

# Design Pattern Study

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# Prerequisites

- Java OOP에 대한 이해 (class, interface, ...)
  - Not java language itself!
- CS230 System Programming 이상의 **삽질 경험**
- C/C++ 기초 약간
- UML notation : textbook 부록 참조

# Contents

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- What is Design Pattern?
- Study Plan

# What is Design Pattern?

- 경험 많은 프로그래머들의 비법(?)
  - 이렇게 하니까 좋더라~
  - 자주 사용되는 문제들을 해결하는 핵심
- 왜 사용하나?
  - Class Design의 어려움
  - 매번 다시 고민(삽질)하기 싫어서

# What is Design Pattern?

- Pattern의 구성요소
  - Pattern Name
    - 일종의 vocabulary 같은 것
  - Problem
    - Pattern을 적용할 대상
  - Solution
    - Design, relationships, consequences, responsibilities of elements
    - Template과 같아서 구체적인(specific) 해답을 제시하지는 않음
  - Consequences
    - Pattern 적용 결과
    - Trade-offs

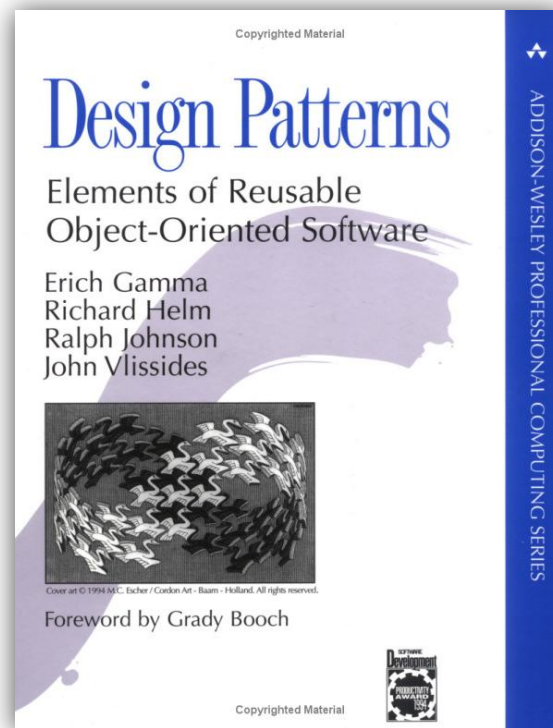
*Descriptions of communicating objects and classes that are customized to solve a general design problem in a particular context*

# What is Design Pattern?

- Categories
  - Creational
    - Abstraction of instantiation process
    - creation
  - Structural
    - How classes/objects are composed for larger structure
    - composition
  - Behavioral
    - Algorithms/assignments of responsibilities between objects
    - communication, interconnection

# Study Plan

- Textbook
  - Design Patterns, Elements of Reusable Object Oriented Software
  - 구입 : 강컴(kangcom.com), 약 4만원
  - 번역판도 있음 (번역의 질은 잘...)
  - 예제 코드는 C++ 및 Smalltalk로 제공



# Study Plan

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- Design Pattern, itself
  - Creational Patterns
  - Structural Patterns
  - Behavioral Patterns
- Discussions & Applications
  - Linux Shell
  - Web programming

# Study Plan

- The Catalog of Design Patterns (9~11 sessions)
  - Abstract Factory, Builder, Factory Method
  - Prototype, Singleton
  - Adapter, Bridge, Composite
  - Decorator, Façade
  - Flyweight, Proxy
  - Chain of Responsibility, Command
  - Interpreter, Iterator, Mediator
  - Memento, Observer, State
  - Strategy, Template Method, Visitor
- Application (2~3 sessions)
- 2 sessions/week after the midterm exam

귀귀귀~

**이제 다시 시작이다...**