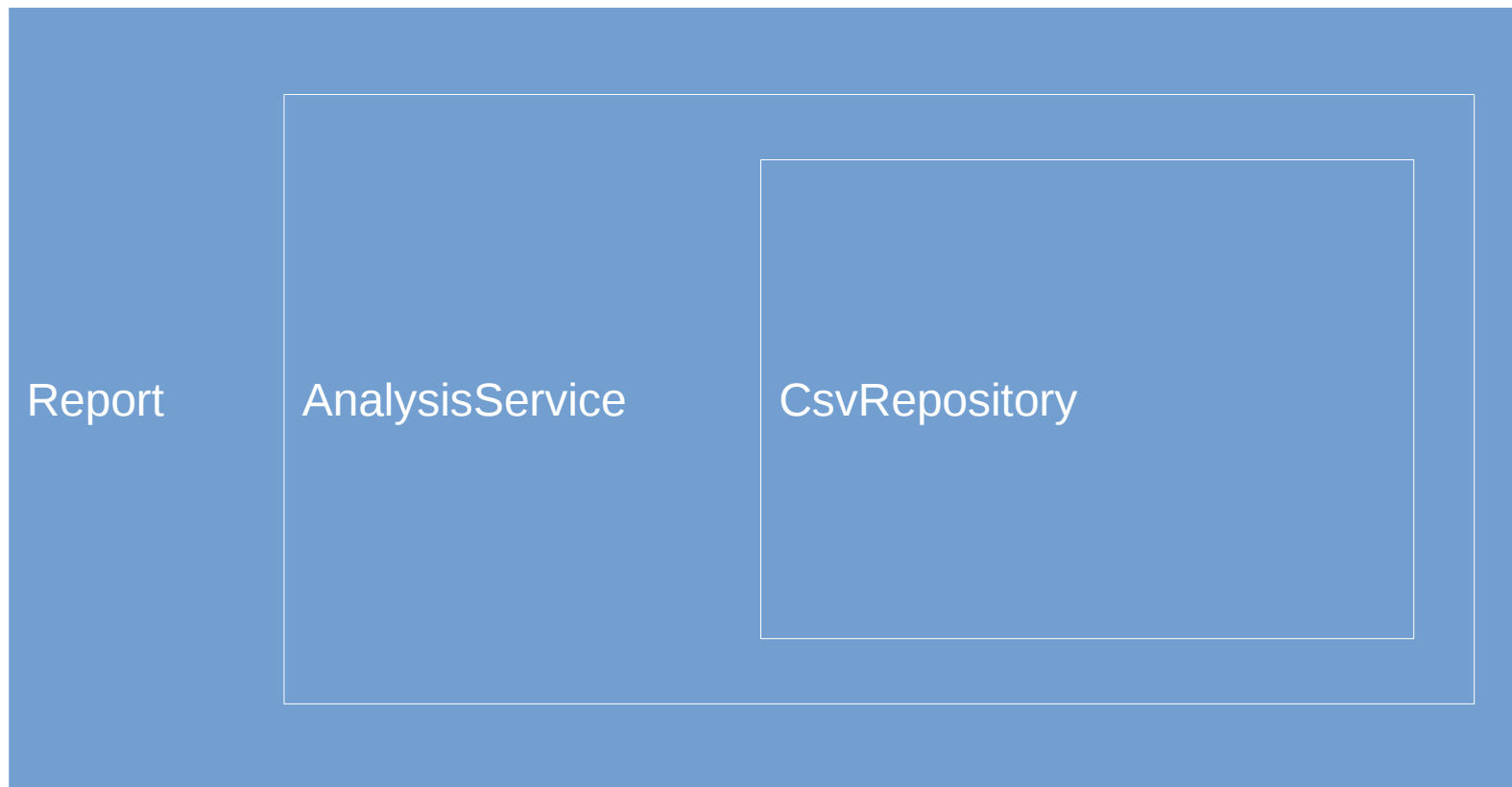
# Dependencies & Motivation

What problem are we solving?

## A Dependency

A relationship between two components where the functionality of one component relies on another component.

# A Sales Report Example









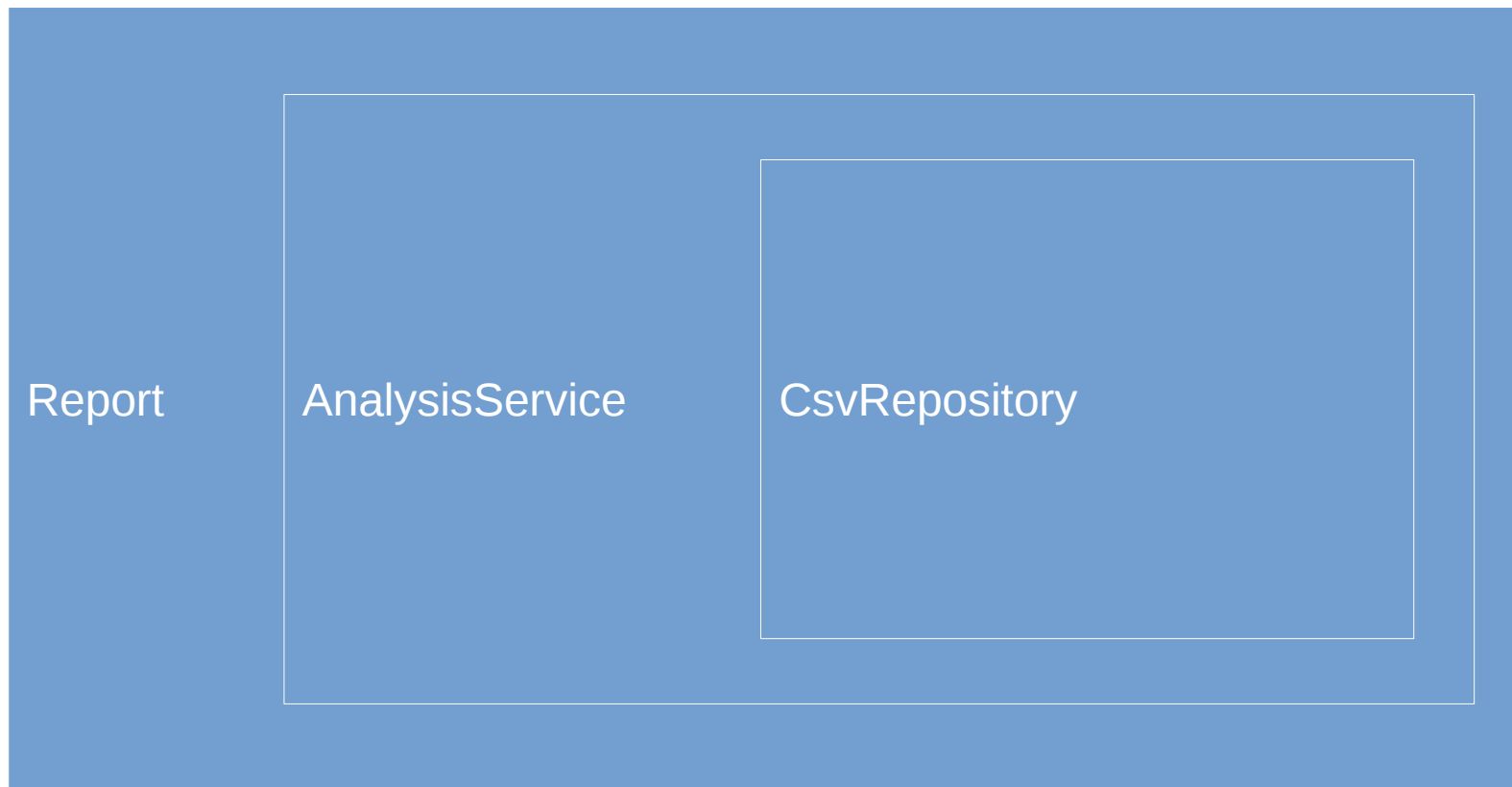
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# Dependency Injection

What is it and how does it work?



# A Sales Report Example



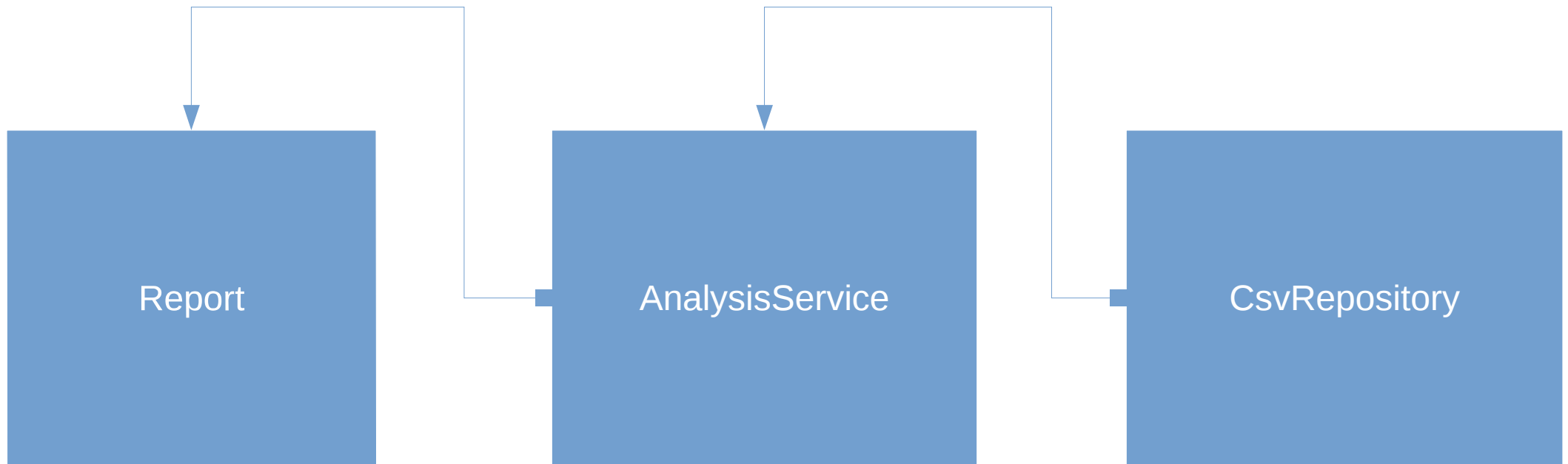
# Goal: Decouple Components

Report

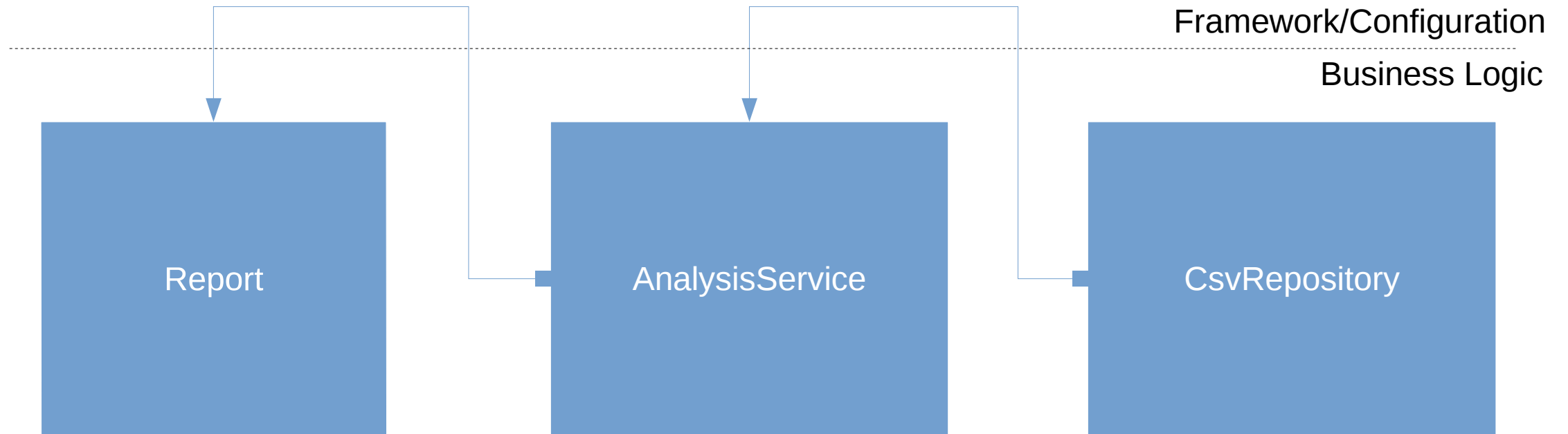
AnalysisService

CsvRepository

# Approach: Dependency Injection



# Approach: Dependency Injection



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# Test Doubles

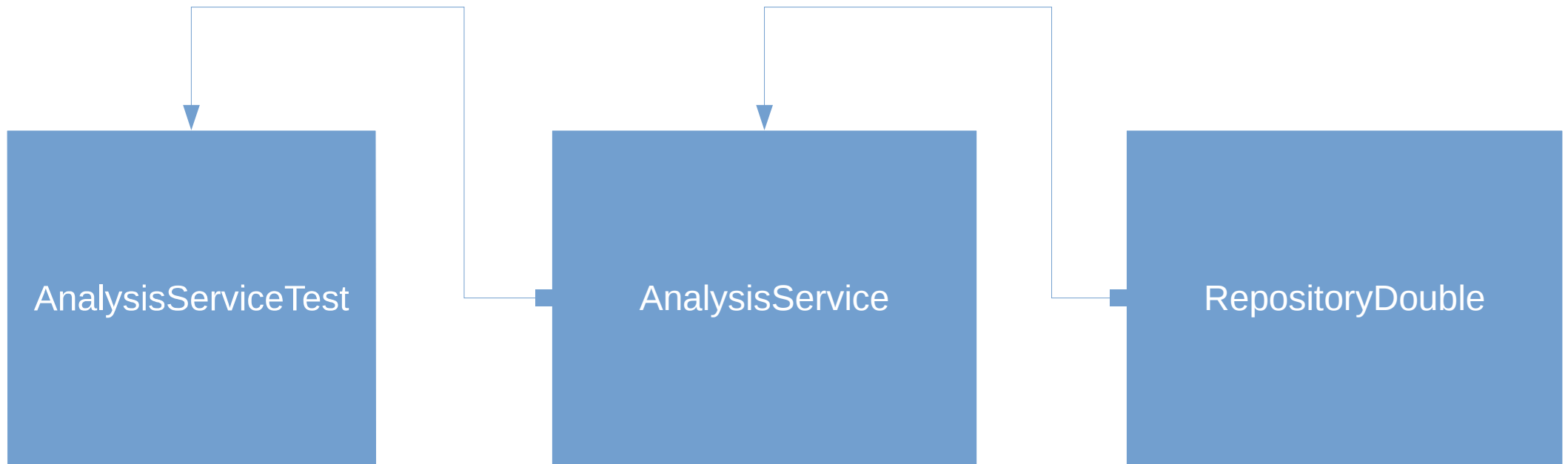
## Isolating code in tests

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# Testing with DI



# Types of Test Double

Fake

Stub

Mock

Fake

Working Implementation

... but much simpler than a real one

Example: In memory database

# Stub

A ready-made answer to method calls

Only what is required for a test

Example: `size()` always returns 1

# Mock

Tests the interactions with the object

May also stub out return values

Example: must invoke `size()` once

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# Conclusions

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# Conclusions



DI: Pattern for decoupling

Enables test isolation: Mocks & Stubs

Really Simple!