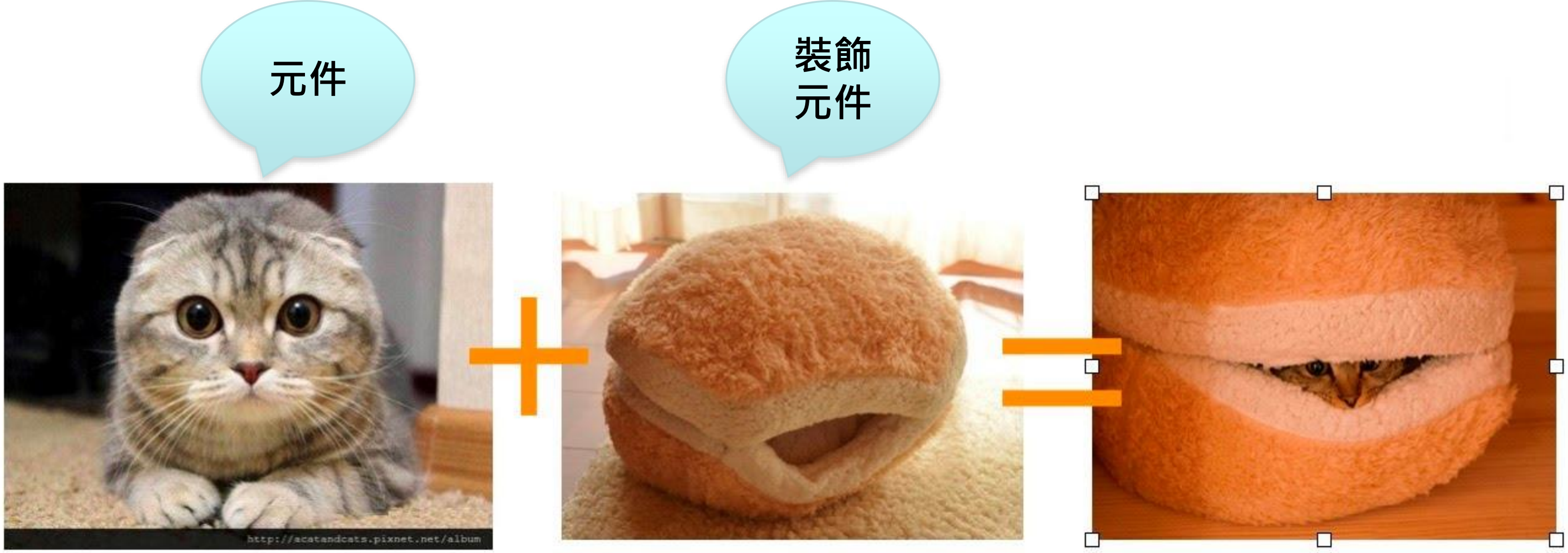
物件導向設計模式

裝飾模式-Decorator

巨匠電腦：段維瀚 老師

裝飾模式



段維瀚 老師

裝飾模式

SUBWAY

老闆，
來個鮪魚
潛艇堡！
OK！

段維瀚 老師

裝飾模式

SUBWAY

裝飾模式

Ham
$30

Tuna
$25

Tomato
$15

Lettuce
$15

Onion
$12

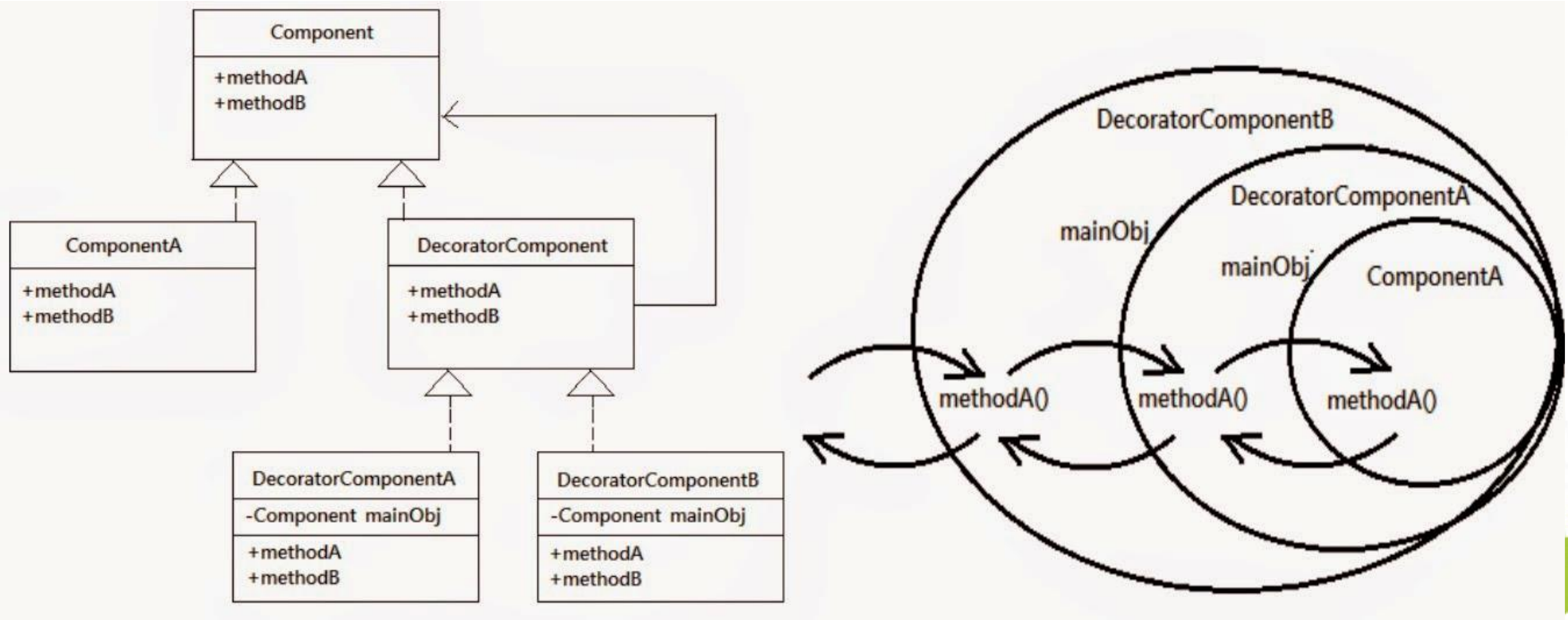
Olives
$10

裝飾模式

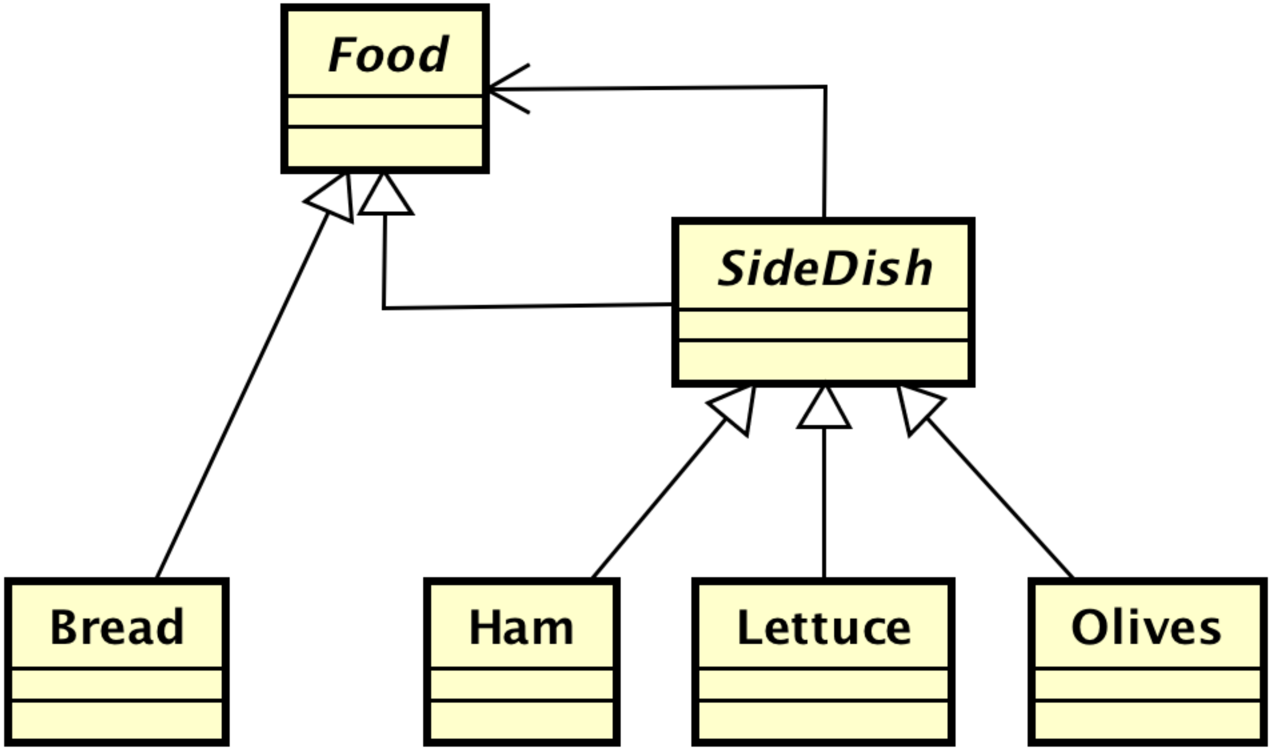
鮪魚潛艇堡

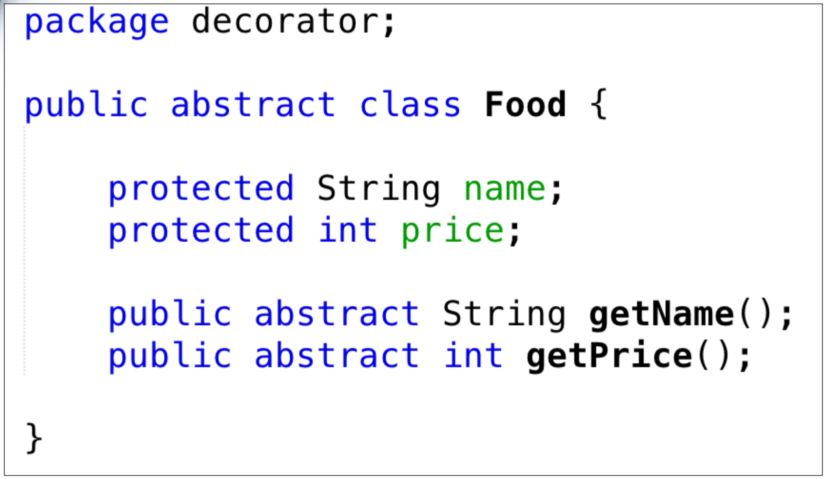
$??

裝飾模式類別設計


Component
+methodA
+methodB
ComponentA
+methodA
+methodB
DecoratorComponent
+methodA
+methodB
DecoratorComponentA
-Component mainObj
+methodA
+methodB
DecoratorComponentB
-Component mainObj
+methodA
+methodB
DecoratorComponentB
DecoratorComponentA
mainObj
mainObj
ComponentA
methodA()
methodA()
methodA()

UML





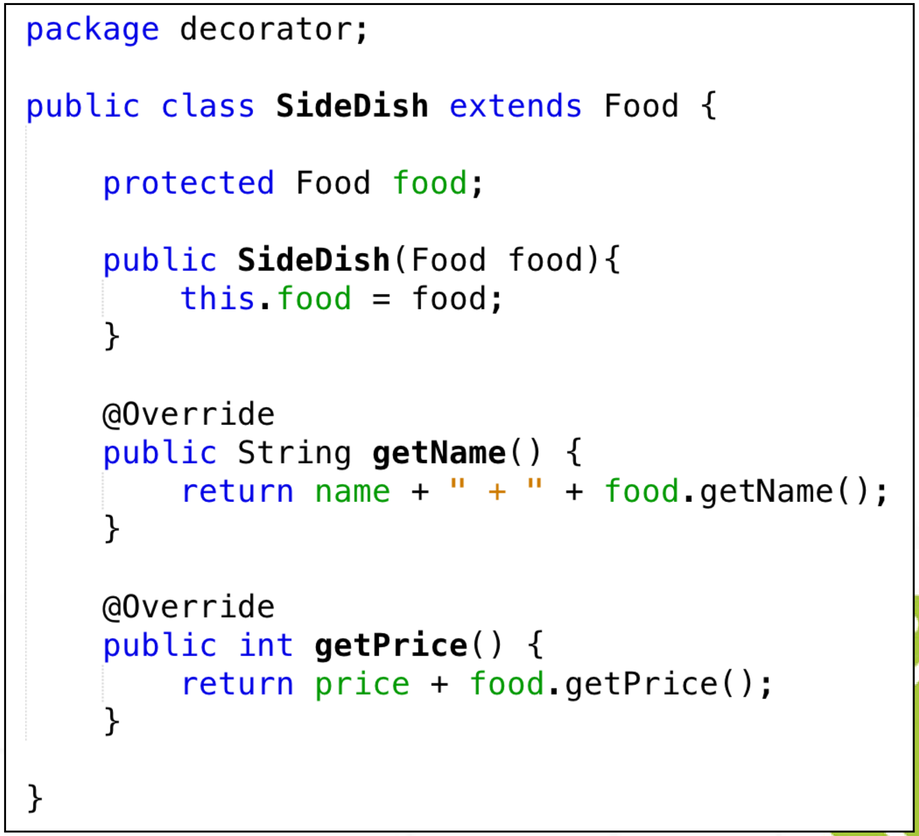
```java
package decorator;

public abstract class Food {

    protected String name;
    protected int price;

    public abstract String getName();
    public abstract int getPrice();

}
```



```java
package decorator;

public class SideDish extends Food {

    protected Food food;

    public SideDish(Food food){
        this.food = food;
    }

    @Override
    public String getName() {
        return name + " + " + food.getName();
    }

    @Override
    public int getPrice() {
        return price + food.getPrice();
    }

}
```

```java
package decorator.lunch;

import decorator.Food;

public class Bread extends Food {

    public Bread() {
        name = "麵包";
        price = 40;
    }

    @Override
    public String getName() {
        return name;
    }

    @Override
    public int getPrice() {
        return price;
    }

}
```

```java
package decorator.lunch;

import decorator.Food;
import decorator.SideDish;

public class Ham extends SideDish {

    public Ham(Food food) {
        super(food);
        super.name = "火腿";
        super.price = 30;
    }

}
```

```java
package decorator.lunch;

import decorator.Food;
import decorator.SideDish;

public class Lettuce extends SideDish {

    public Lettuce(Food food) {
        super(food);
        super.name = "生菜";
        super.price = 15;
    }

}
```

```java
package decorator.lunch;

import decorator.Food;
import decorator.SideDish;

public class Olives extends SideDish {

    public Olives(Food food) {
        super(food);
        super.name = "橄欖";
        super.price = 10;
    }

}
```

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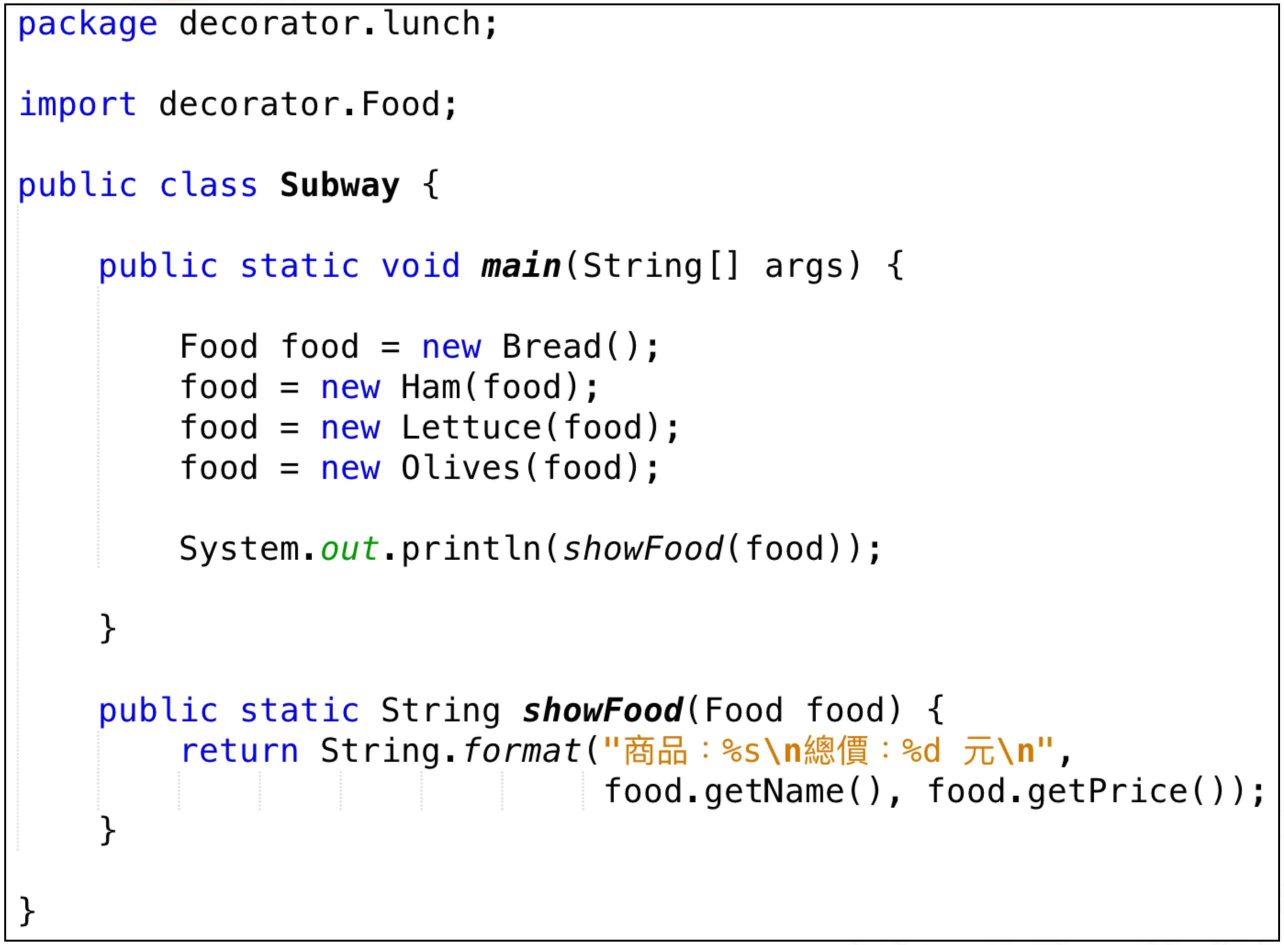

```java
package decorator.lunch;

import decorator.Food;

public class Subway {

    public static void main(String[] args) {

        Food food = new Bread();
        food = new Ham(food);
        food = new Lettuce(food);
        food = new Olives(food);

        System.out.println(showFood(food));

    }

    public static String showFood(Food food) {
        return String.format("商品：%s\n總價：%d 元\n",
                                food.getName(), food.getPrice());
    }

}
```

```
商品：橄欖 + 生菜 + 火腿 + 麵包
總價：95 元
```

Are you OO today ?

Have a good time