Design Patterns - Summary

Semester: Spring 2022

Version: 0.1.0
Date: 2022-04-06 18:06

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Contents

1 Introduction

1.1 Most important quotes

In the introduction the basics of object-oriented programming are explained. Therefore, for many this is easy to read. However, some important statements are made.

> Favor object composition over class inheritance

Because it is very difficult to make the correct abstraction often the base class(es) are not complete or have too much in it. With object composition you don't have this problem.

> Program to an interface, not an implementation

If you implement against interfaces you can test your class with unit tests. If you implement against a fixed implementation you can not change this behavior at anytime.

1.2 The design patterns

Class Design Patterns deal with the relationships between classes and their subclasses. The Object Design Patterns with the object relationships which can be changed at runtime.

		Purpose		
		Creational	**Structural**	**Behavioral**
Scope	**Class**	Factory Method (121)	Adapter (157)	Interpreter (274) Template Method (360)
	Object	Abstract Factory (99) Builder (110) Prototype (133) Singleton (144)	Adapter (157) Bridge (171) Composite (183) Decorator (196) Facade (208) Flyweight (218) Proxy (233)	Chain of Responsibility (251) Command (263) Iterator (289) Mediator (305) Memento (316) Observer (326) State (338) Strategy (349) Visitor (366)

Figure 1: Design pattern space