Patterns Overview
Observer

* Deferred (abstract)
+ Effective (implemented)

Inherits from Client (uses)
Command

**COMMAND**

*execute*
*undo*

**DELETION**
*execute*
*undo*
*line*
*index*
...

**INSERTION**
*execute*
*undo*
*index*
...

...
Chain of responsibility

- APPLICATION
- HANDLER
- INTERMEDIATE_HANDLER
- FINAL_HANDLER

- can_handle
- do_handle
- set_next
- next
- handle
- can_handle
- do_handle
- handled
- handled
State

CONTEXT

state

do_something

STATE

do_something*

INITIAL_STATE

do_something+

INTERMEDIATE_STATE

do_something+

FINAL_STATE

do_something+

context

state
Abstract Factory

FACTORY

PRODUCT_A

PRODUCT_A1

new_product_a+

PRODUCT_A2

new_product_a+

FACTORY_1

new_product_b+

FACTORY_2

new_product_b+

PRODUCT_B

PRODUCT_B1

PRODUCT_B2

new_product_b*
Factory Method

```
* PRODUCT
  + CONCRETE_PRODUCT
  new_product+

* CREATOR
  + CONCRETE_CREATOR
  new_product+
```
Builder

CLIENT

* my_builder

my_builder

build

build*

build_product

build_part_a

build_part_b

MY_BUILDER

* last_product*

last_product+

MY_PRODUCT

PART_A

part_a

PART_B

set_part_a

set_part_b
**Singleton**

SHARED_SINGLETON

instance

GLOBAL point of access

CLIENT

SINGLETON
Bridge

APPLICATION

impl

IMPLEMENTATION

APP

APP

APP

APP

perform

perform*

perform+

perform+
Composite

Transparency version

Safety version
Decorator

```
COMPONENT

do_something*

CONCRETE_COMPONENT

do_something+

DECORATED_COMPONENT

do_something+

CONCRETE_DECORATED_COMPONENT_1

do_something+

CONCRETE_DECORATED_COMPONENT_2

do_something+
```
Flyweight

new_flyweight

FLYWEIGHT_FACTORY

flyweights

FLYWEIGHT

intrinsic_state
perform+

CLIENT

SHARED_FLYWEIGHT

entire_state
perform+

UNSHARED_FLYWEIGHT