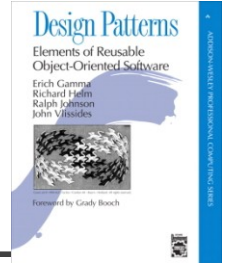


Design Patterns

PV167 Project in Object-oriented Design of Information Systems

Design Patterns

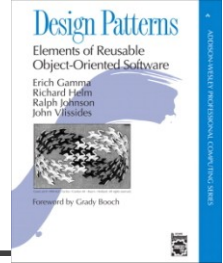


✧ **Design Patterns: Elements of Reusable Object-Oriented Software**

by E. Gamma, R. Helm, R. Johnson, J. Vlissides, 1994

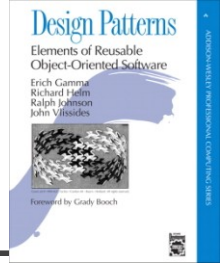
✧ Pattern catalog:

- Creational patterns – 5 patterns
- Structural patterns – 7 patterns
- Behavioral patterns – 11 patterns



Design Patterns

Part 1/2



Most popular patterns

✧ Creational patterns

- Singleton

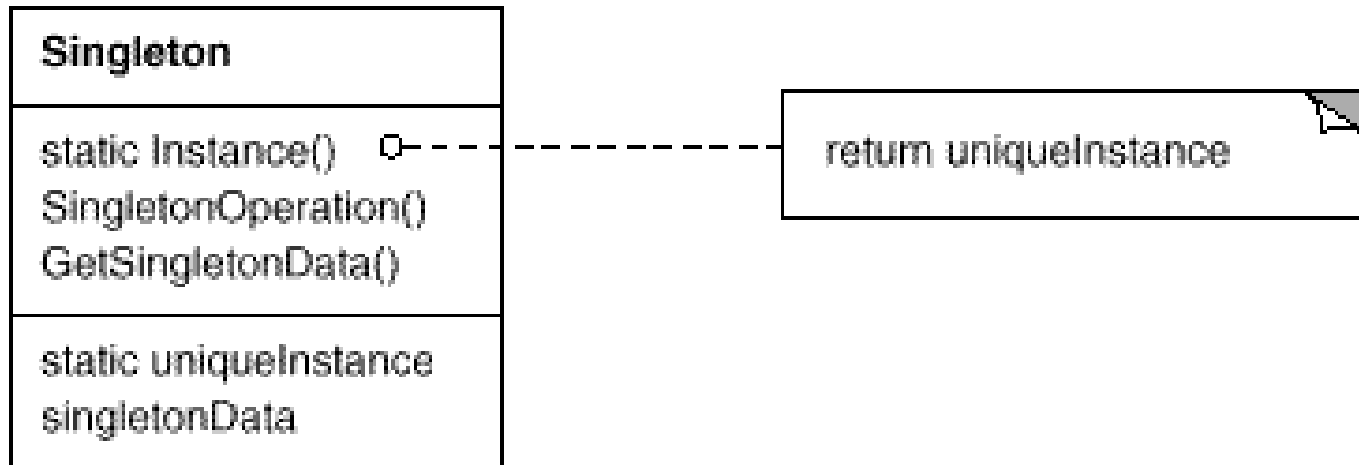
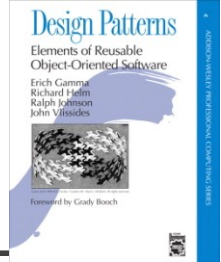
✧ Structural patterns

- Adapter
- Bridge
- Composite

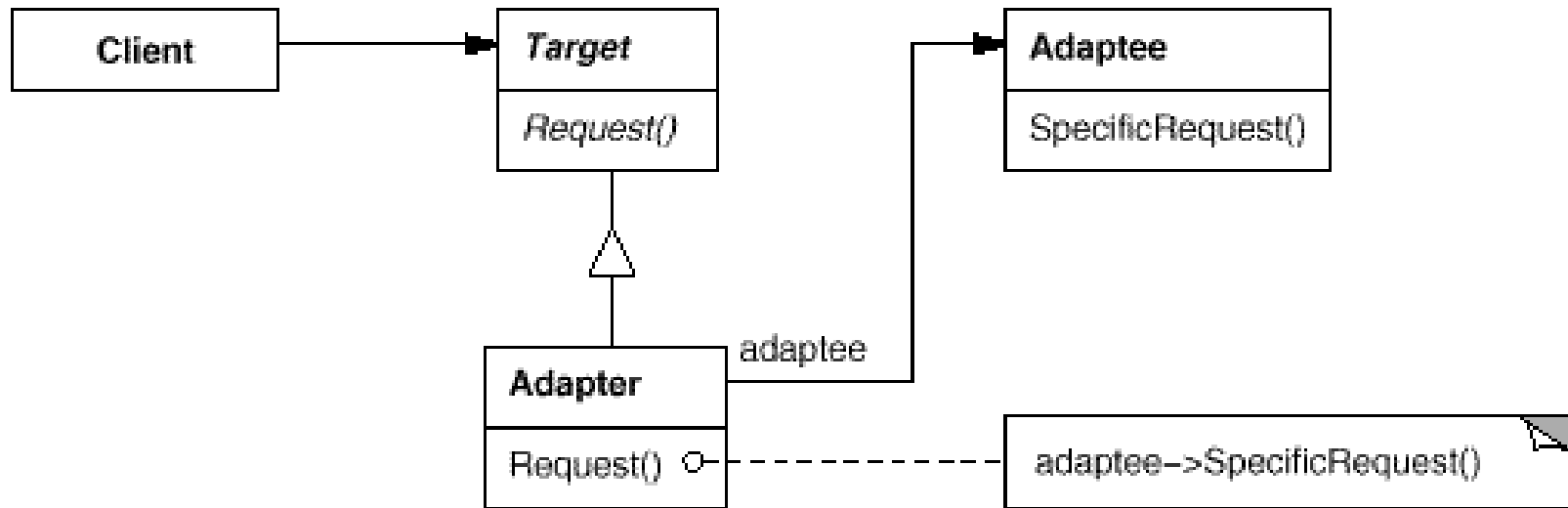
✧ Behavioral patterns

- Observer
- Strategy

Creational – Singleton

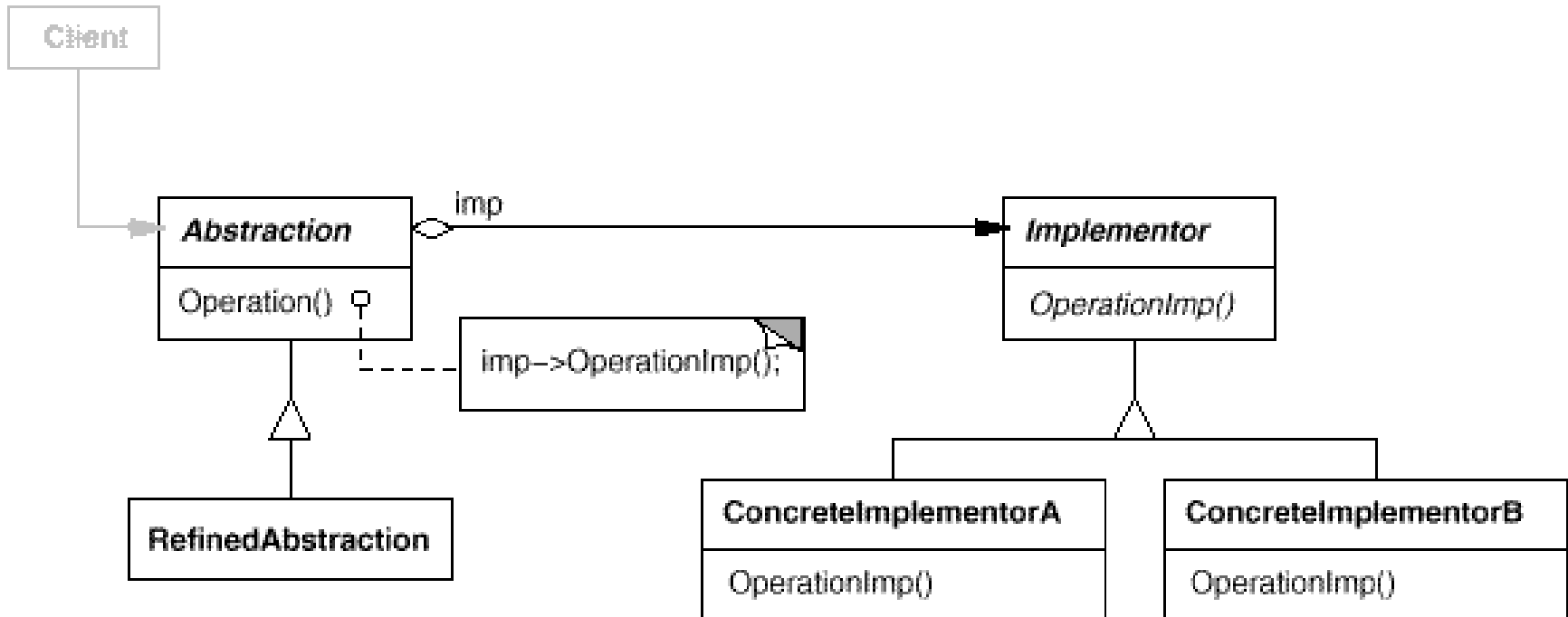


Structural – Adapter pattern



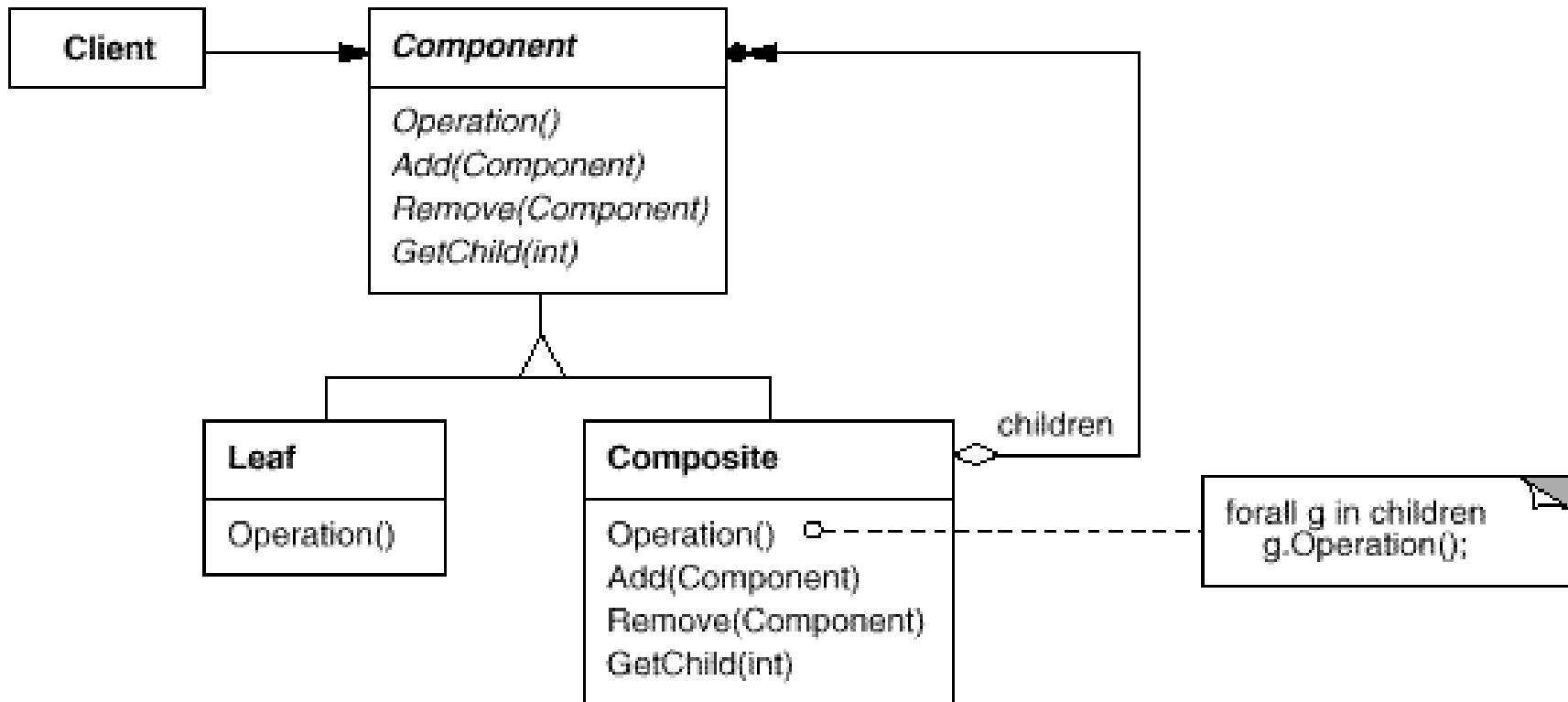


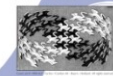
Structural – Bridge pattern



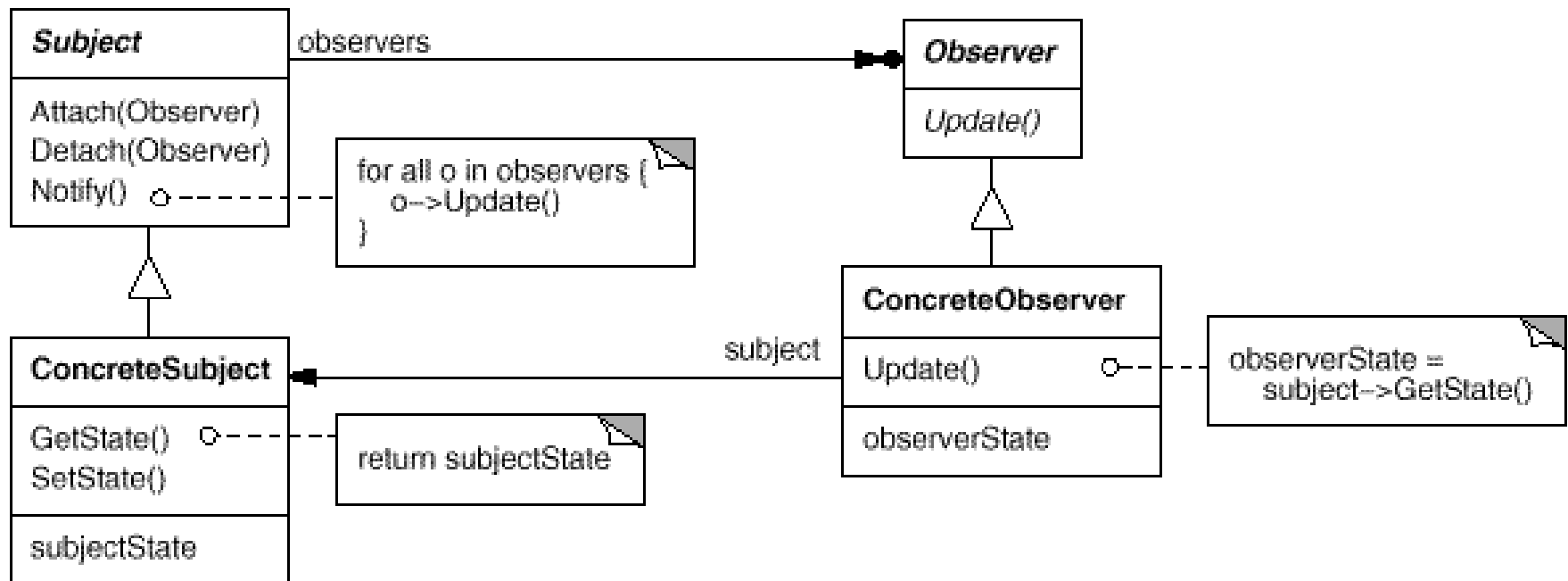


Structural – Composite pattern

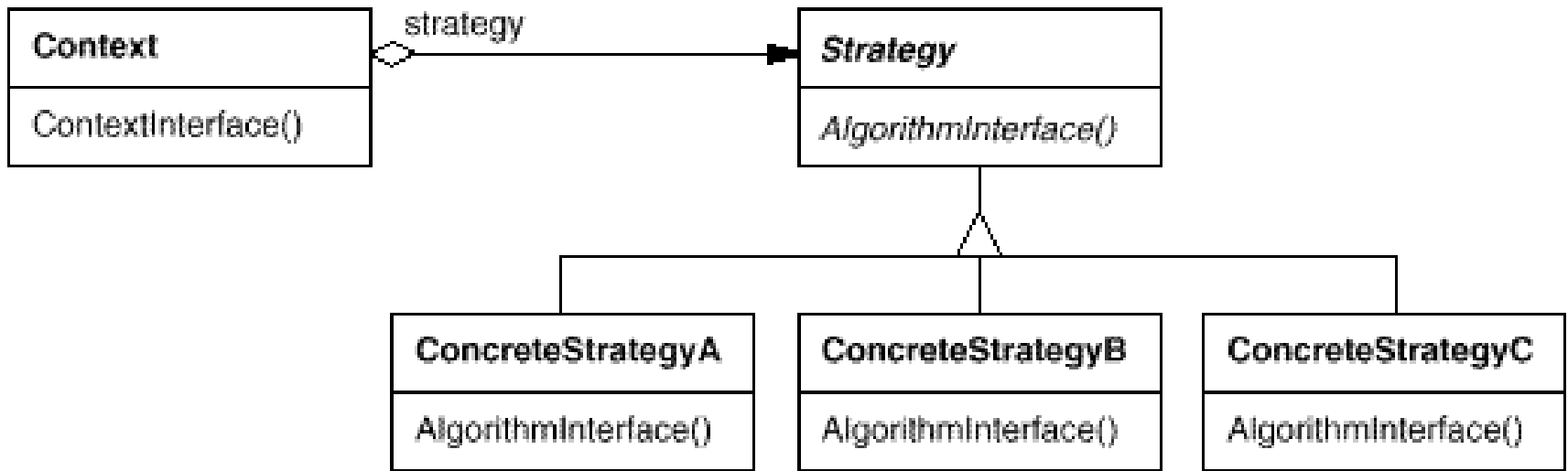


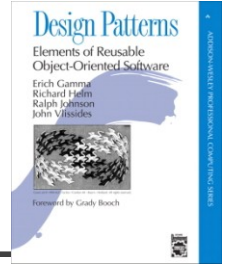


Behavioral – Observer pattern



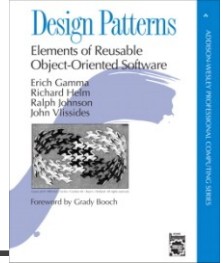
Behavioral – Strategy pattern





Design Patterns

Part 2/2



Other popular patterns

✧ Creational patterns

- Abstract Factory

✧ Structural patterns

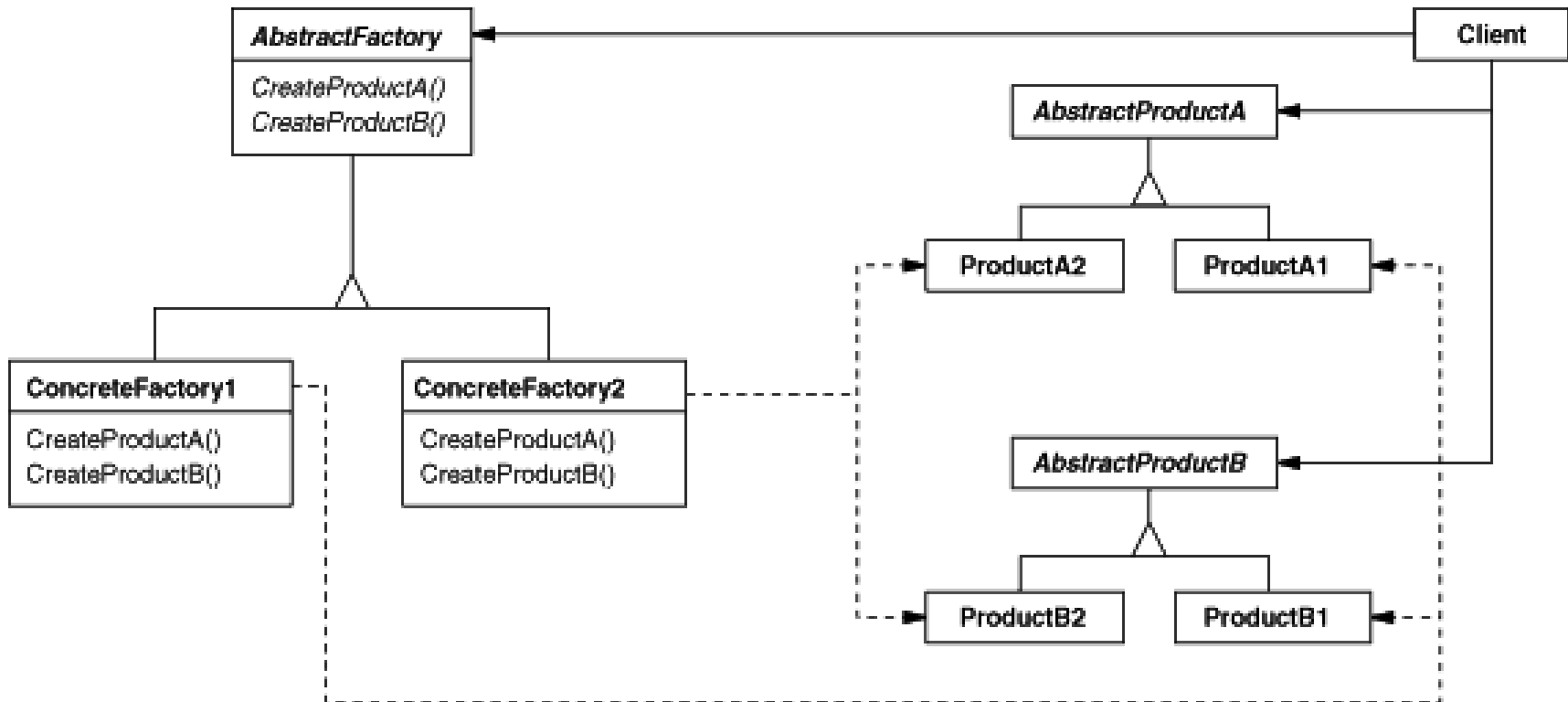
- Façade
- Flyweight

✧ Behavioral patterns

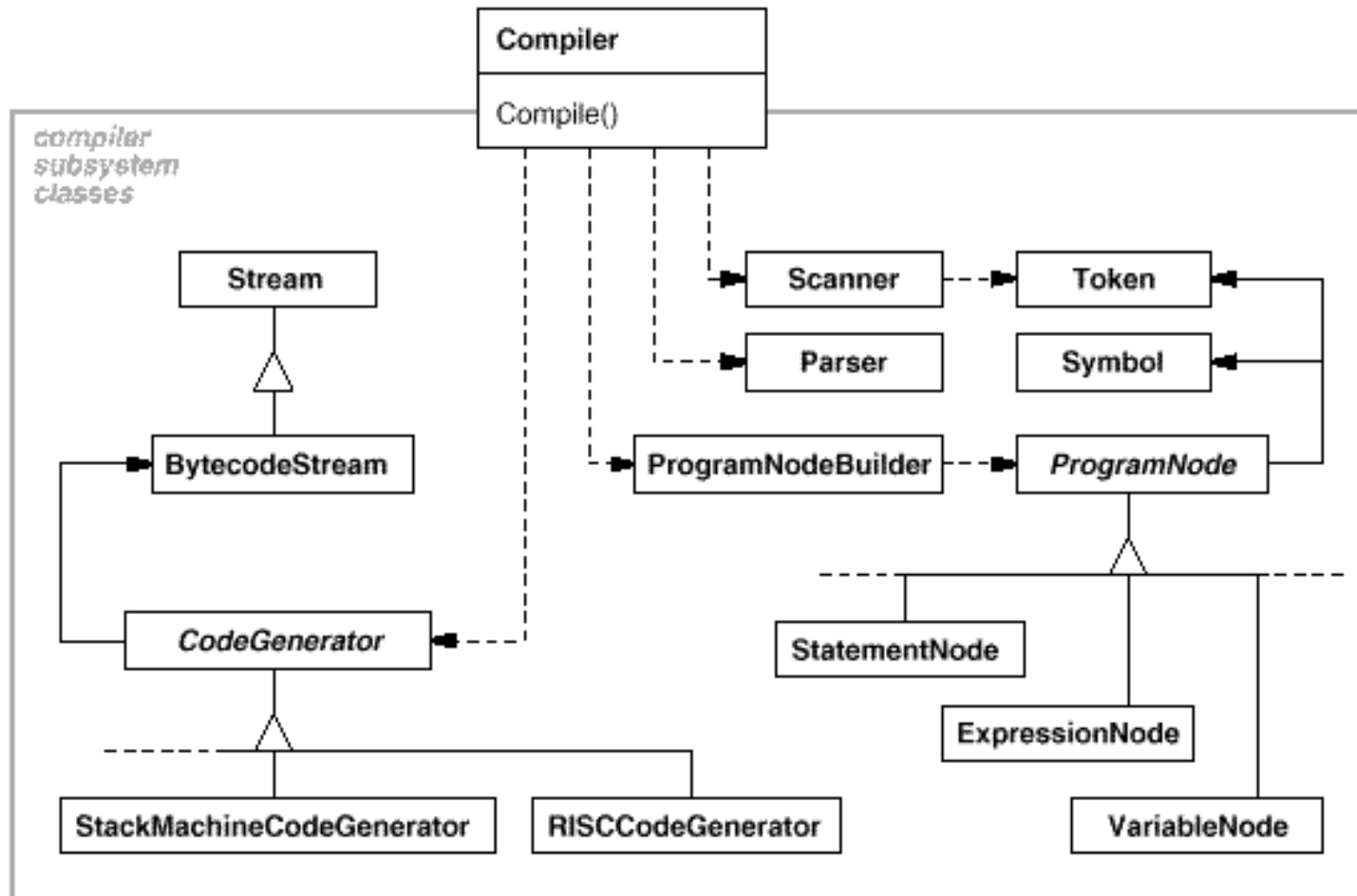
- Mediator
- Memento
- State
- Visitor



Creational – Abstract Factory pattern

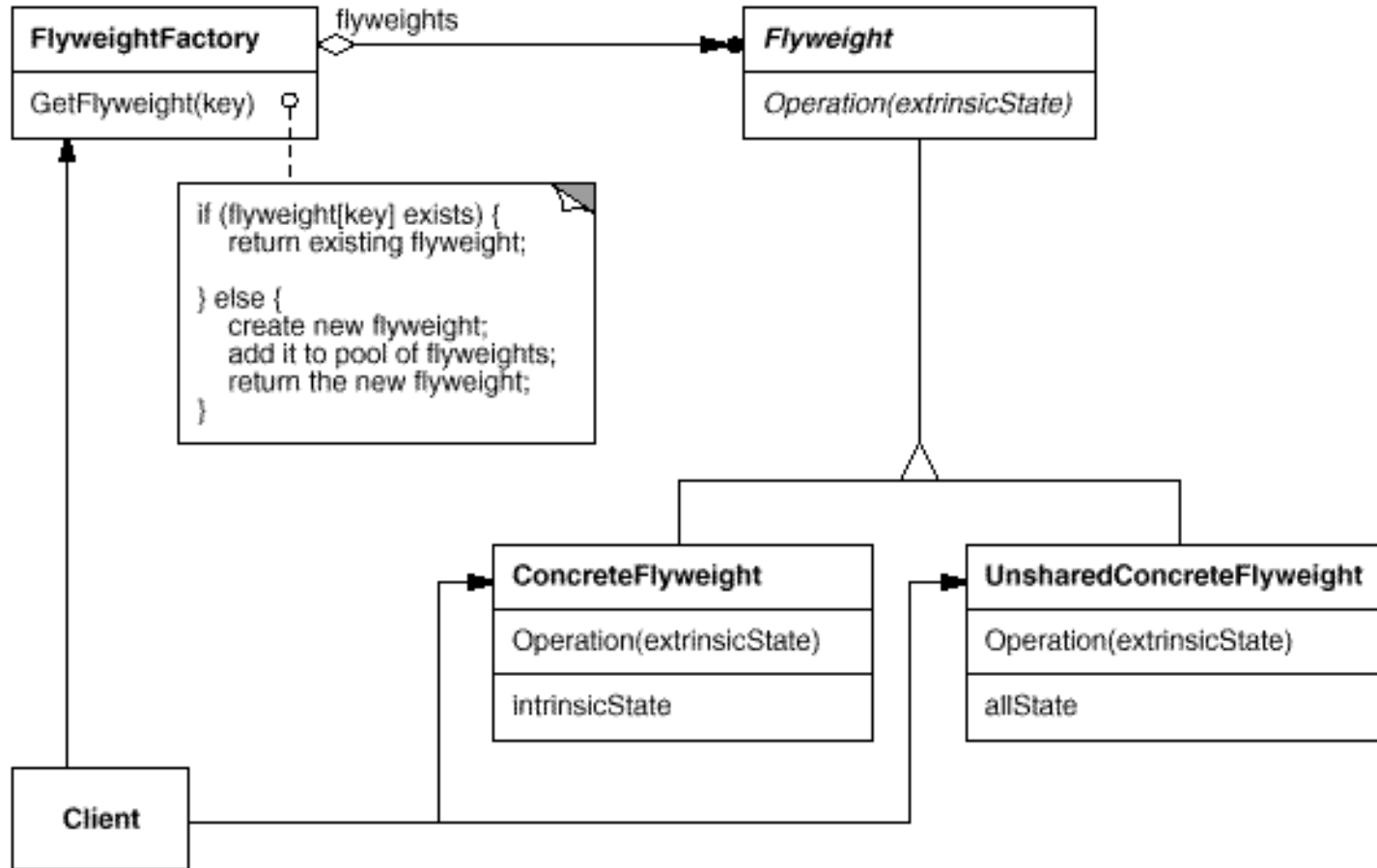


Structural – Façade pattern

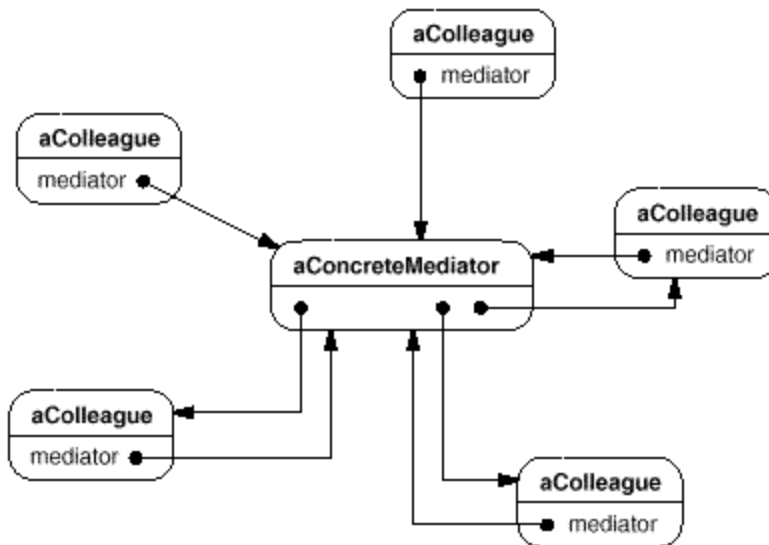
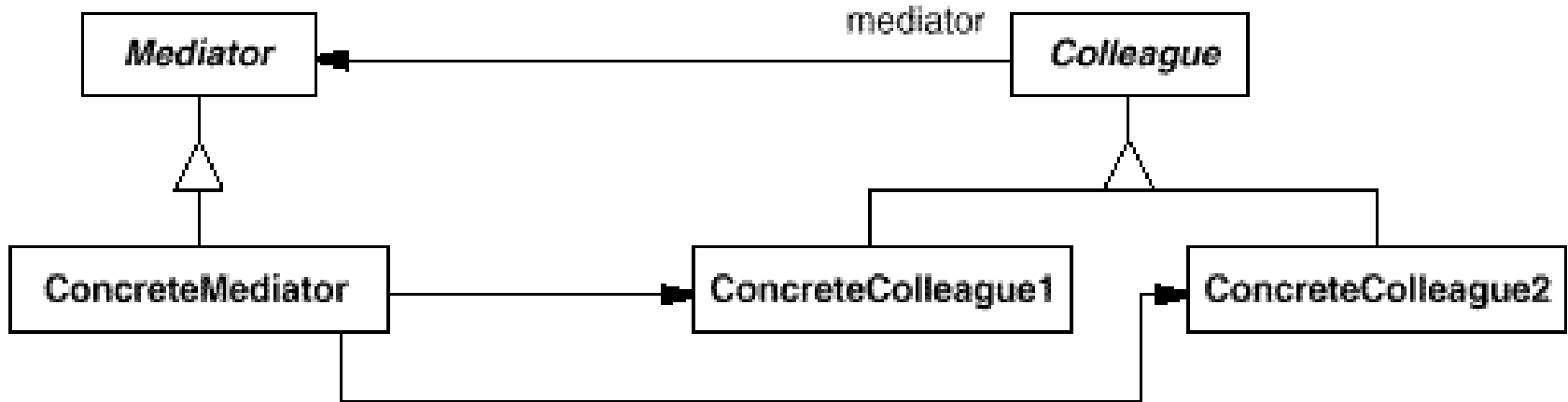




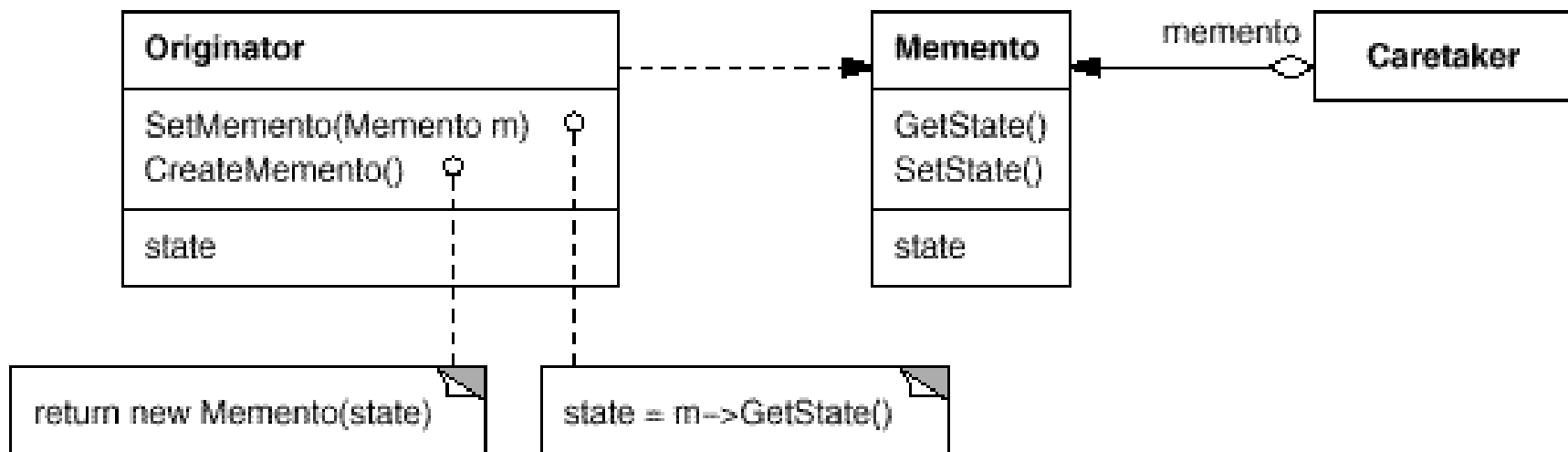
Structural – Flyweight pattern



Behavioral – Mediator pattern

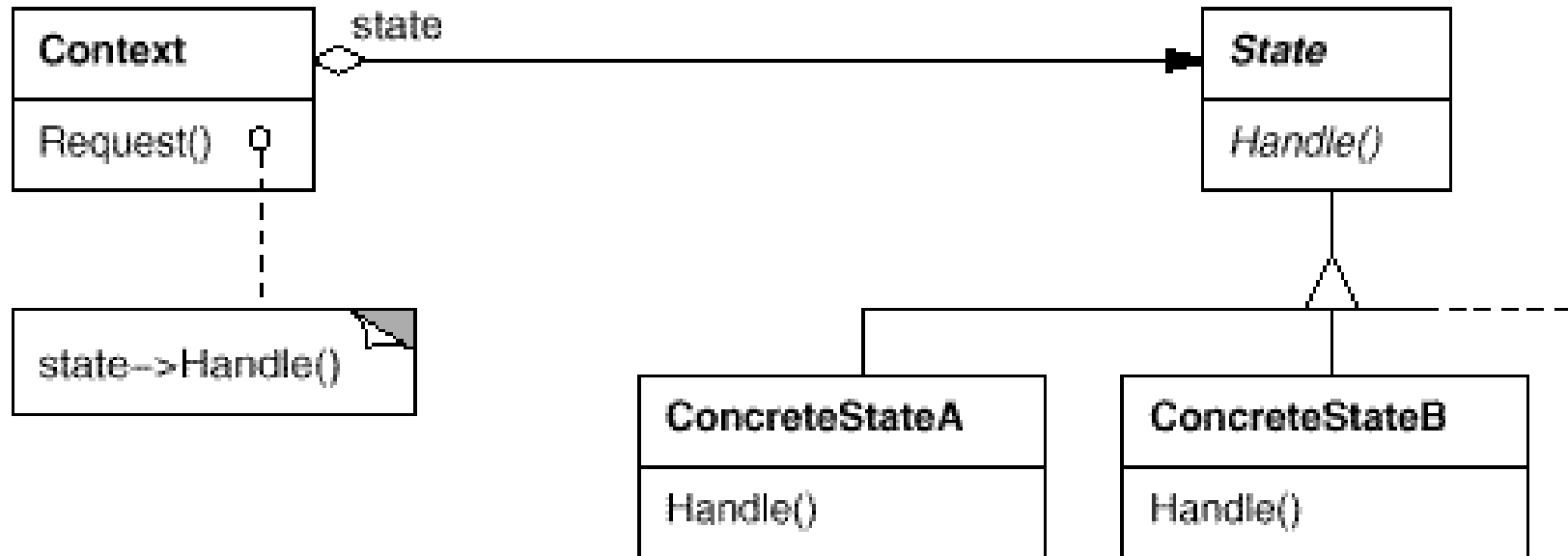


Behavioral – Memento pattern





Behavioral – State pattern



Behavioral – Visitor pattern

