

Patrones de diseño I

UNRN

Universidad Nacional
de Río Negro

XVI

2024



—

Patrones de diseño

Cuándo utilizarlos

Cuándo **NO** utilizarlos

Patrones de diseño

Dónde utilizarlos

Beneficios

Clasificación

Propósito

Alcance

Patrones de diseño

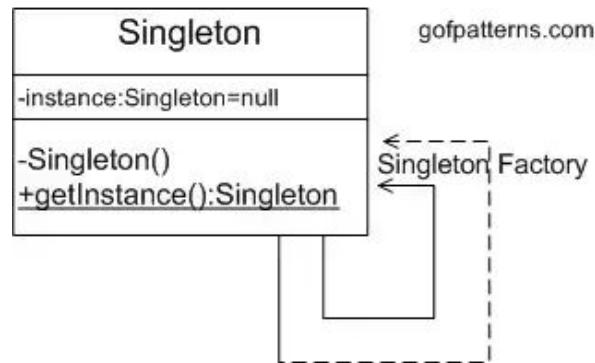
Propósito		De Creación	Estructural	De Comportamiento
Alcance	Clase	Factory Method	Adapter	Interpreter
	Objeto	Abstract Factory	Adapter	Template Method
		Builder	Bridge	Chain of Responsibility
		Prototype	Composite	Command
		Singleton	Decorator	Iterator
			Facade	Mediator
			Flyweight	Memento
			Proxy	Observer
				State
				Strategy
				Visitor

Creacionales

Singleton

Singleton

The Singleton Pattern



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Access modifiers in class diagram: +, -, #

+ public,
- private,
protected

Singleton



Singleton

InstitutoEducativo

- instance : InstitutoEducativo

+ getInstance() : InstitutoEducativo

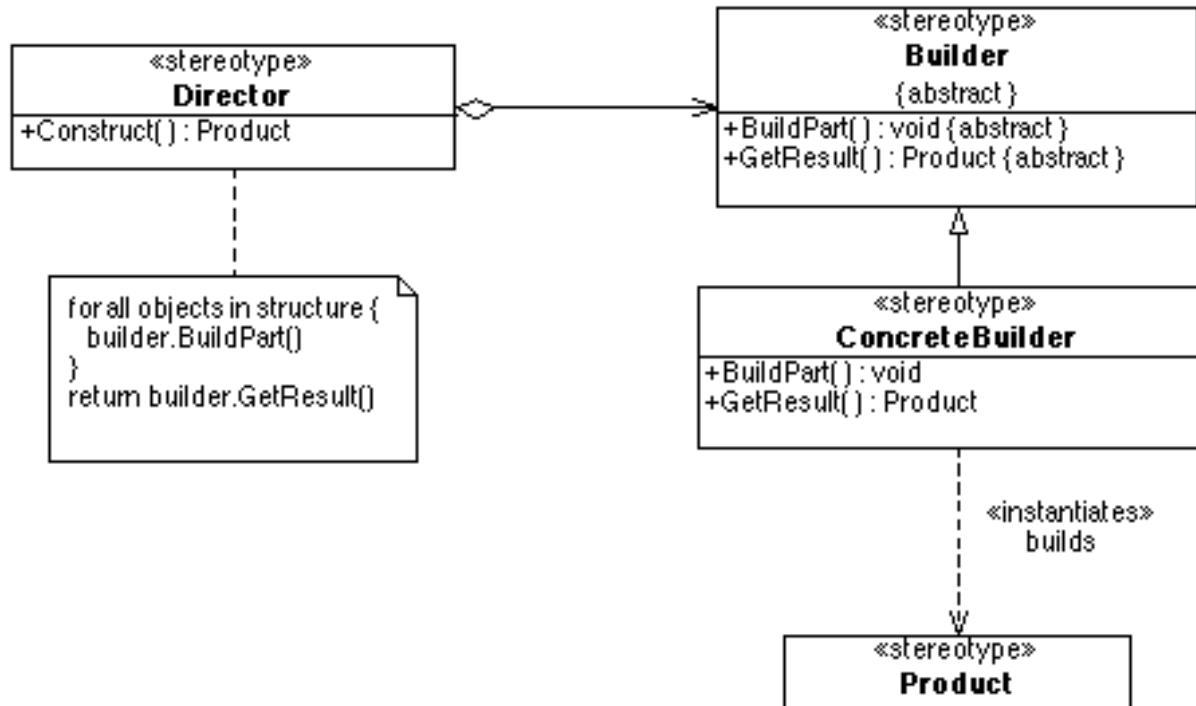
- InstitutoEducativo()

PDDC Singleton DEMO

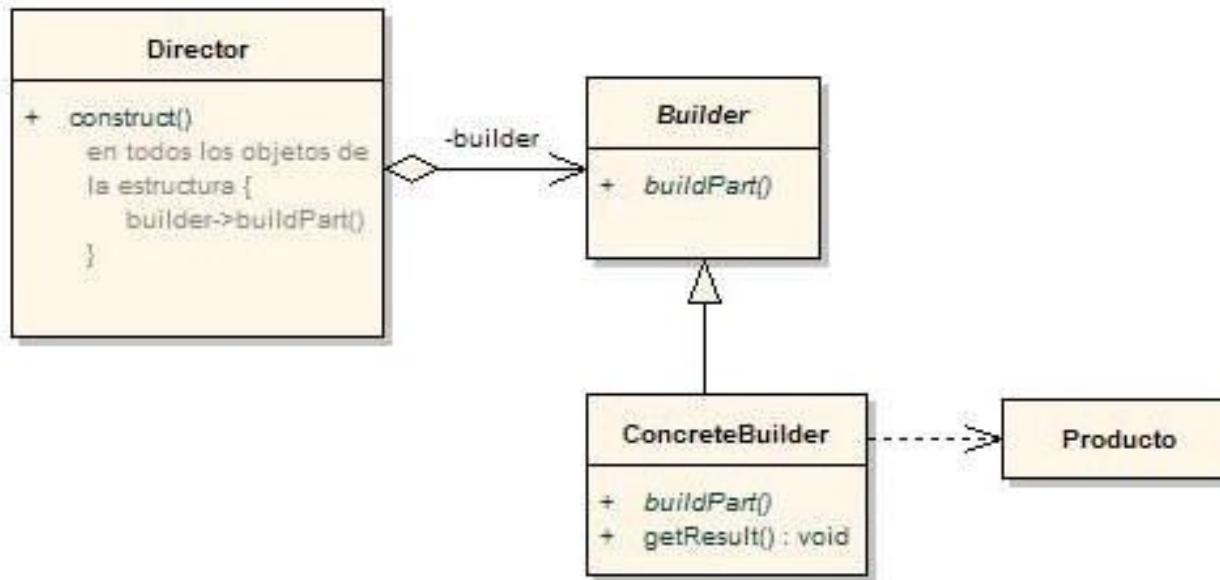
PDDC

Builder

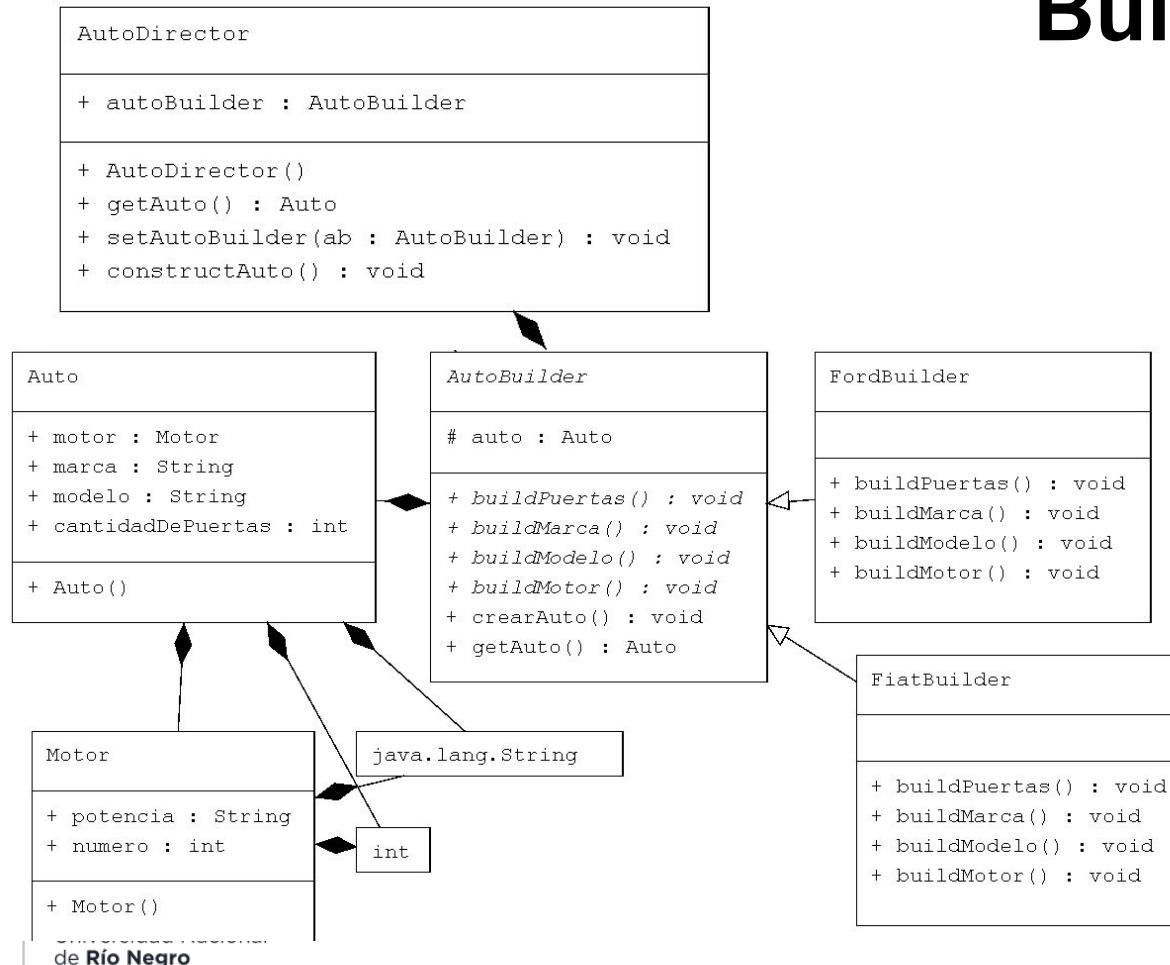
Builder



Builder



Builder



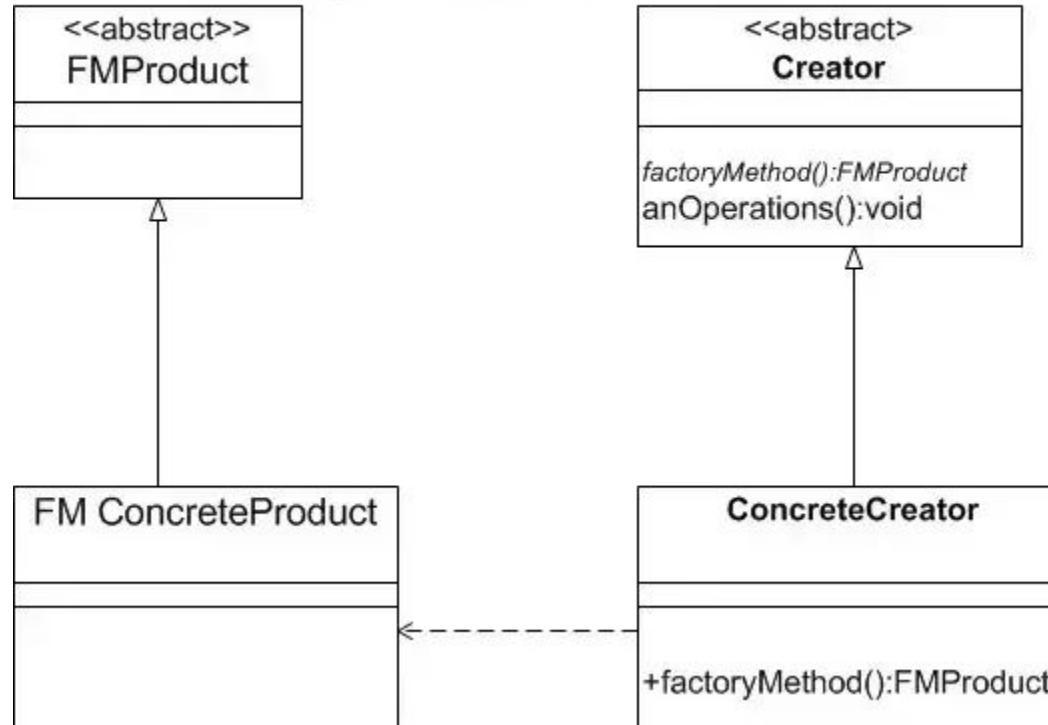
PDDC Builder DEMO

PDDC Builder CONSECUENCIAS

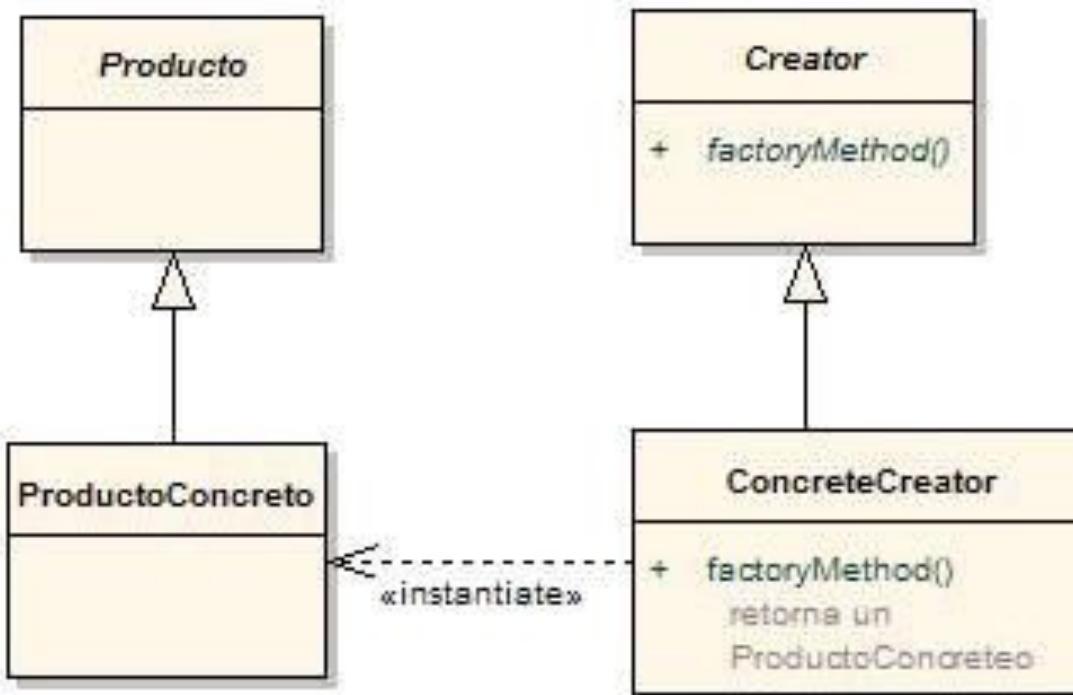
Factory Method

Factory Method

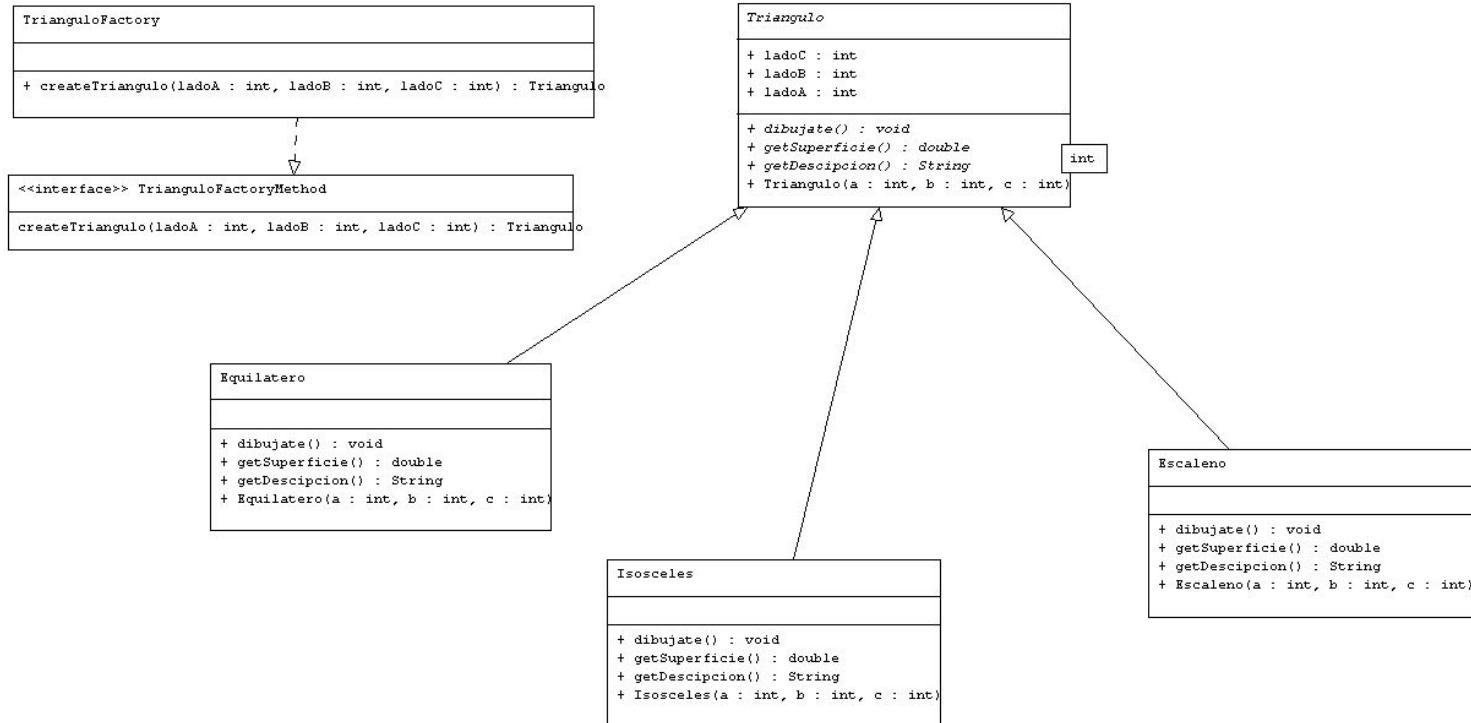
The Factory Method Pattern



Factory Method



Factory Method



PDDC

Factory Method

DEMO

PDDC

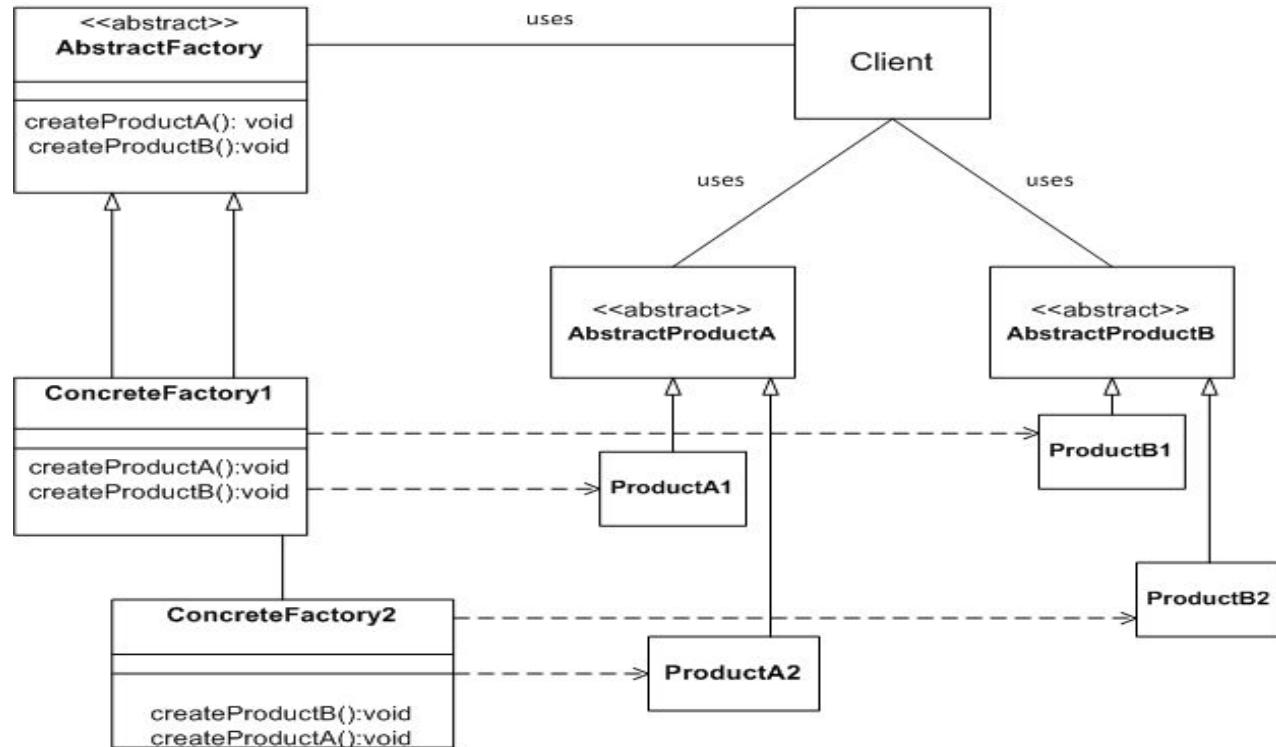
Factory Method

CONSECUENCIAS

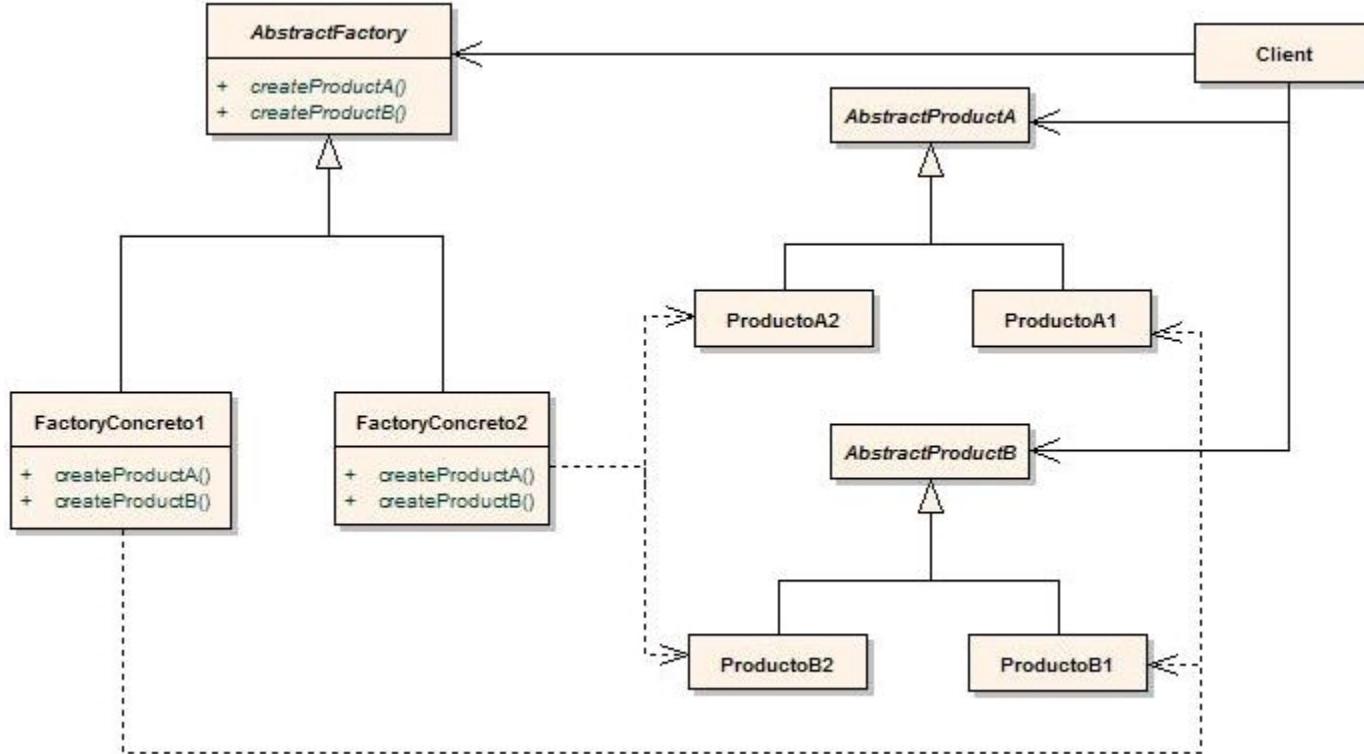
Abstract Factory

Abstract Factory

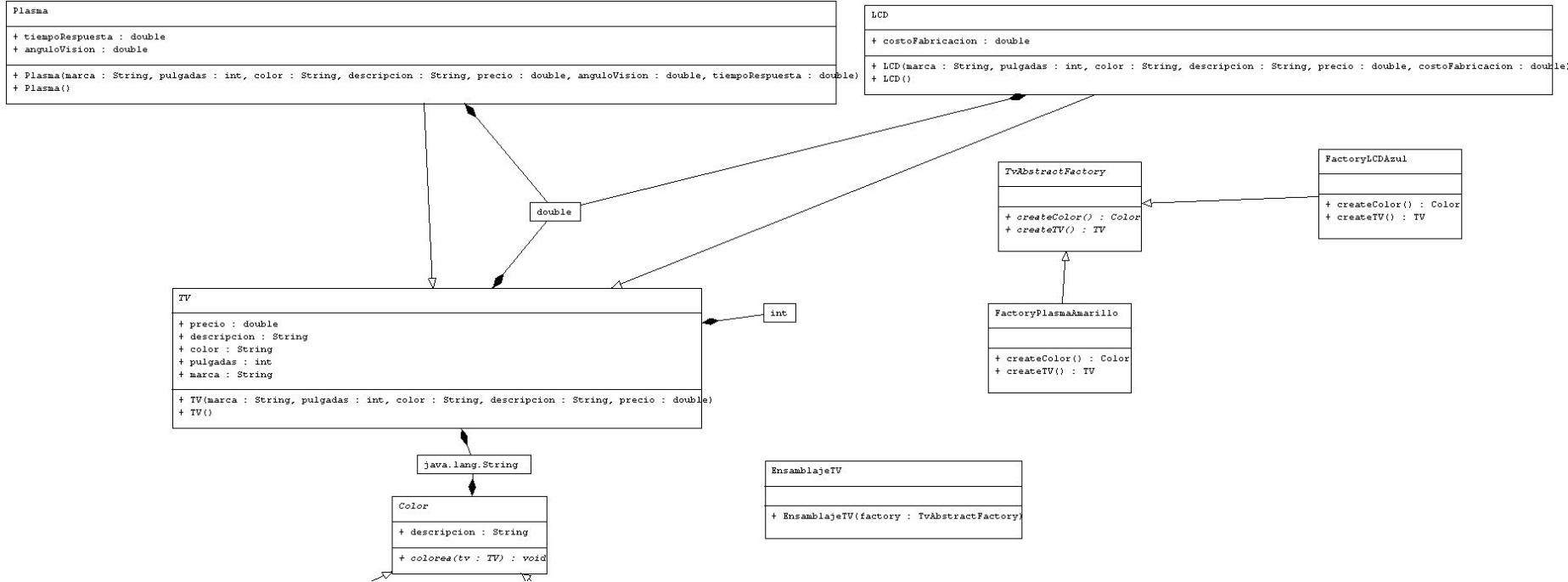
The Abstract Factory Pattern



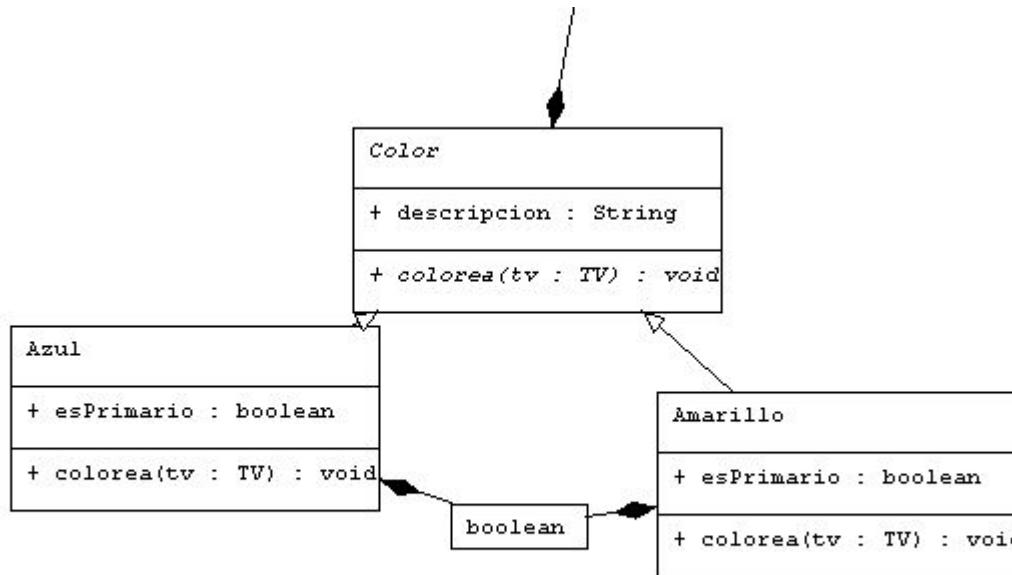
Abstract Factory



Abstract Factory



Abstract Factory



PDDC

Abstract Factory

DEMO

PDDC

Abstract Factory

CONSECUENCIAS

Patrones de diseño

Propósito		De Creación	Estructural	De Comportamiento
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			Flyweight	Memento
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				State
				Strategy
				Visitor

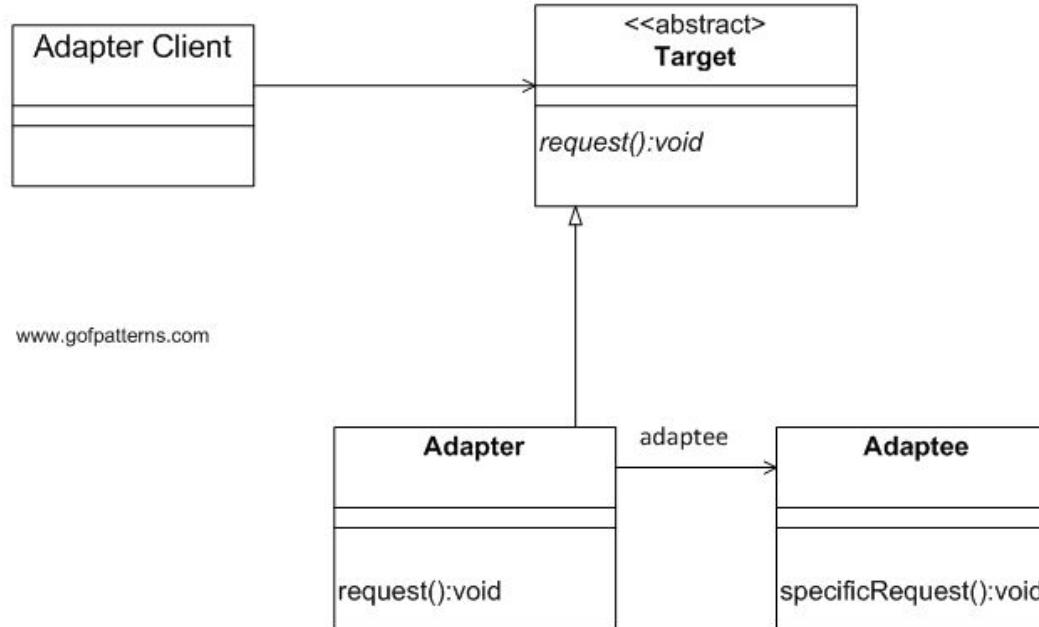
Estructurales

Adapter

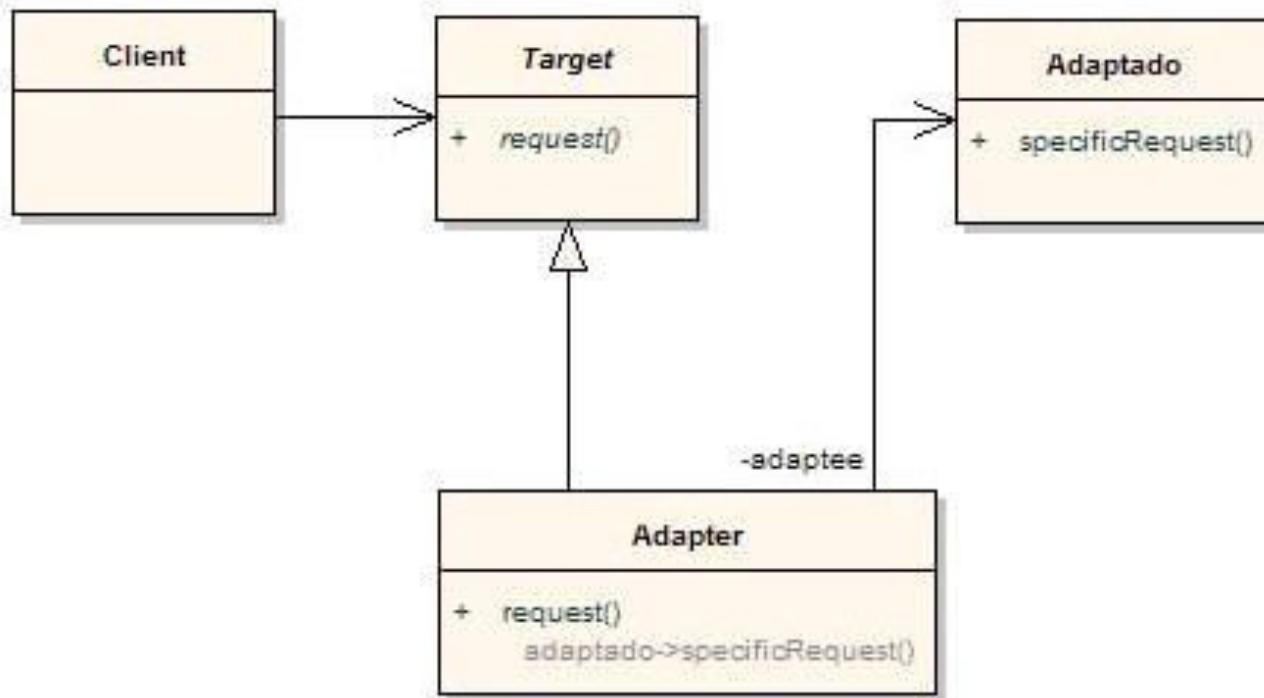
Adapter

The Adapter Pattern

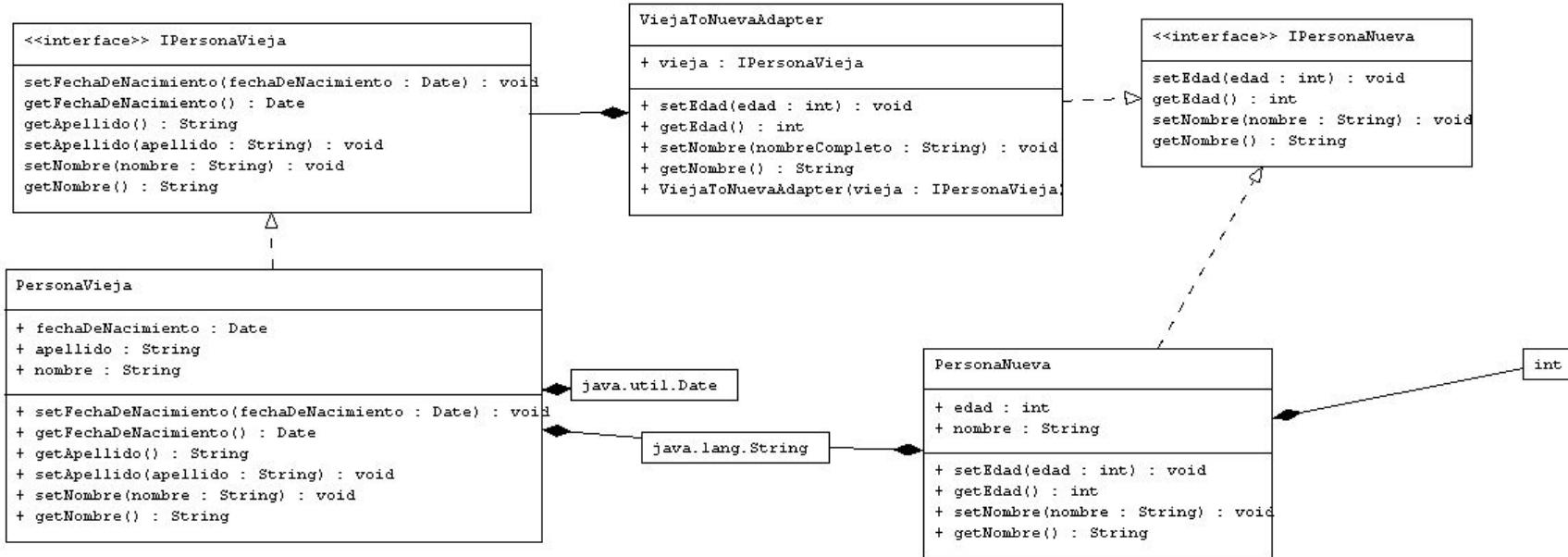
Implements an interface known to its clients.



Adapter



Adapter



PDDE Adapter DEMO

PDDE Adapter CONSECUENCIAS

Patrones de diseño II

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Patrones de diseño

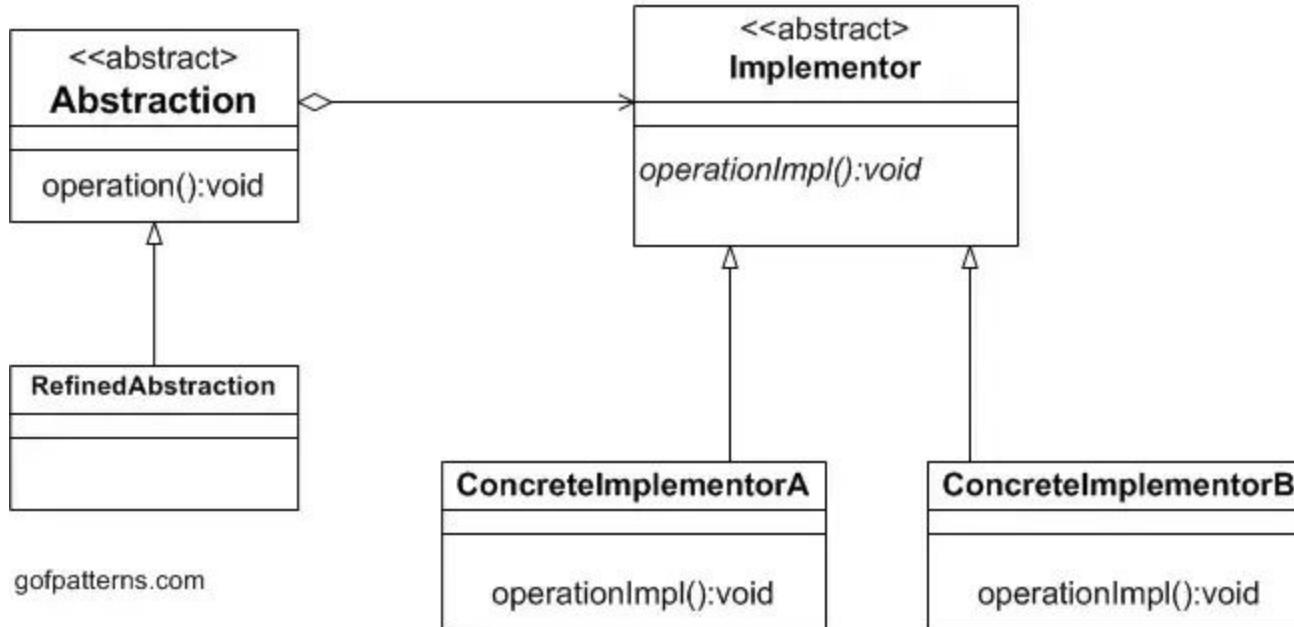
Propósito		De Creación	Estructural	De Comportamiento
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			Proxy	Observer
				State
				Strategy
				Visitor

PDDE

Bridge

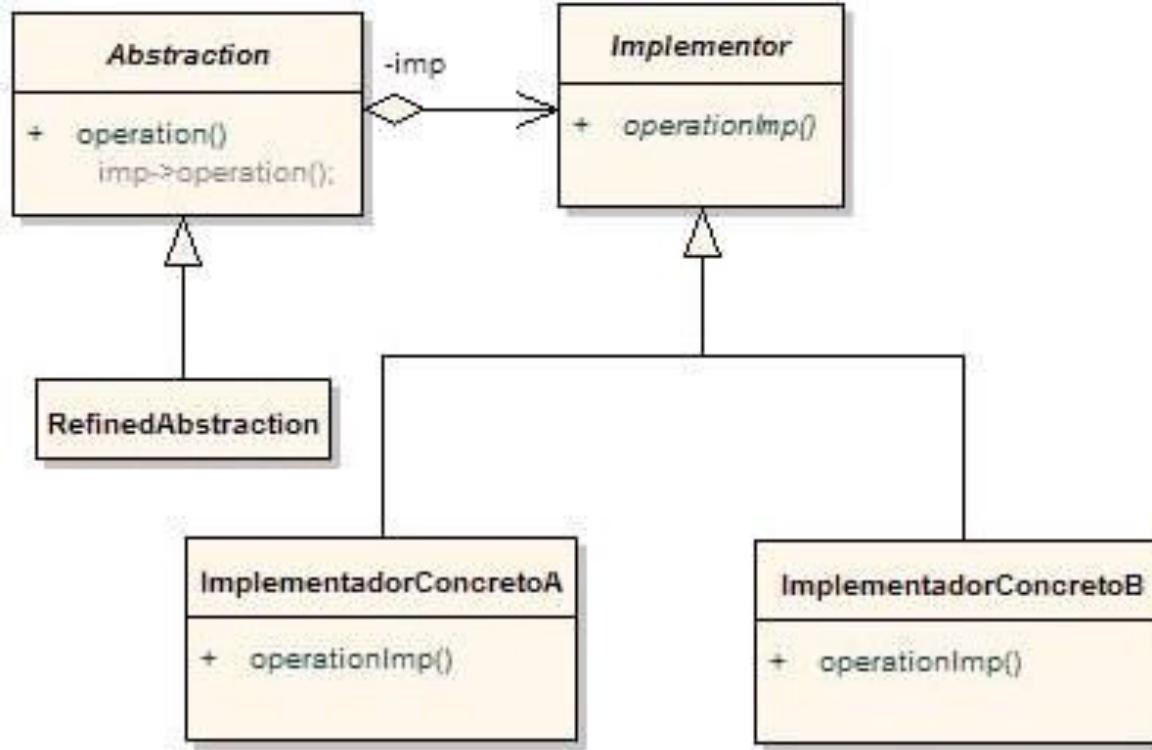
Bridge

The Bridge Pattern

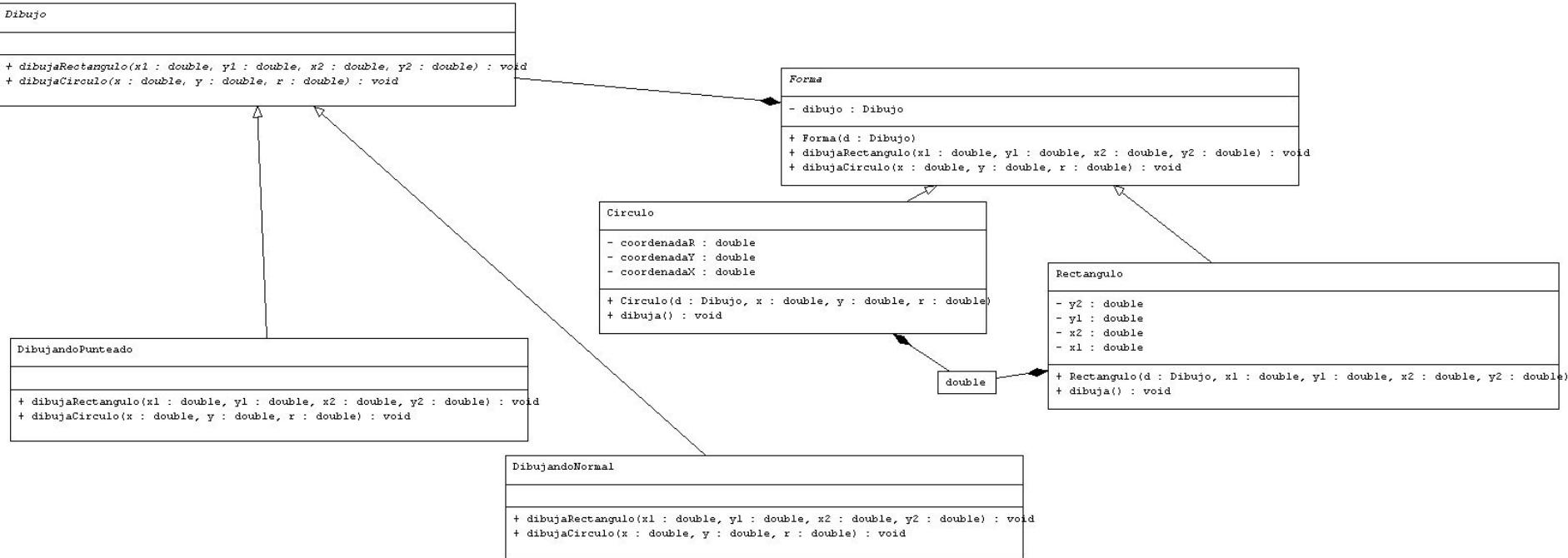


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Bridge



Bridge



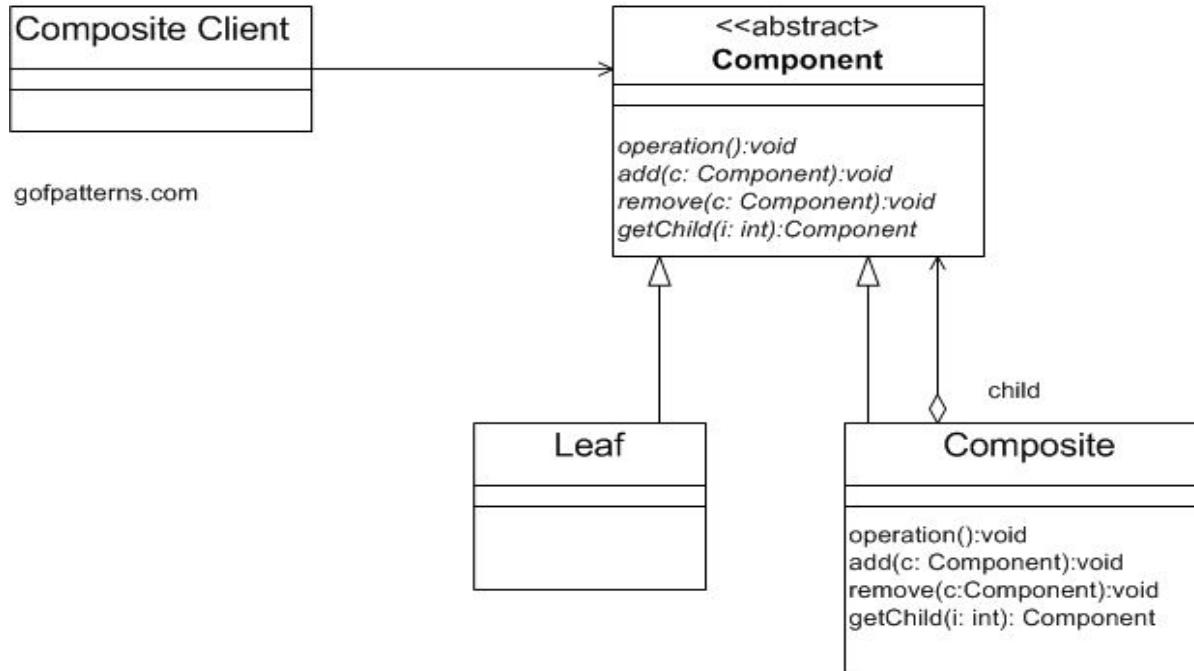
PDDE Bridge DEMO

PDDE Bridge CONSECUENCIAS

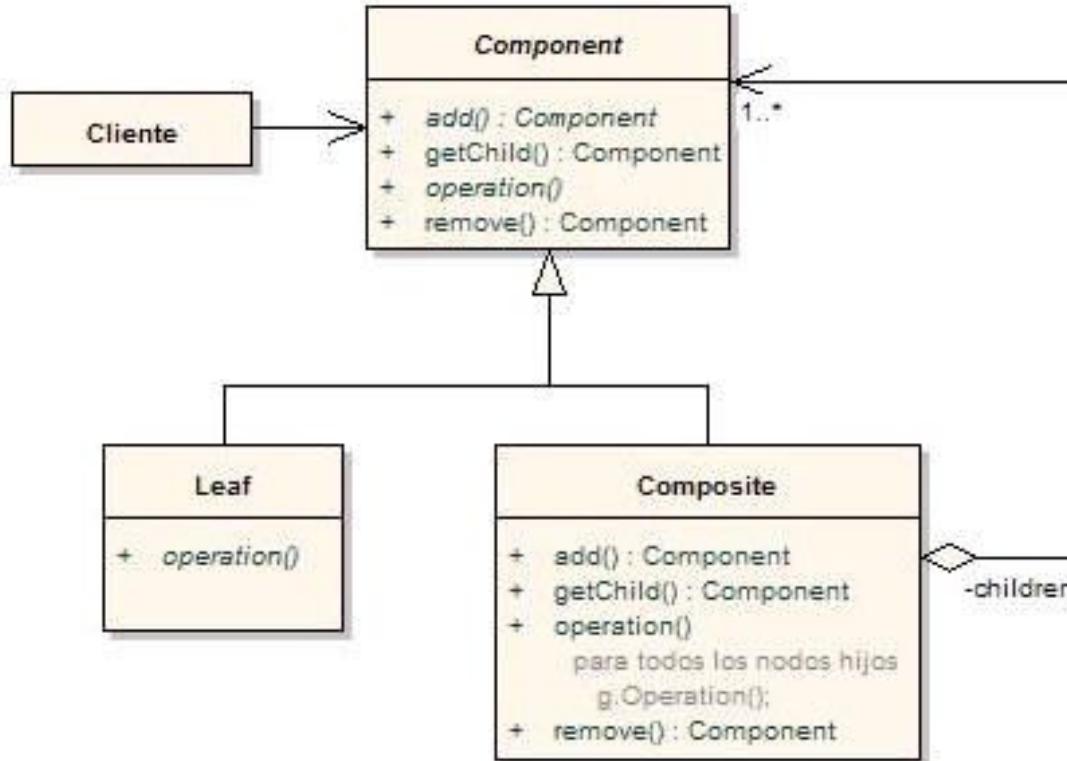
Composite

Composite

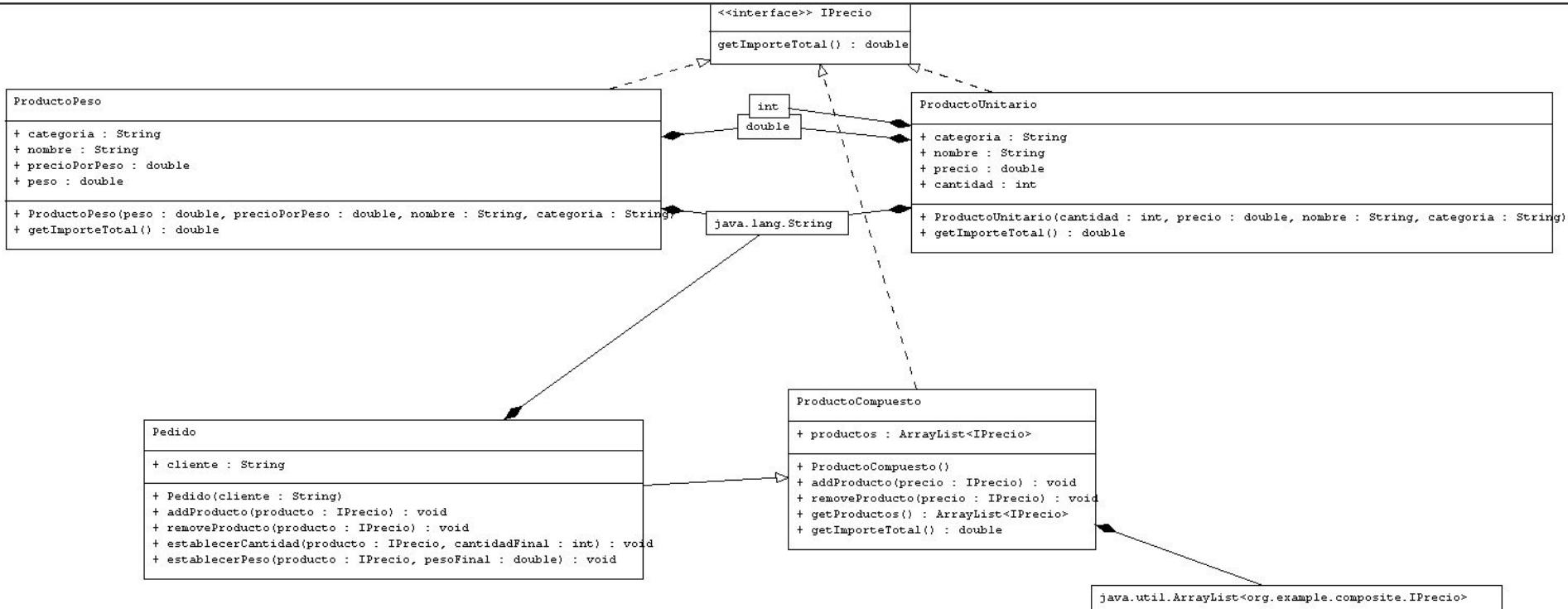
The Composite Pattern



Composite



Composite



PDDE Composite DEMO

PDDE Composite CONSECUENCIAS

Patrones de diseño III

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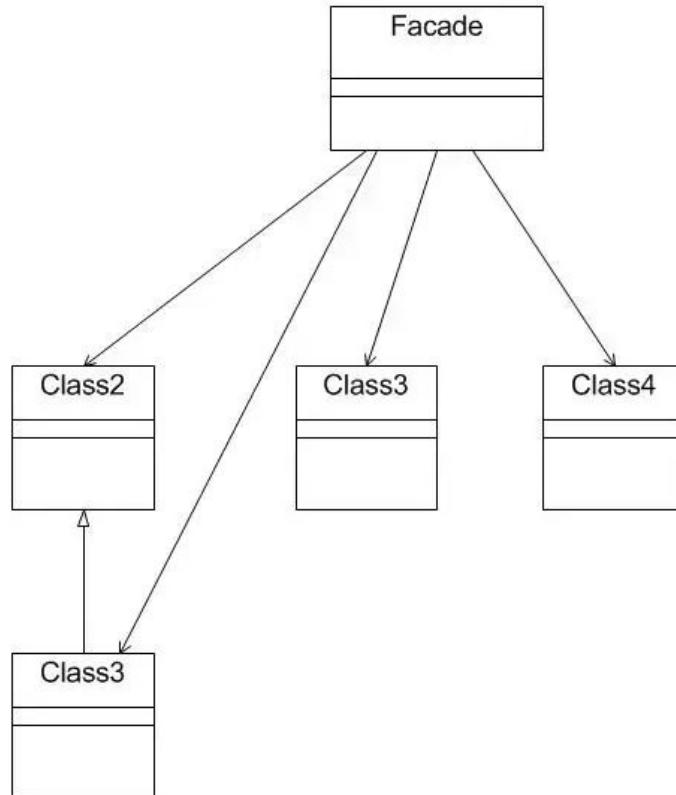
2024



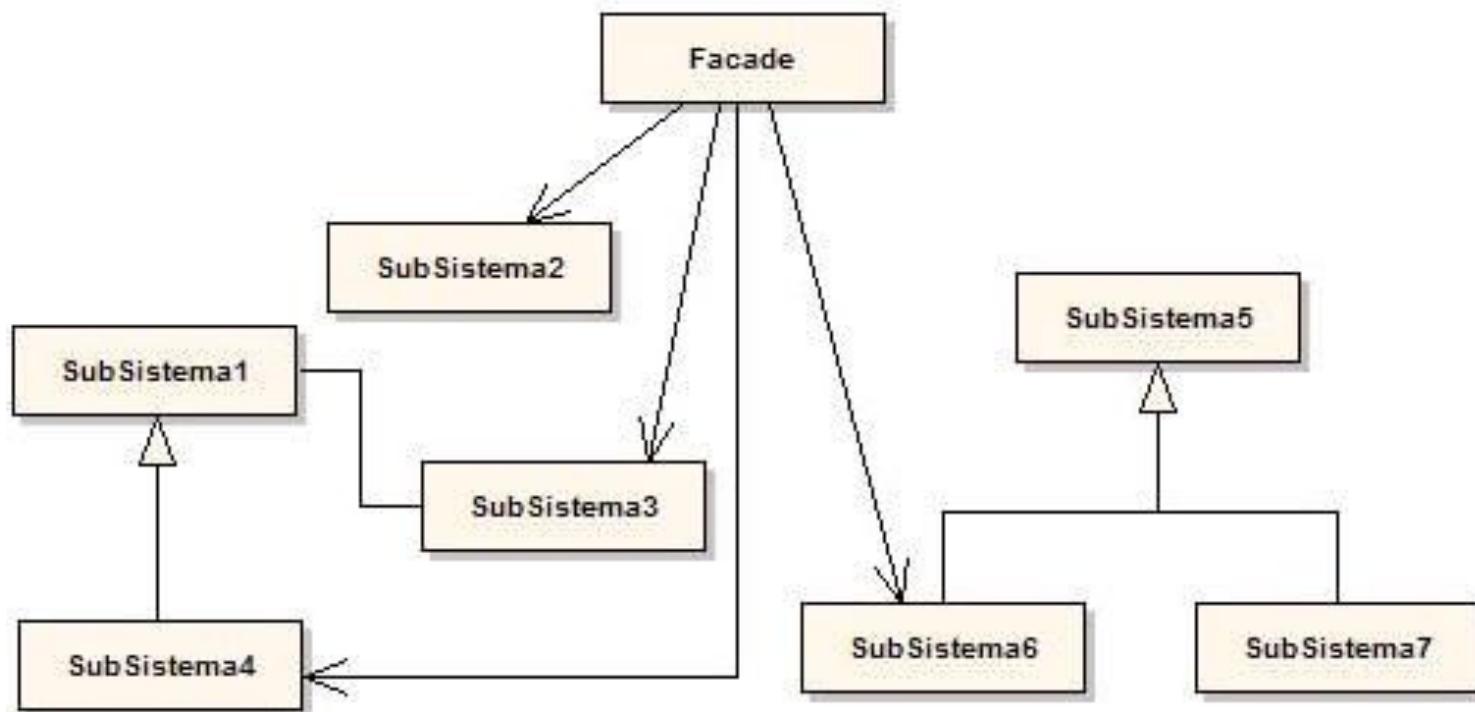
Facade

Facade

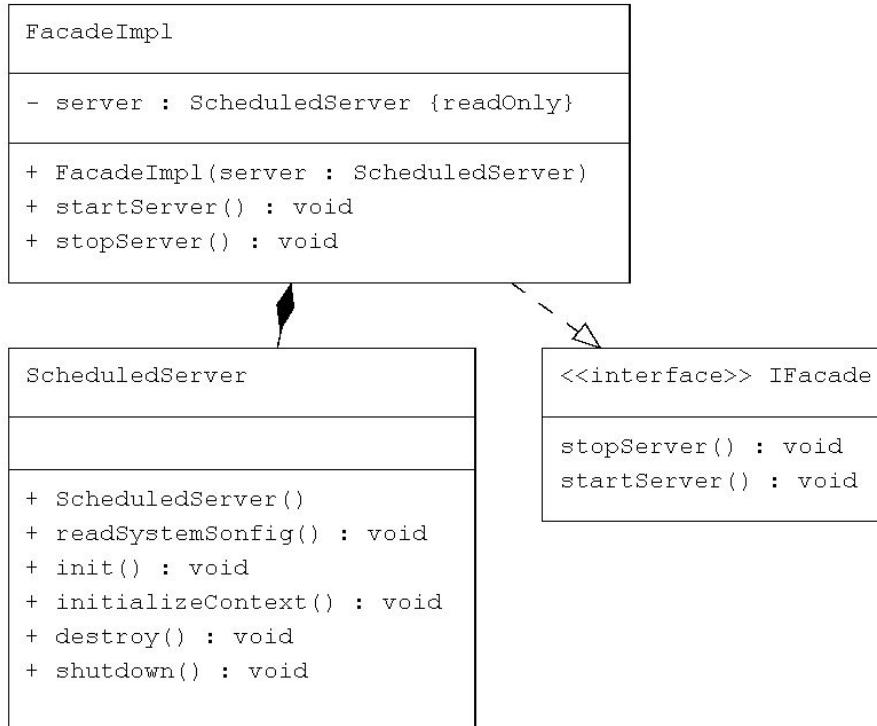
The Façade Pattern



Facade



Facade



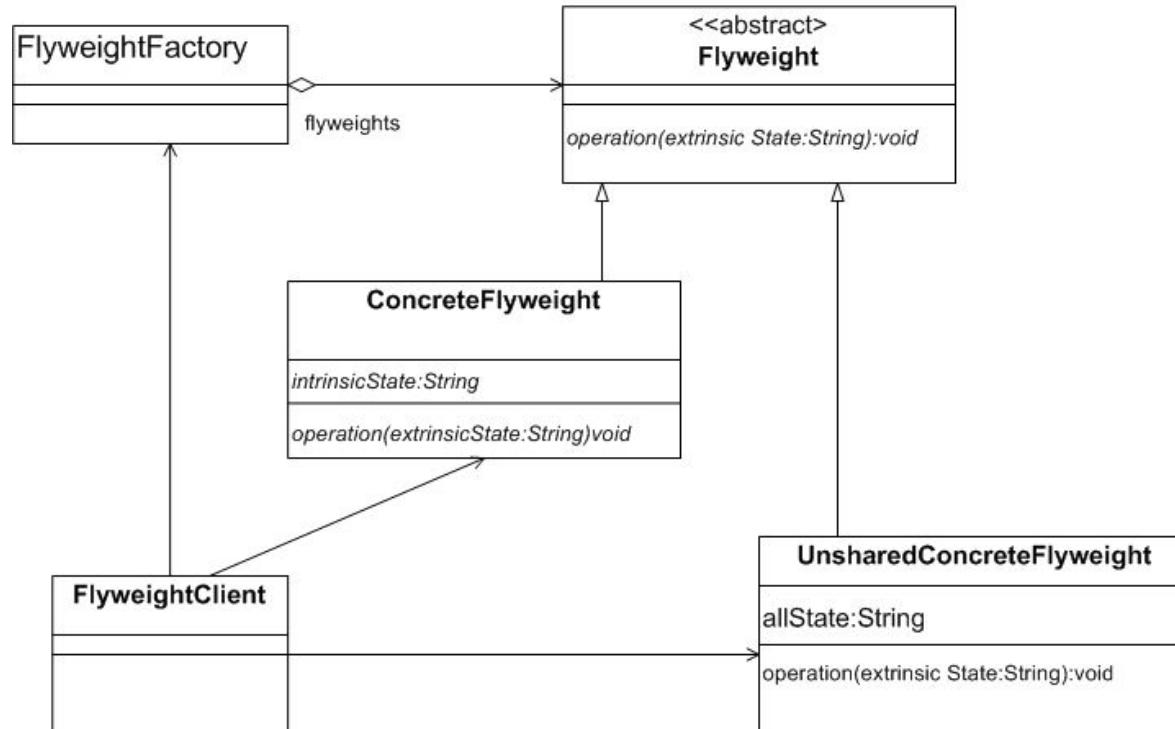
PDDE Facade DEMO

PDDE Facade CONSECUENCIAS

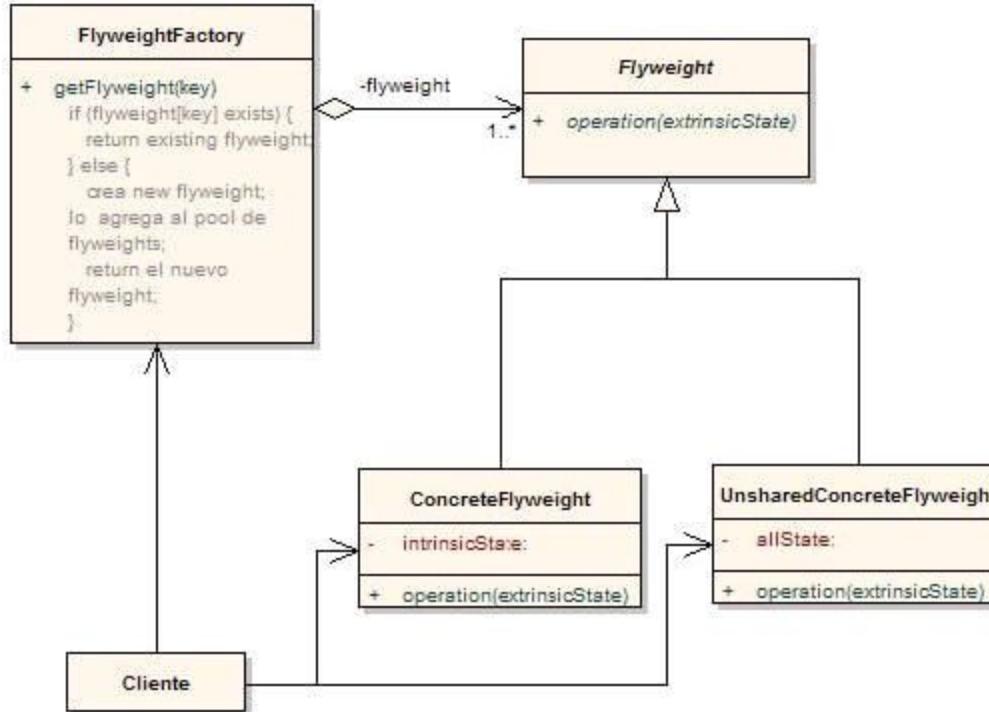
Flyweight

Flyweight

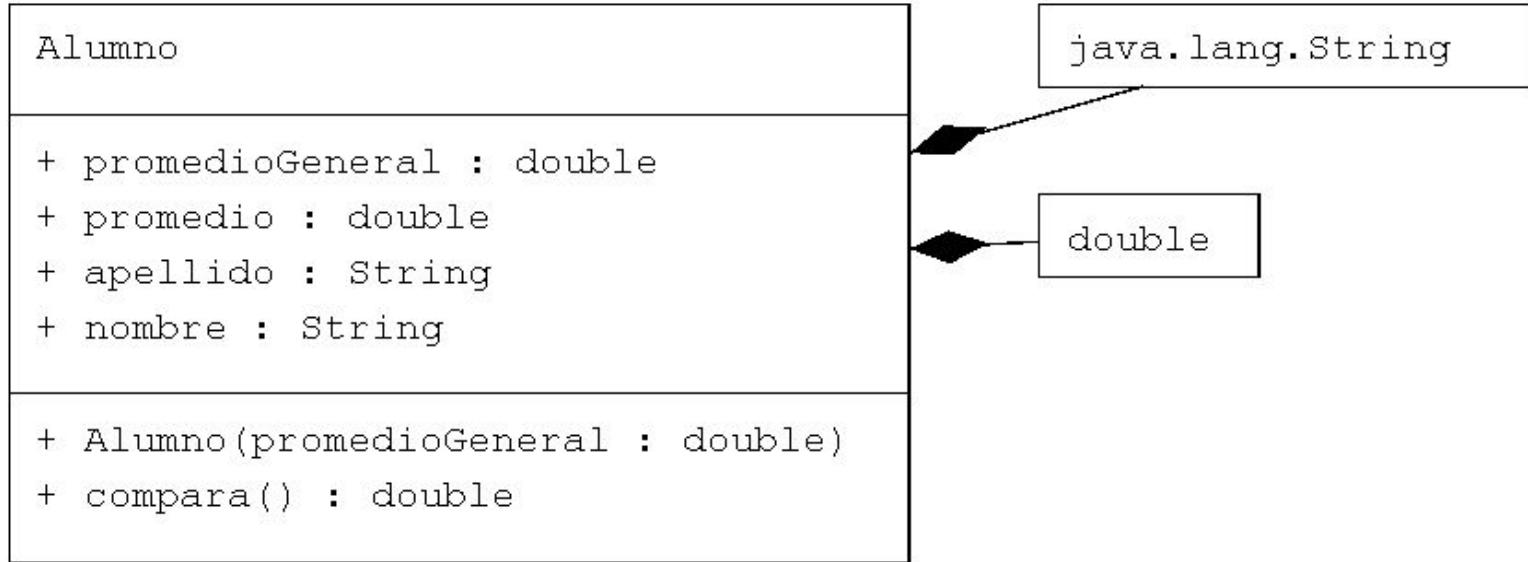
The Flyweight Pattern



Flyweight



Flyweight



PDDE

Flyweight

DEMO

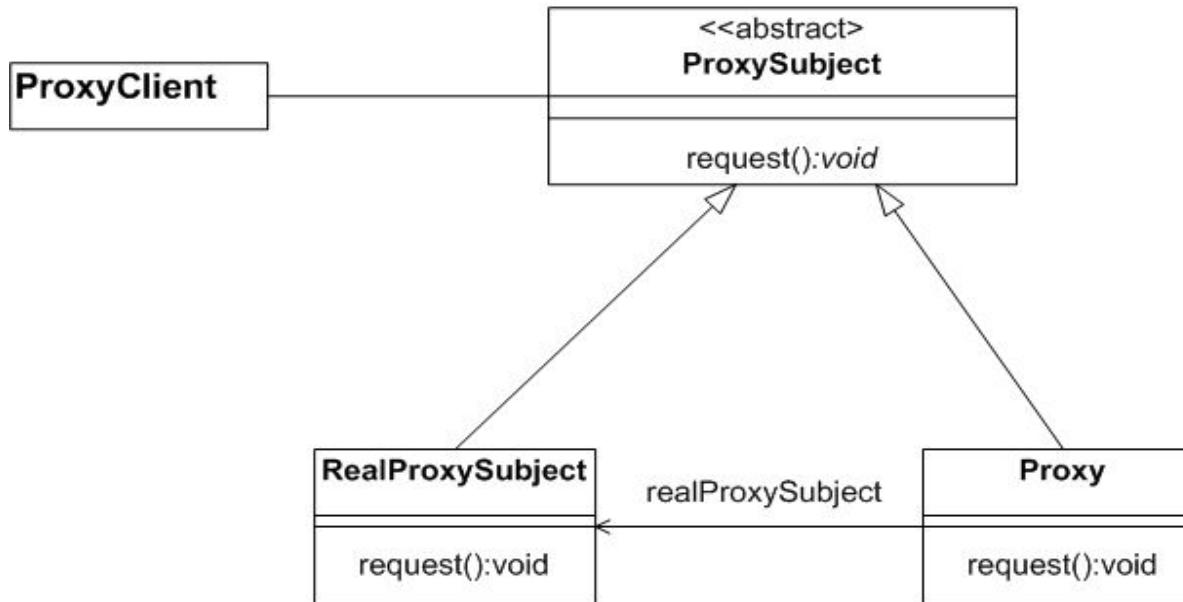
PDDE Flyweight CONSECUENCIAS

PDDE

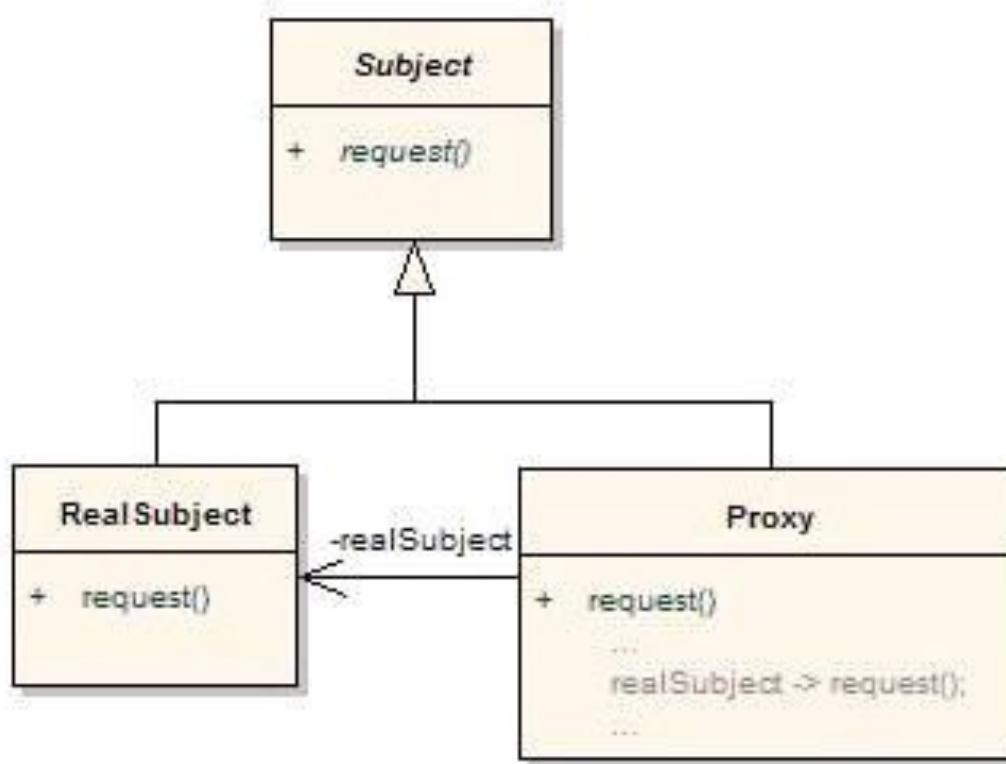
Proxy

Proxy

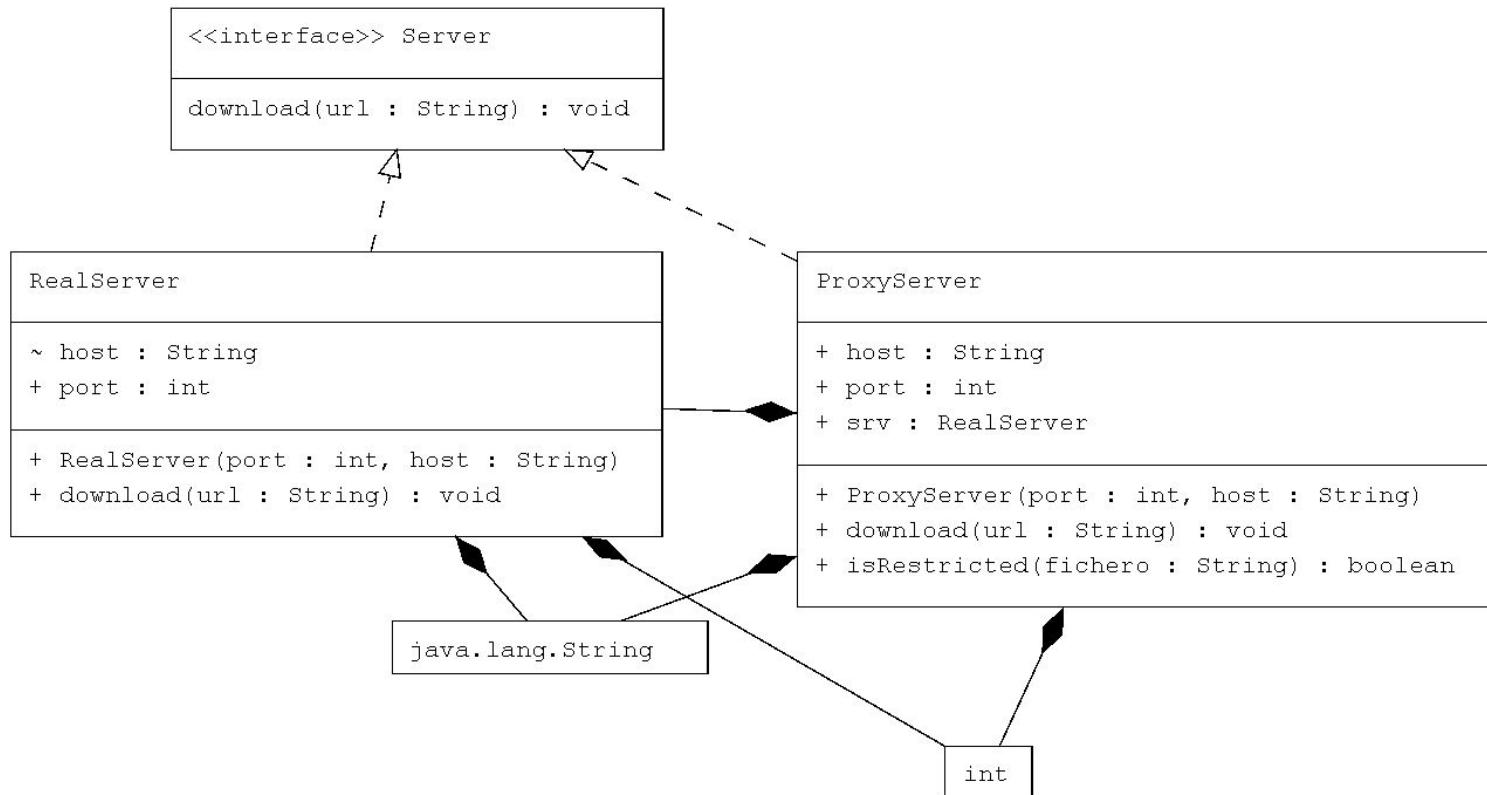
The Proxy Pattern



Proxy



Proxy



PDDE Proxy DEMO

PDDE Proxy CONSECUENCIAS

Patrones de diseño

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				State
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				Visitor

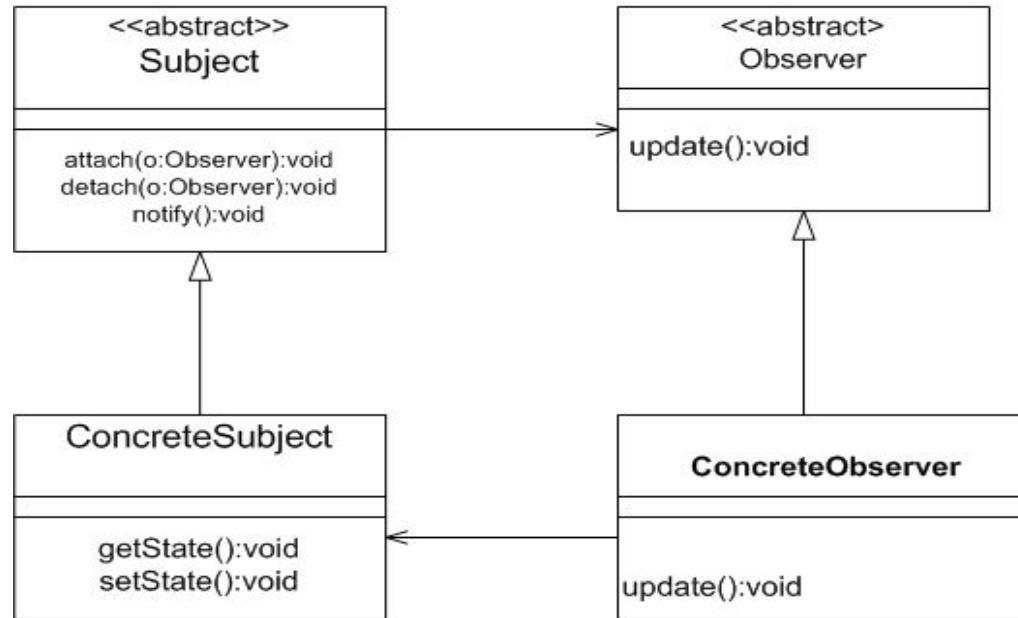
Comportamiento

PDDCO

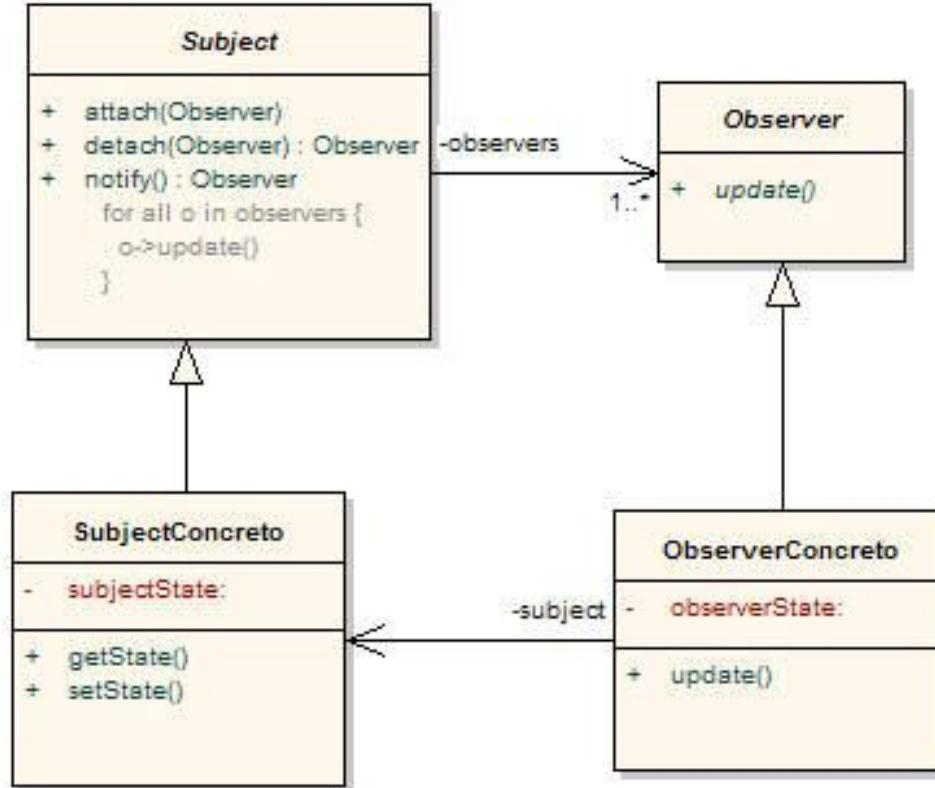
Observer

Observer

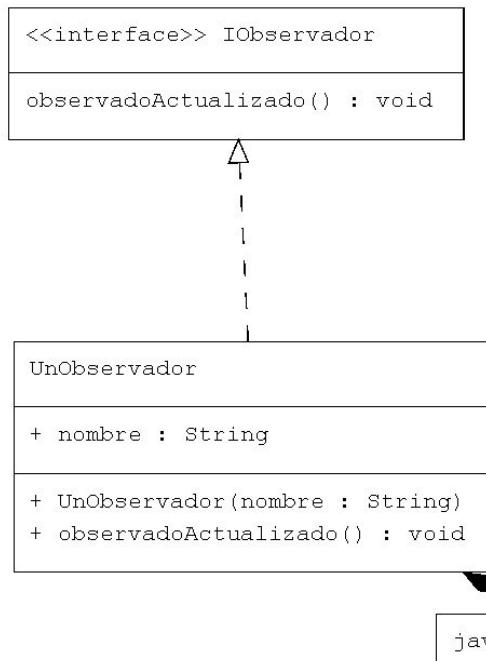
The Observer Pattern



Observer



Observer



```
java.util.ArrayList<org.example.observer.IObservador>
```

Observado

```
+ observadores : ArrayList<IObservador>
```

```
+ Observado()
```

```
+ agregarObservador(o : IObservador) : void
```

```
+ eliminarObservador(o : IObservador) : void
```

```
+ notificarObservadores() : void
```



UnObservado

```
+ UnObservado()
```

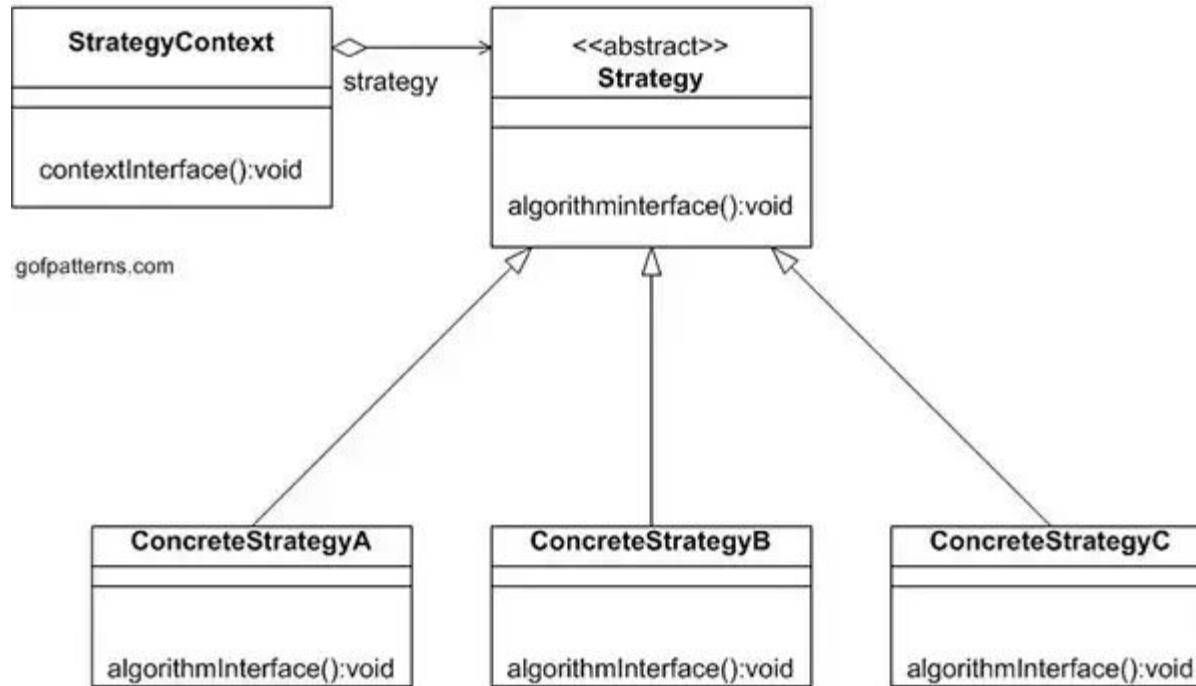
PDDCO Observer DEMO

PDDE Observer CONSECUENCIAS

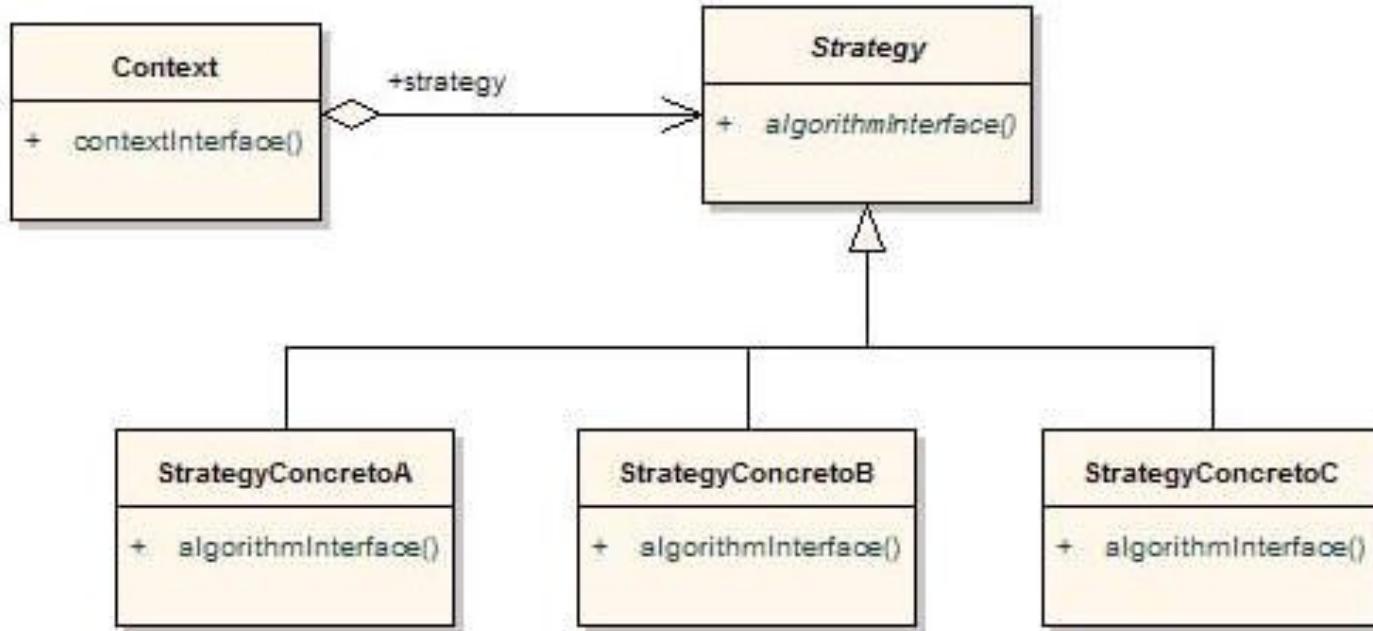
Strategy

Strategy

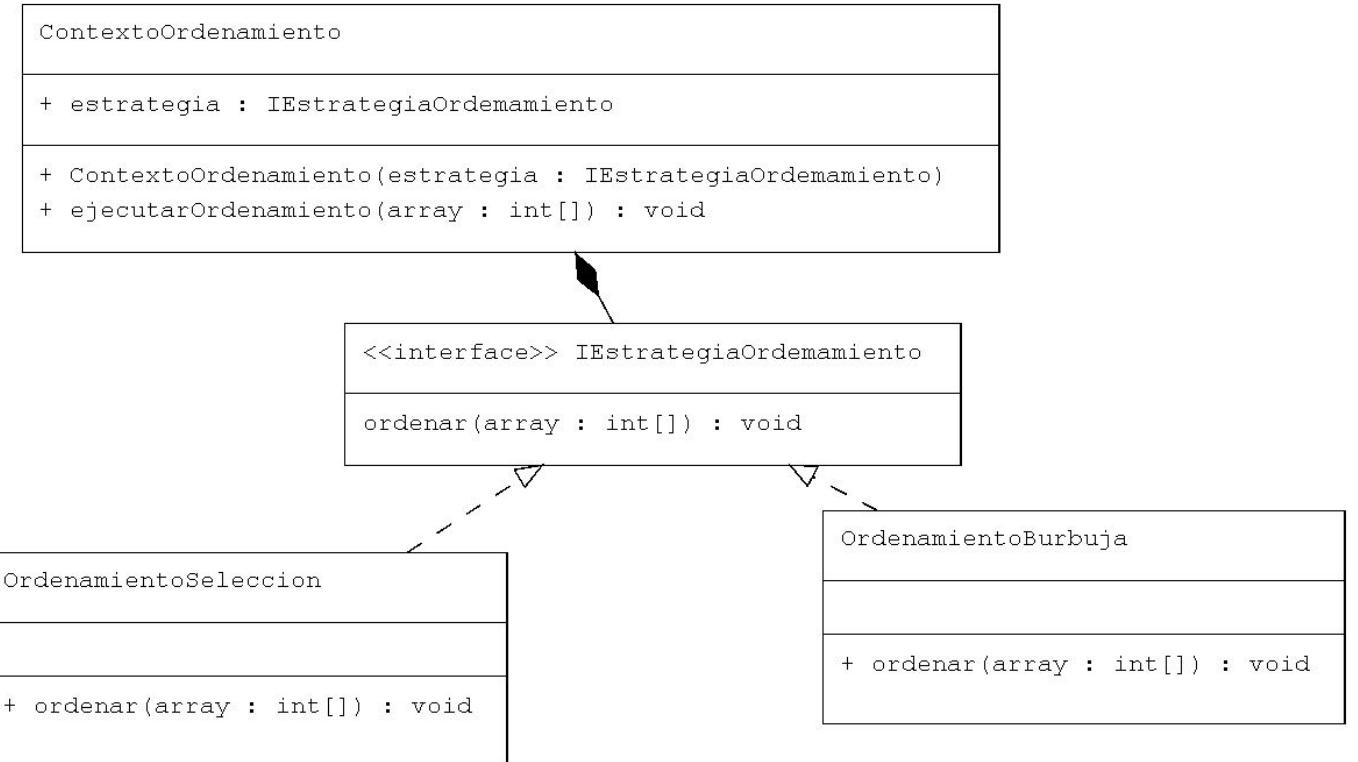
The Strategy Pattern



Strategy



Strategy



PDDCO Strategy DEMO

PDDE Strategy CONSECUENCIAS

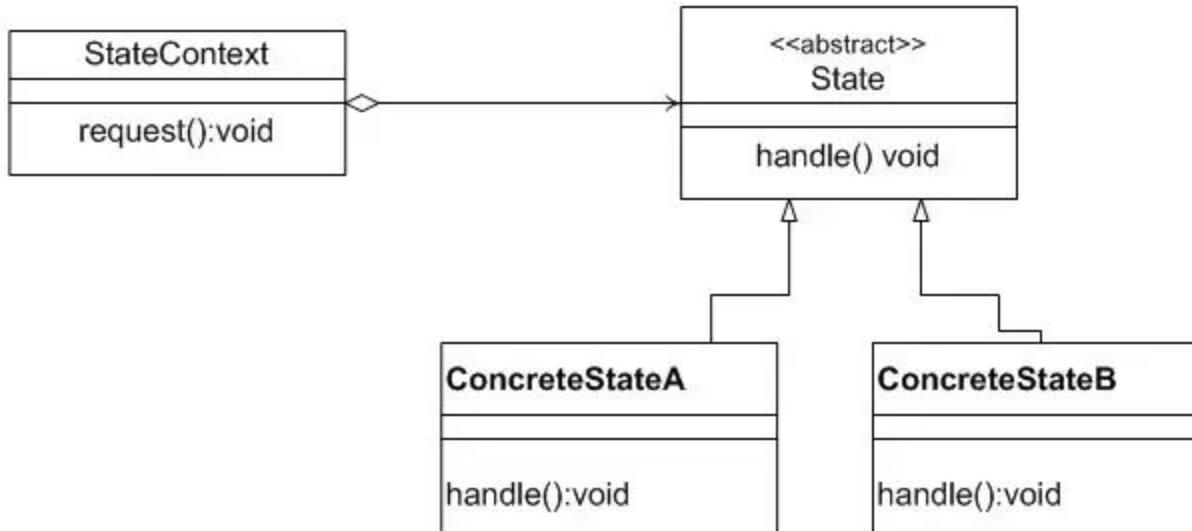
PDDCO

State

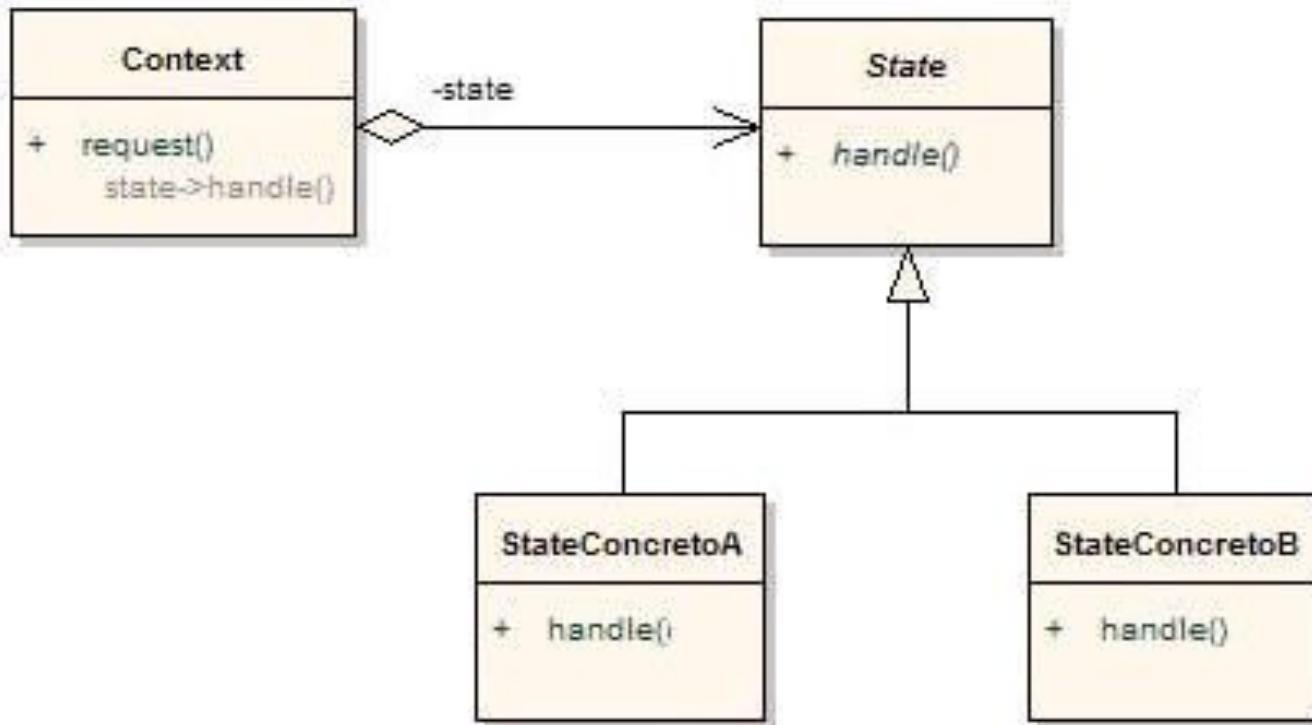
State

The State Pattern

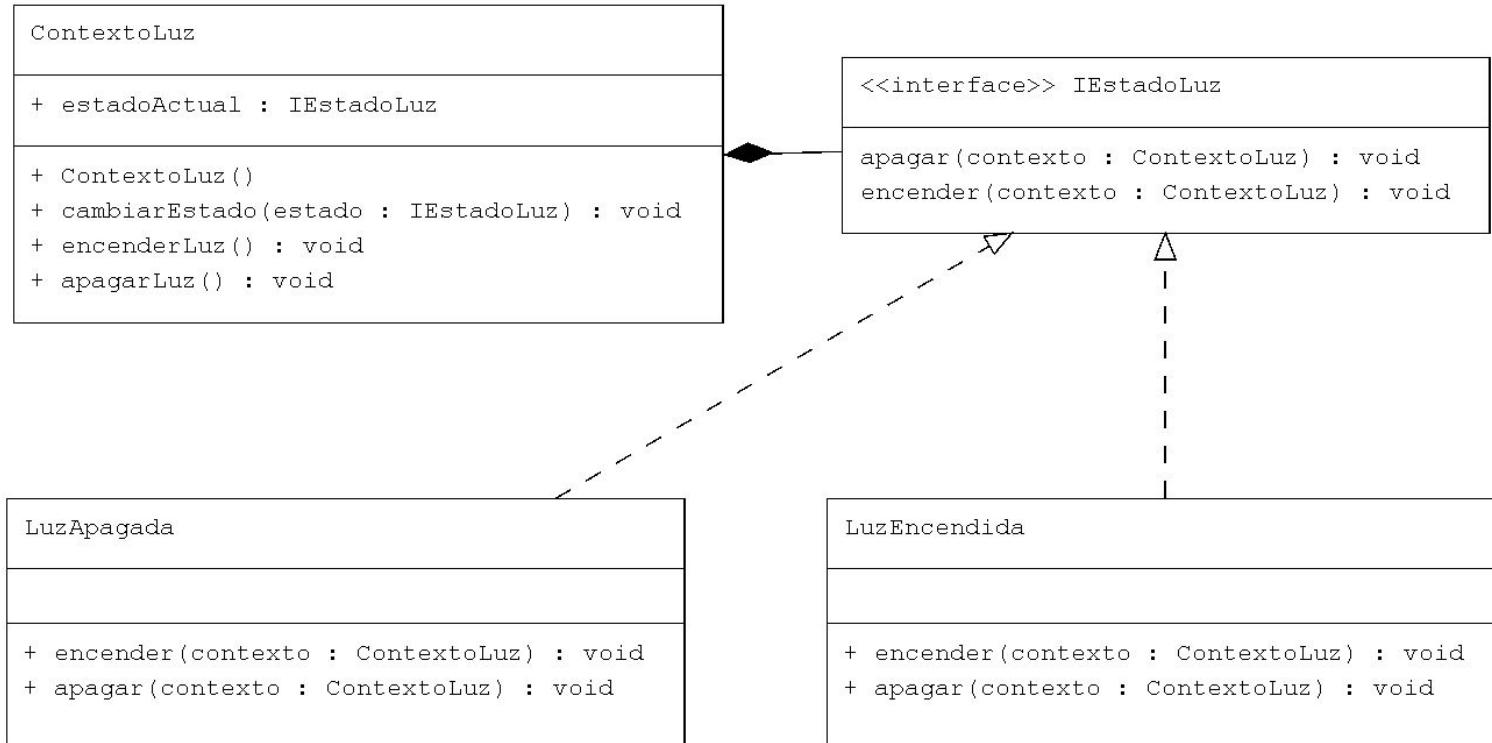
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State



State



PDDCO State DEMO

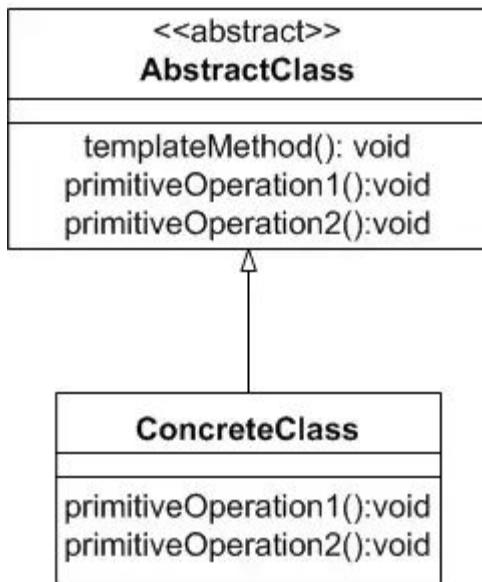
PDDE State CONSECUENCIAS

Template Method

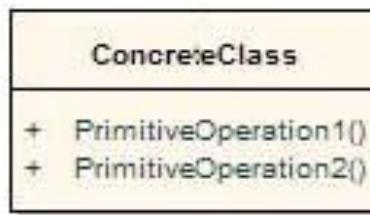
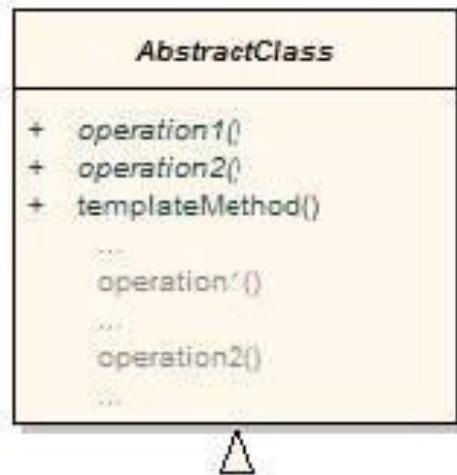
Template Method

The Template pattern

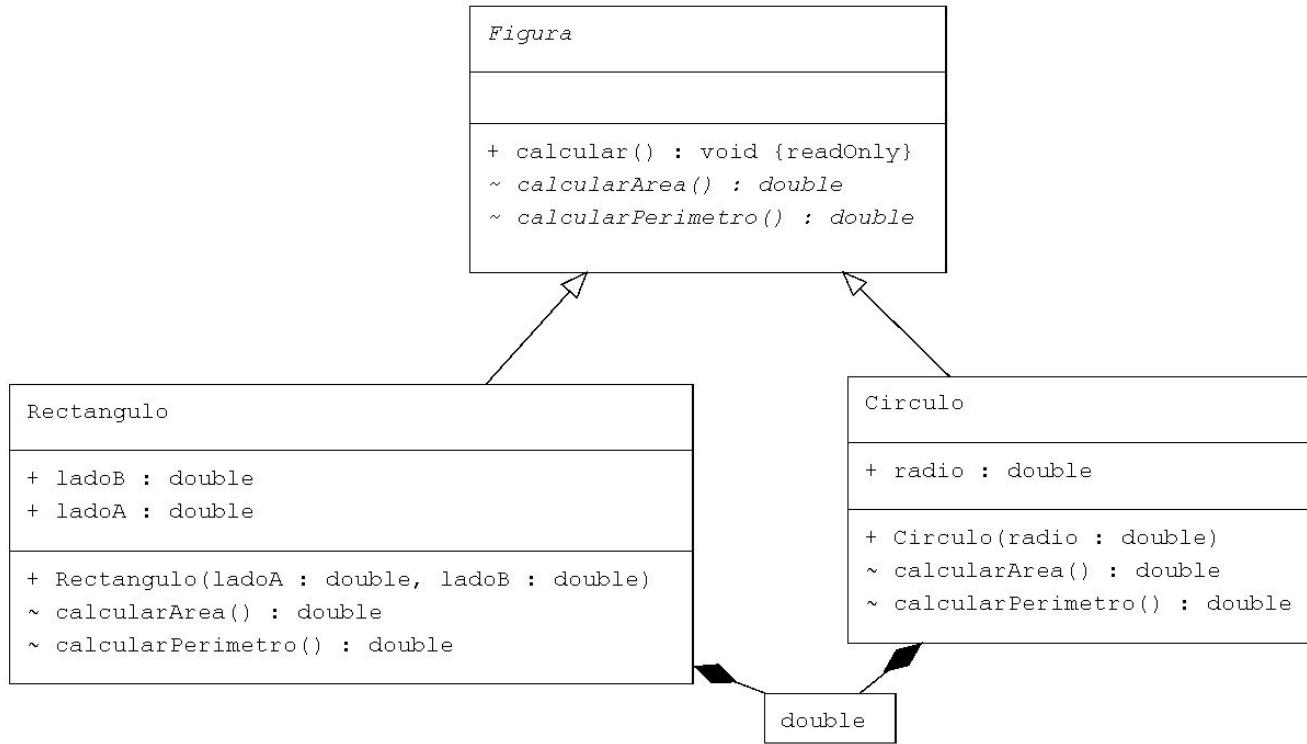
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Template Method



Template Method



PDDCO

Template Method

DEMO

PDDCO

Template Method

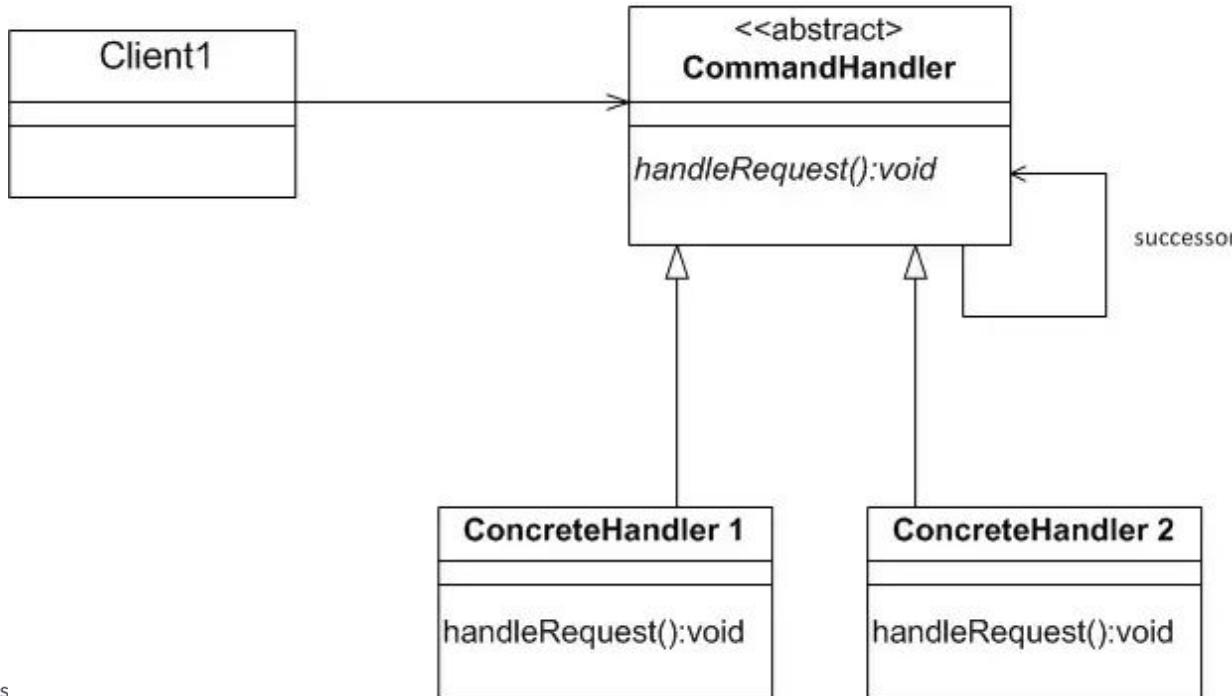
CONSECUENCIAS

Chain of Responsibility

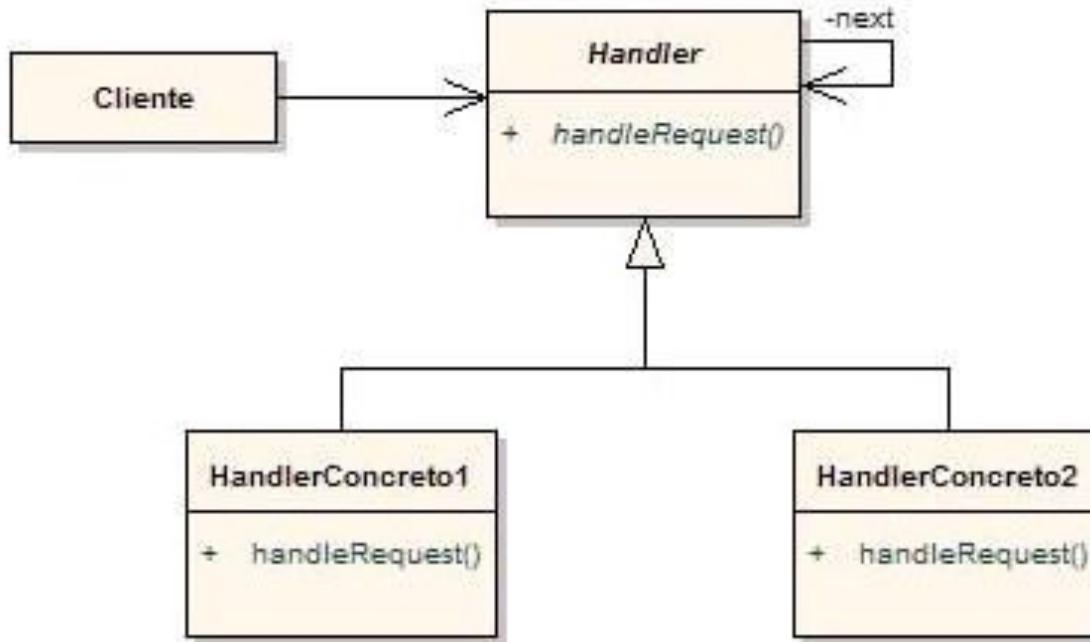
Chain of Responsibility

The Chain of Responsibility Pattern

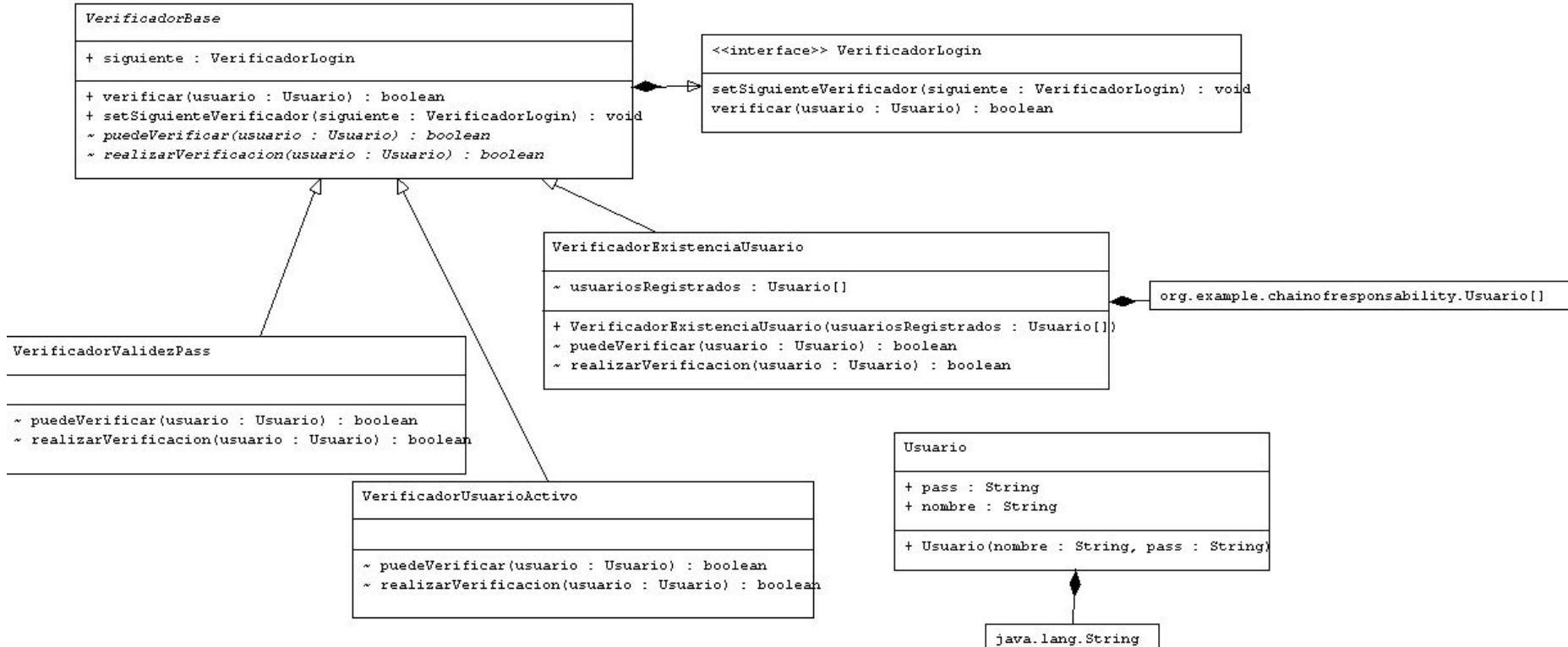
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Chain of Responsibility



Chain of Responsibility



PDDCO

Chain of Responsibility

DEMO

PDDCO

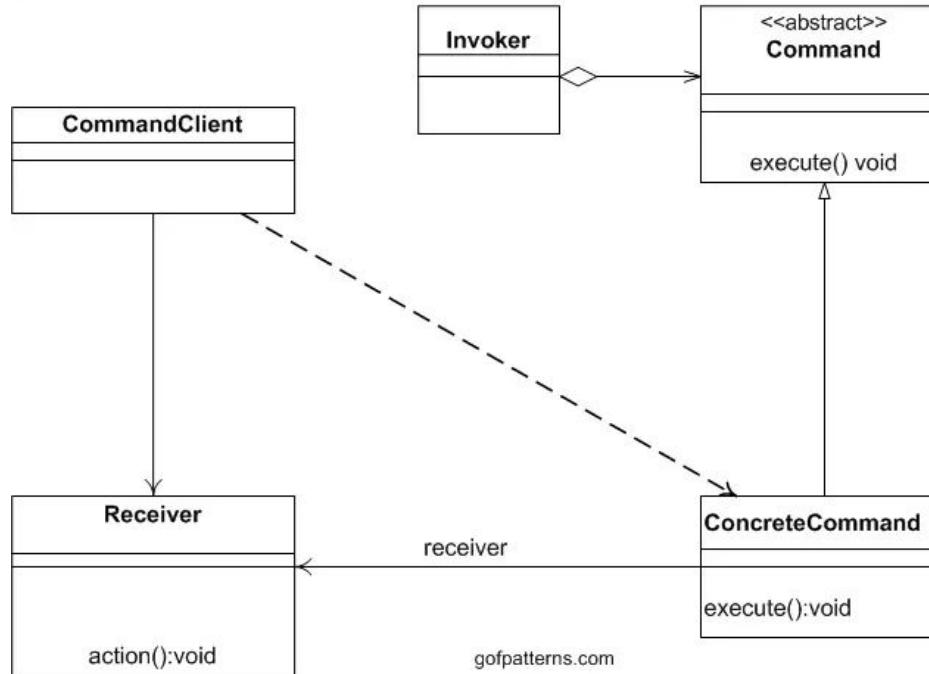
Chain of Responsibility

CONSECUENCIAS

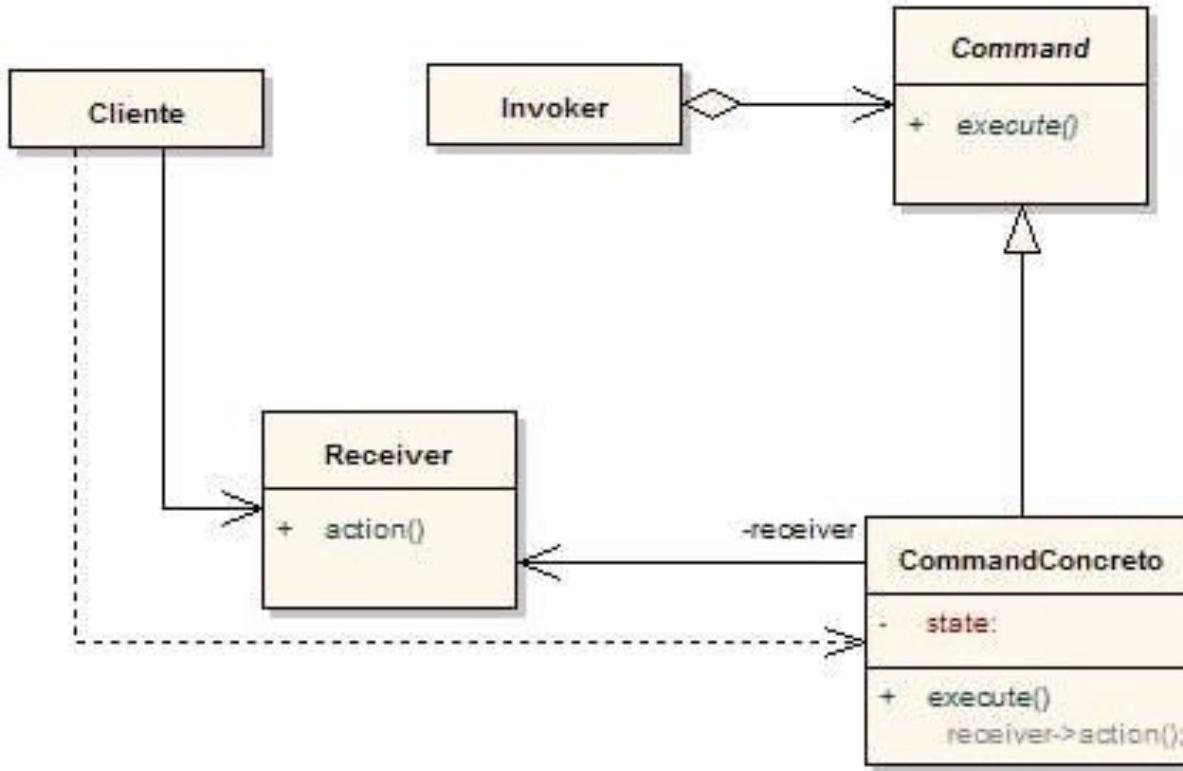
Command

Command

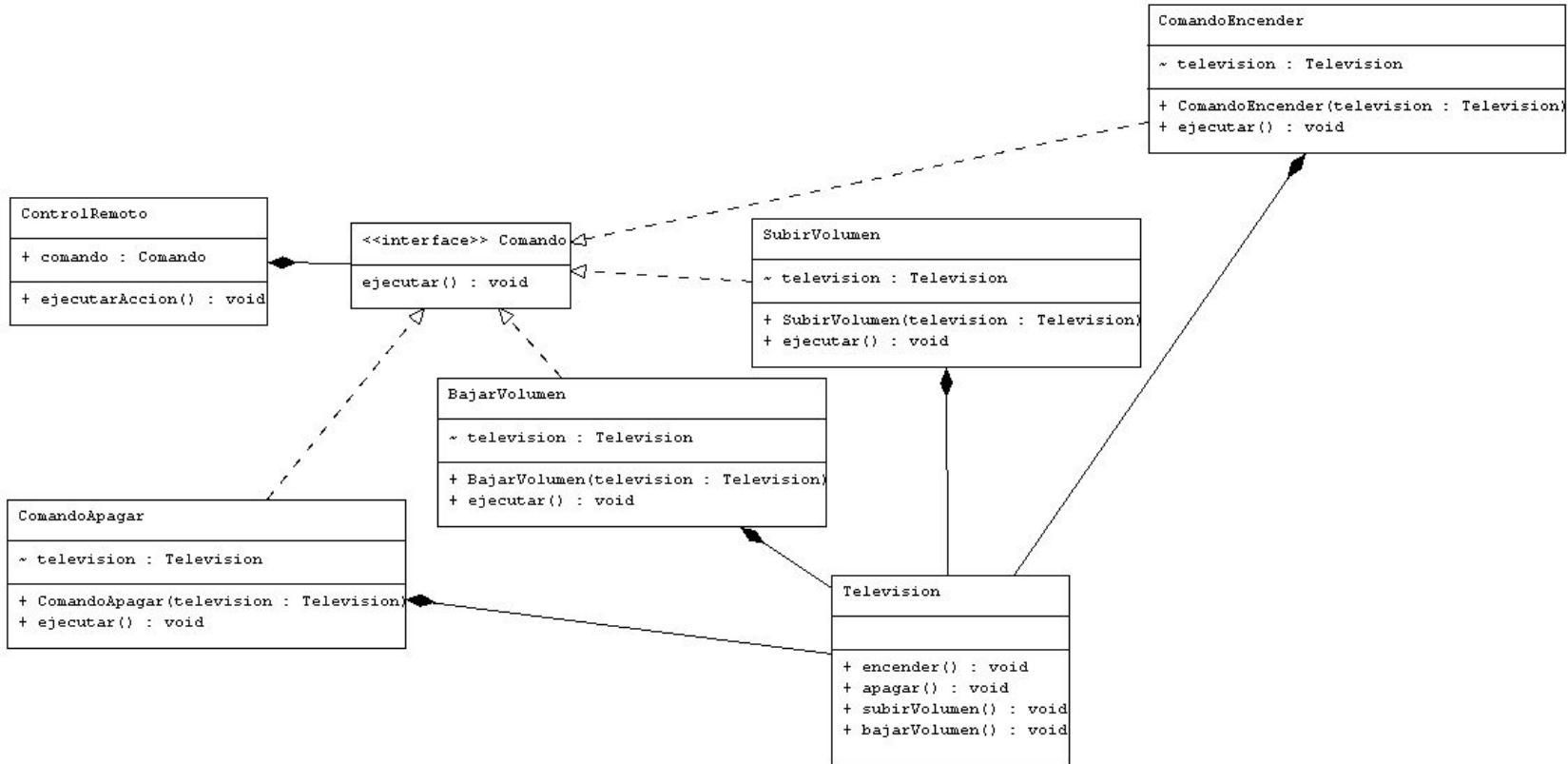
The Command Pattern



Command



Command



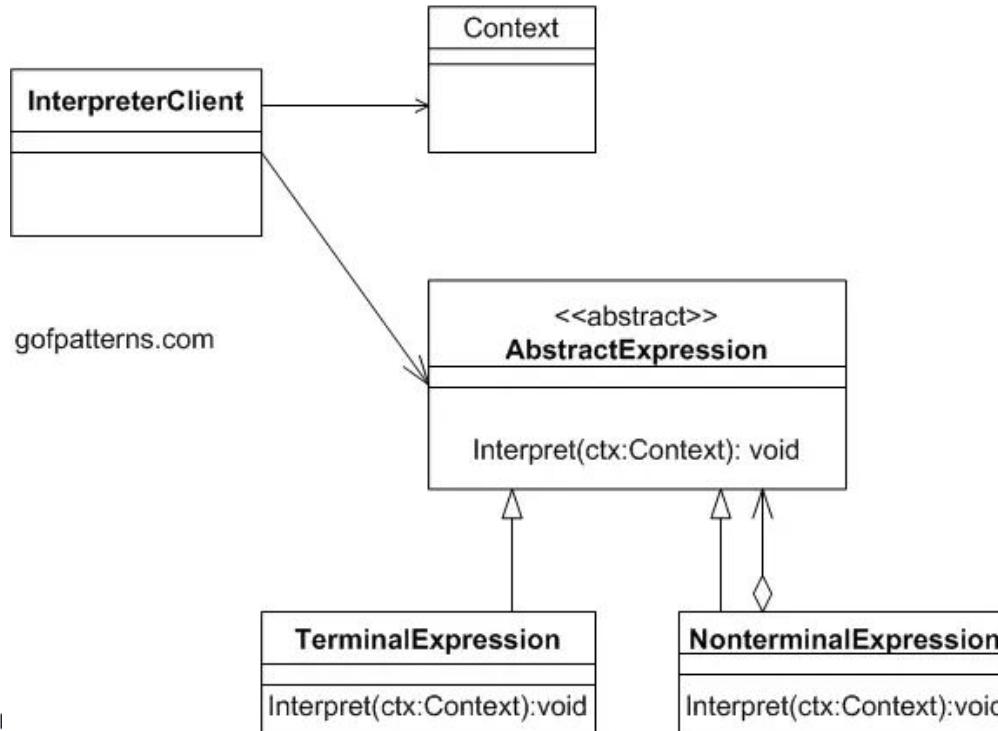
PDDCO Command DEMO

PDDCO Command CONSECUENCIAS

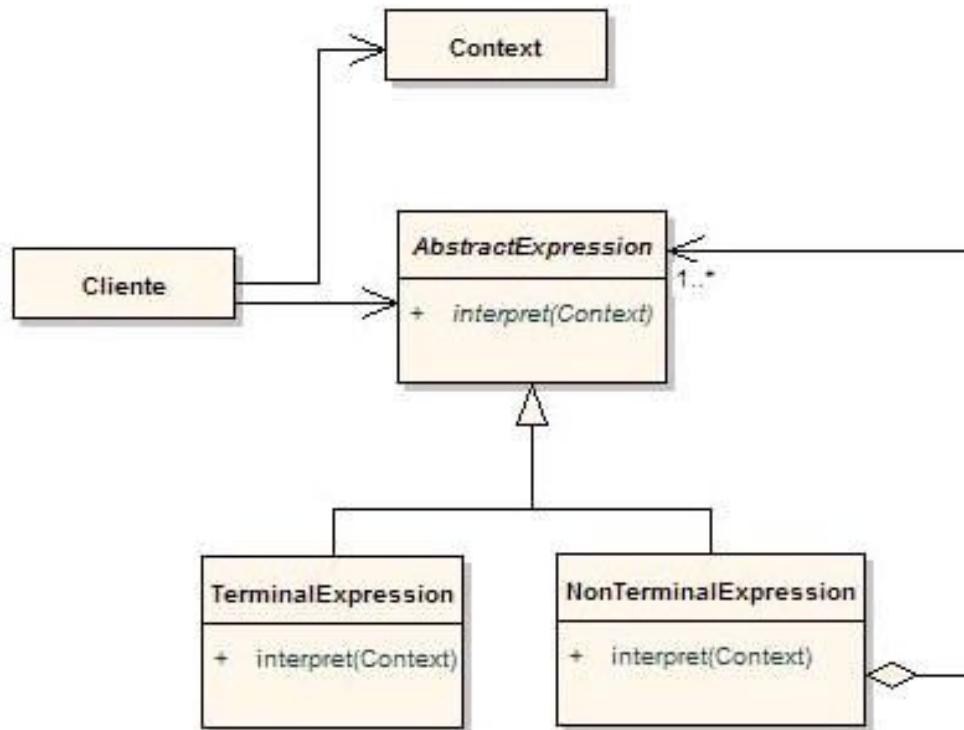
Interpreter

Interpreter

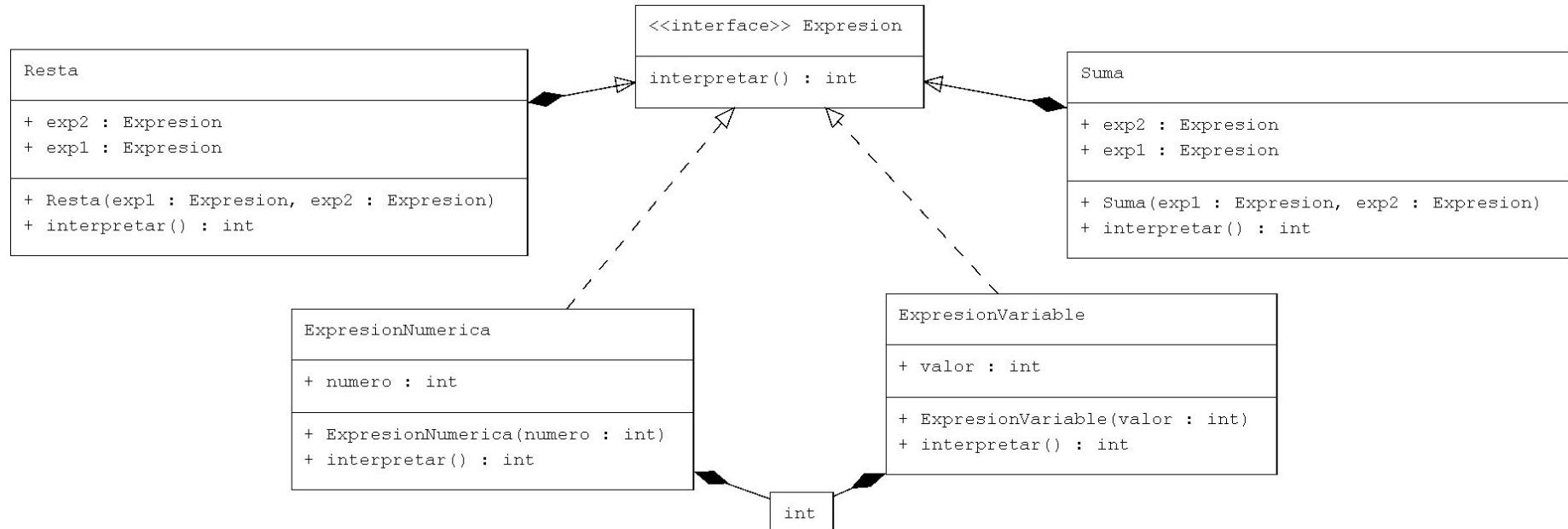
The Interpreter Pattern



Interpreter



Interpreter



PDDCO Interpreter DEMO

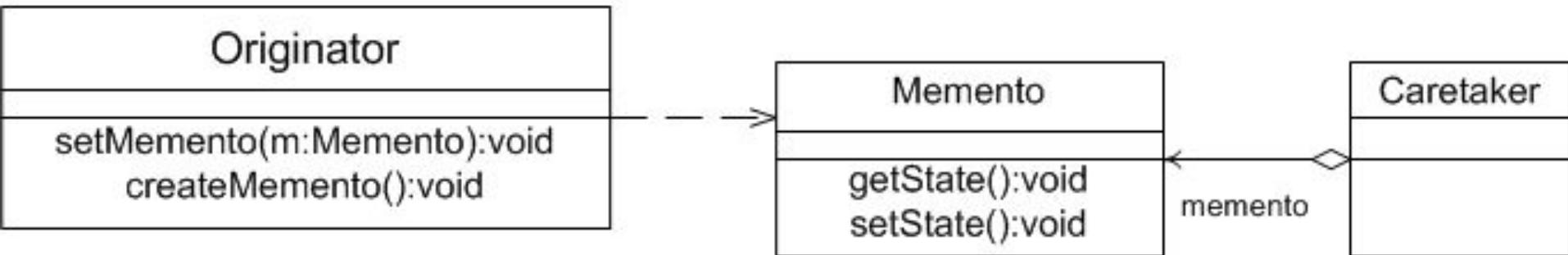
PDDCO Interpreter CONSECUENCIAS

PDDCO

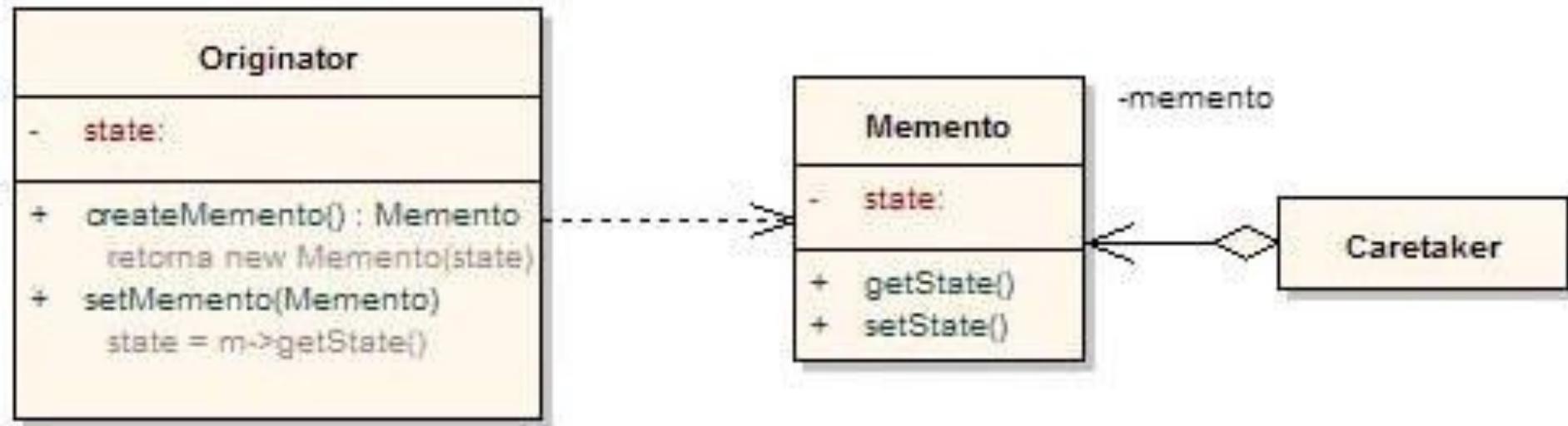
Memento

Memento

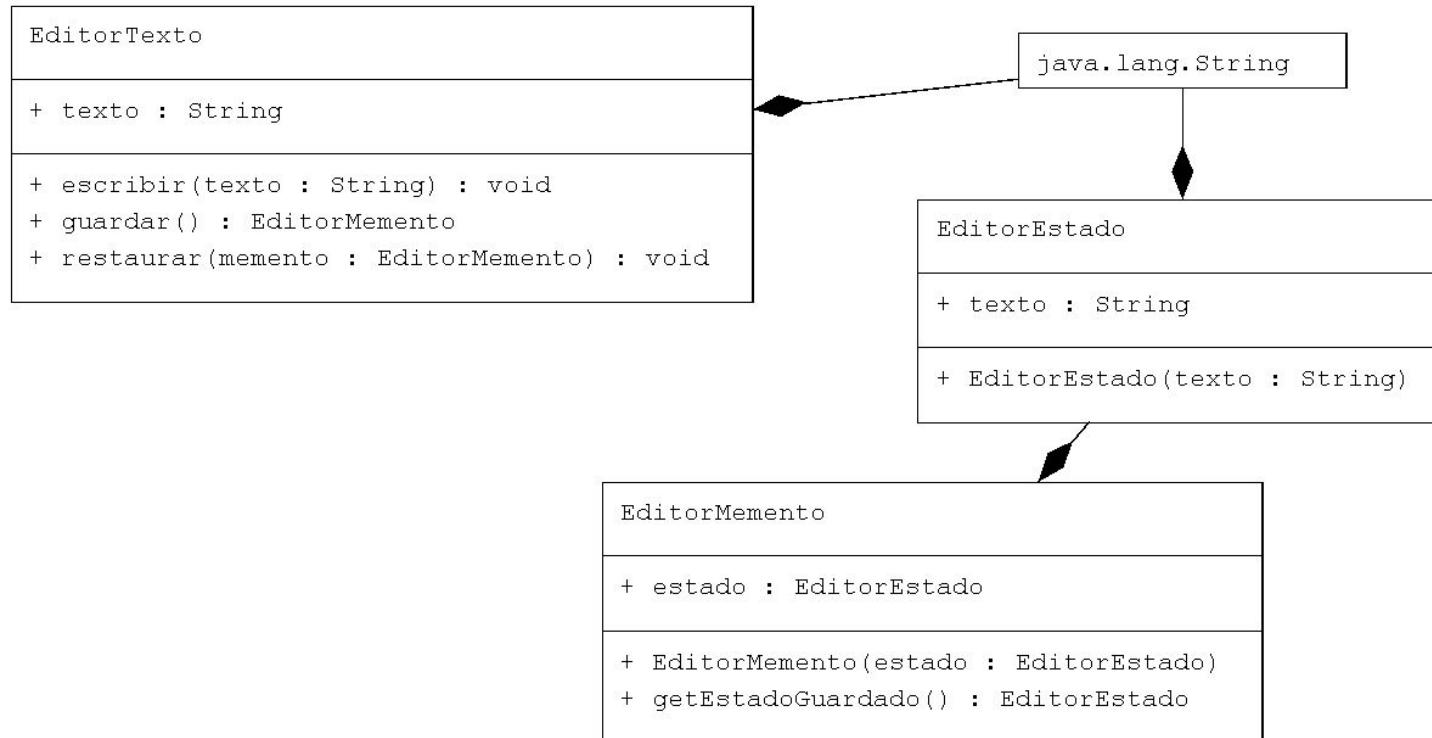
The Memento pattern



Memento



Memento



PDDCO

Memento

DEMO

PDDCO

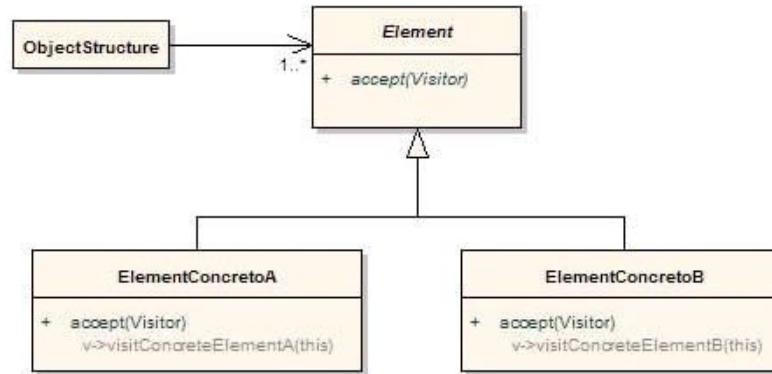
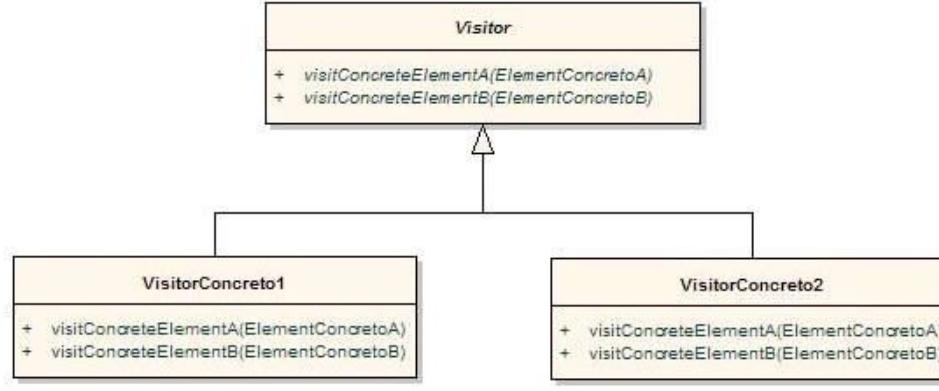
Memento

CONSECUENCIAS

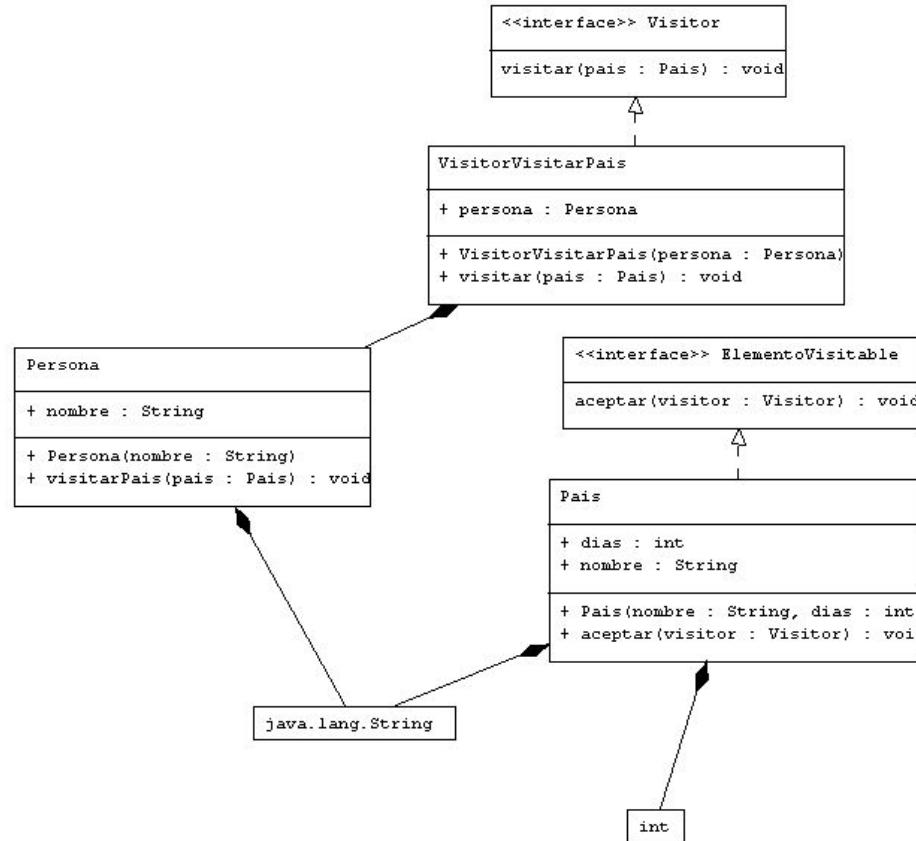
PDDCO

Visitor

Visitor



Visitor



PDDCO Visitor DEMO

PDDCO Visitor CONSECUENCIAS

¿Preguntas?

