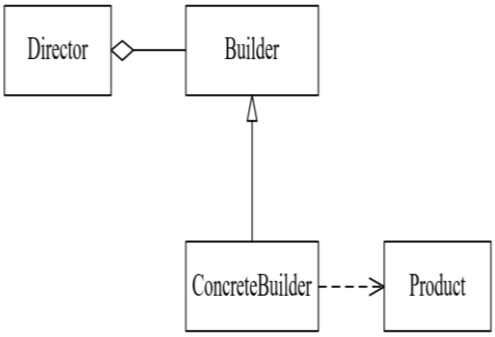
The signatures of some GoF design patterns

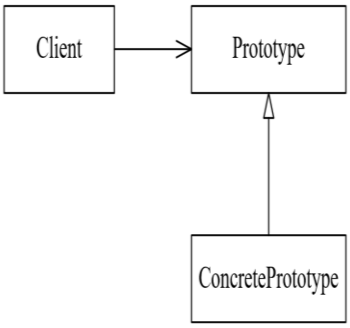


Builder	
Behavioral characteristics	• A method in Director ***calls*** a method in Builder ***with loop*** • A method in ConcreteBuilder ***overrides*** a method in Builder • A method in ConcreteBuilder ***returns an instance*** of Product

1 – The structural signature of the Builder

2 – The behavioral signature of the Builder

The signature of the Builder design pattern

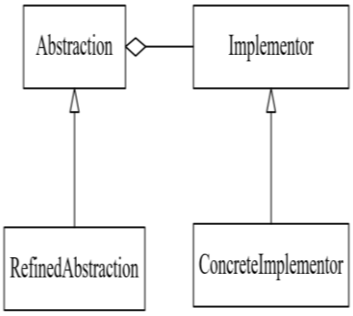


Prototype	
Behavioral characteristics	• A method in Client ***calls*** a method in Prototype • A method in ConcretePrototype ***overrides*** a method in Prototype and ***returns a copy of the same class***

1 – The structural signature of the Prototype

2 – The behavioral signature of the Prototype

The signature of the Prototype design pattern

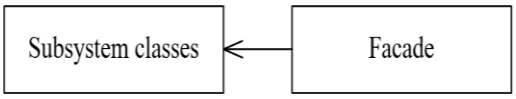


Bridge	
Behavioral characteristics	• A method in Abstraction ***calls*** a method in Implementor

1 – The structural signature of the Bridge

2 – The behavioral signature of the Bridge

The signature of the Bridge design pattern

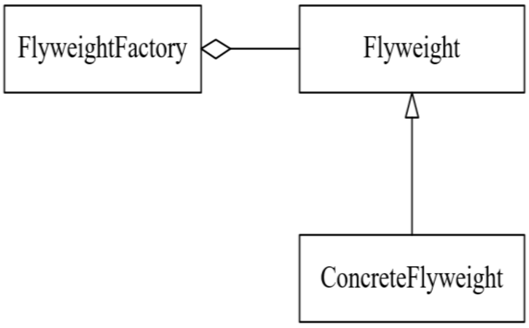


Façade	
Behavioral characteristics	• ***delegation*** from Façade to subsystem classes • ***no association*** from Subsystem classes to Façade • Façade is ***a singleton***

1 – The structural signature of the Façade

2 – The behavioral signature of the Façade

The signature of the Façade design pattern

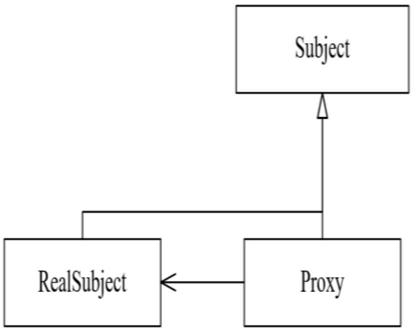


1 – The structural signature of the Flyweight

Flyweight	
Behavioral characteristics	• FlyweightFactory is ***associated*** to Flyweight with ***multiplicity*** (FlyweightFactory has a nonpublic set of Flyweights and is a singleton) • A method in ConcreteFlyweight ***overrides*** a method in Flyweight • ConcreteFlyweights are not public • A public method in FlyweightFactory ***returns an instance*** of Flyweight

2 – The behavioral signature of the Flyweight

The signature of the Flyweight design pattern

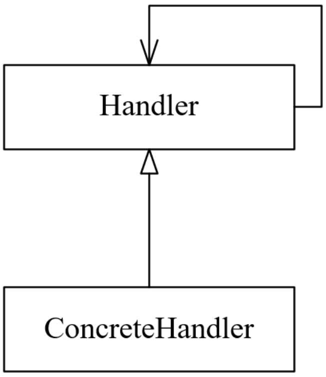


1 – The structural signature of the Proxy

Proxy	
Behavioral characteristics	• A method in Proxy ***overrides*** a method in Subject and ***calls*** a method in RealSubject

2 – The behavioral signature of the Proxy

The signature of the Proxy design pattern

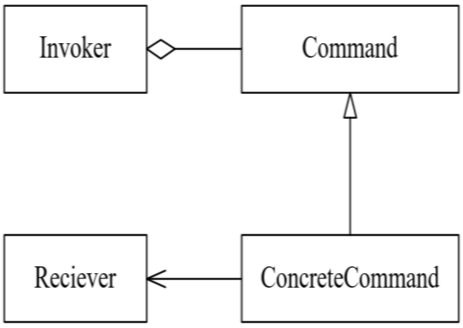


1 – The structural signature of the Chain of Resposibility

Chain of Resposibility	
Behavioral characteristics	• A method in ConcreteHandler ***overrides*** a method in Handler and ***includes a conditional statement*** that ***calls a method*** in Handler • Handler ***calls an overridden method*** in ConcreteHandler

2 – The behavioral signature of the Chain of Resposibility

The signature of the Chain of Resposibility design pattern

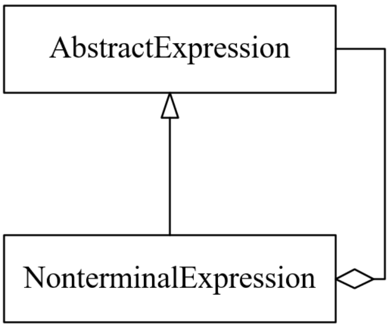


1 – The structural signature of the Command

Command	
Behavioral characteristics	• A method in ConcreteCommand ***overrides*** a method in Command and ***delegates to a method*** in receiver • A method in Invoker ***calls a method*** in Command • The constructor of ConcreteCommand has a parameter of the type Reciever

2 – The behavioral signature of the Command

The signature of the Command design pattern

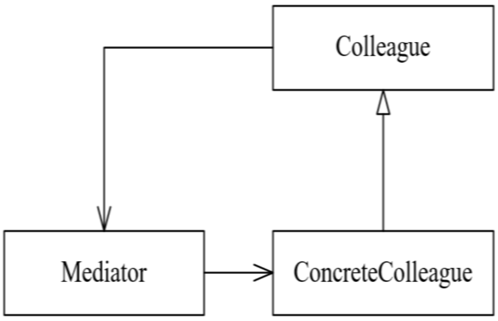


1 – The structural signature of the Interpreter

Interpreter	
Behavioral characteristics	• A method in NonterminalExpression ***overrides*** a method in AbstractExpression that ***calls itself recursively*** and has ***dependency*** to another class (the class that defines the context)

2 – The behavioral signature of the Interpreter

The signature of the Interpreter design pattern

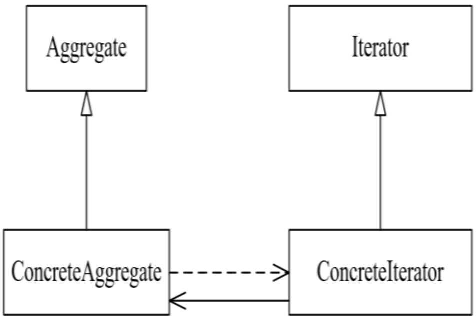


1 – The structural signature of the Mediator

Mediator	
Behavioral characteristics	• A method in ConcreteColleague ***calls a method*** in Mediator • ***Delegation*** from the mediator to a colleague

2 – The behavioral signature of the Mediator

The signature of the Mediator design pattern

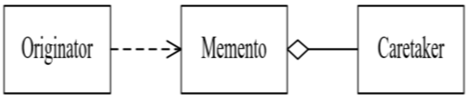


1 – The structural signature of the Iterator

Iterator	
Behavioral characteristics	• A method in ConcreteAggregates ***overrides*** a method in Aggregates and ***returns an instance*** of ConcreteIterator

2 – The behavioral signature of the Iterator

The signature of the Iterator design pattern



1 – The structural signature of the Memento

Memento	
Behavioral characteristics	• A method in Caretaker ***calls*** a method in Originator • A method in Originator ***calls*** a method in Memento

2 – The behavioral signature of the Memento

The signature of the Memento design pattern