

#### Outline

Lesson 11

Components

Lesson 12.

Architecture

Lesson 13.

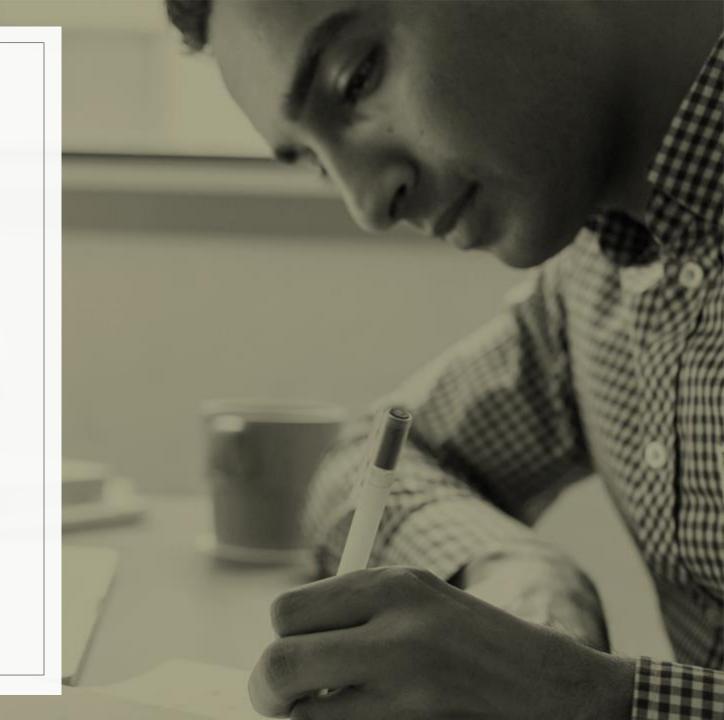
Test Driven Development

Any fool can write code that
a computer can understand.
Good programmers write code that
humans can understand.
Martin Fowler



### Components

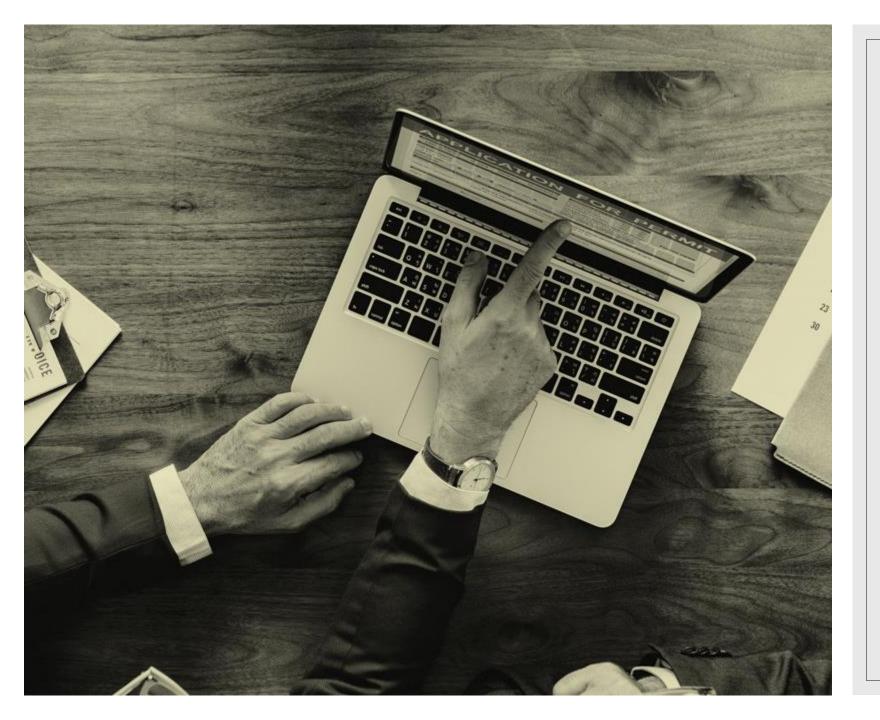
- Jar, DLL: dynamic link libraries
- Loose coupling
- Consists of Classes
- Independent deployment & development



#### Release Reuse Equivalency Principle

- Client code change
- Manageable Components
- Components need to be big





## The Common closure principle

- Same reason to change
- Isolate components
- Loose coupling

### The Common reuse principle





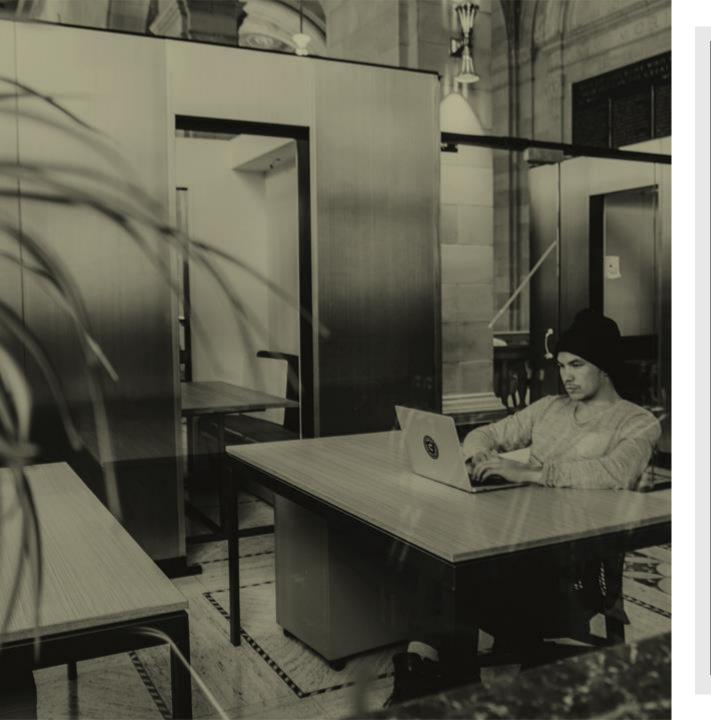
Similar to the Interface Segregation Principle



Group together classes

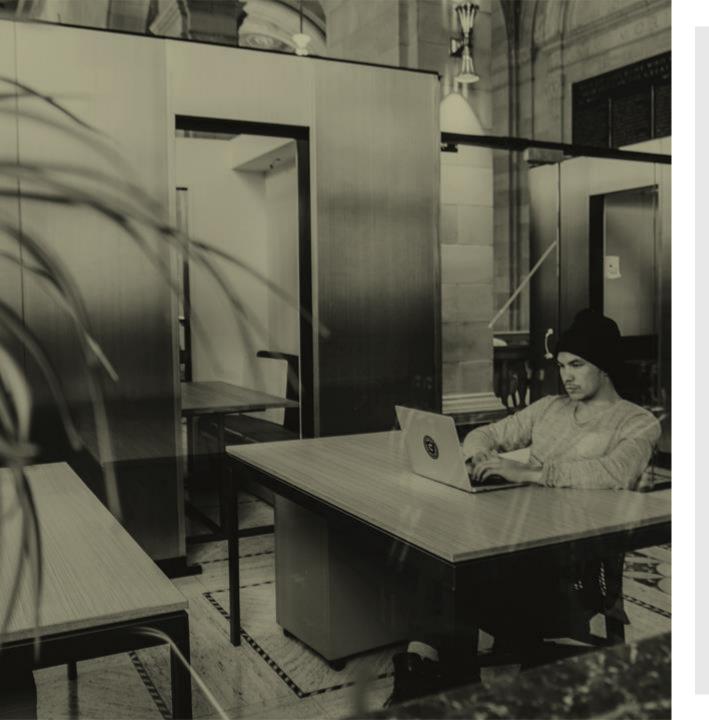


Separate classes.



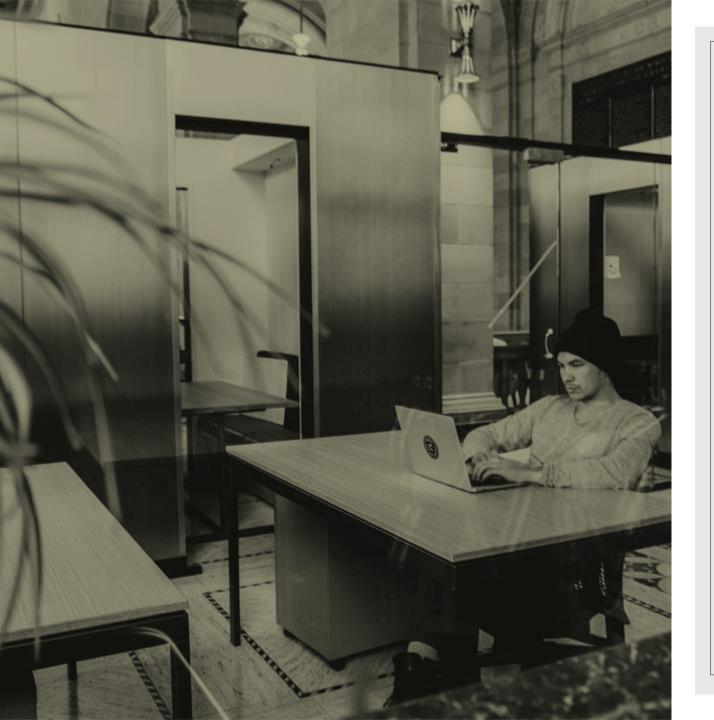
## Component coupling

- The Acyclic Dependencies Principle
- The Stable Dependencies Principle
- The Stable Abstraction Principle



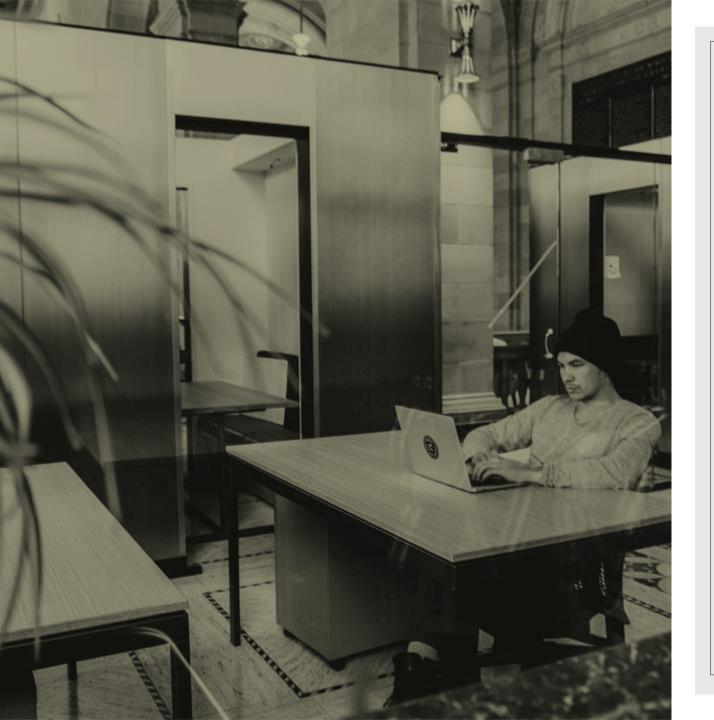
# The Acyclic Dependencies principle

- Downward dependencies
- It worked yesterday
- Weekly build



# The Stable Dependencies principle

- Components that change should not be dependent on difficult to change components
- Components that are heavily dependent should be very stable
- Components that rely on many other components are highly volatile



# The Stable Abstraction principle

- Components should be as abstract as it is stable.
- Dependencies run in the direction of abstraction
- Stable == interfaces and abstract classes,
   Instable == concrete



### Components Summary

- Classes that change for the same reason should be in the same component.
- Classes that change for different reason should be in separate Use names that are
- The dependencies should be directed downwards not in circle
- A component should only depend on components that are more stable than he is.



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