

CS 665 Final Presentation

Observer-Builder Pattern

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Scenario

If we are pattern designer in a team, and manager ask us to create Order Information management System in an e-platform what should we do? Which pattern should we used?

My choice :
Observer + Builder pattern

Builder Pattern

This pattern we have not learned it before.

Builder Pattern uses multiple simple objects to build a complex object step by step. This design pattern is belong to creational pattern type, which provides an optimal way to create objects.

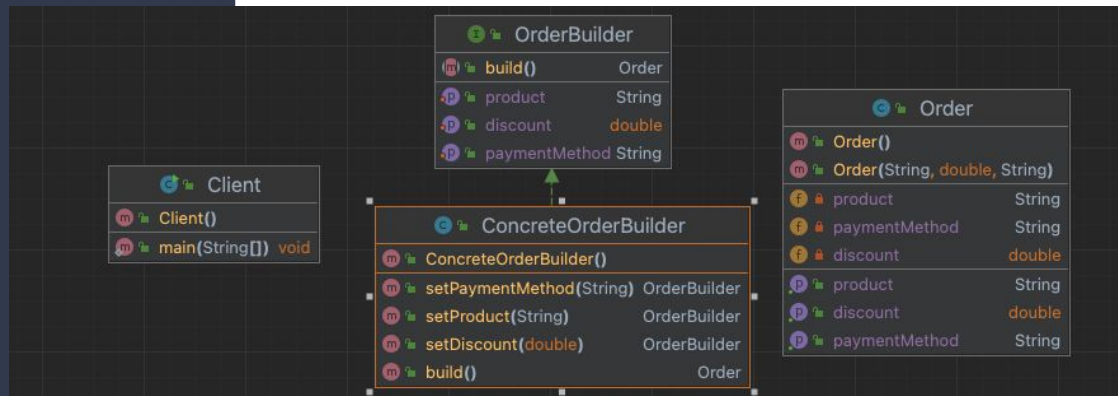
Builder Pattern

Why we don't use constructor or set function?

```
public Order(String product, double discount, String paymentMethod, String orderAddress, String phoneNumber){  
    this.product = product;  
    this.discount = discount;  
    this.paymentMethod = paymentMethod;  
    this.orderAddress = orderAddress;  
    this.phoneNumber = phoneNumber;  
    orderTime = LocalTime.now();  
}
```

Builder Pattern UML

How to use the Builder Pattern

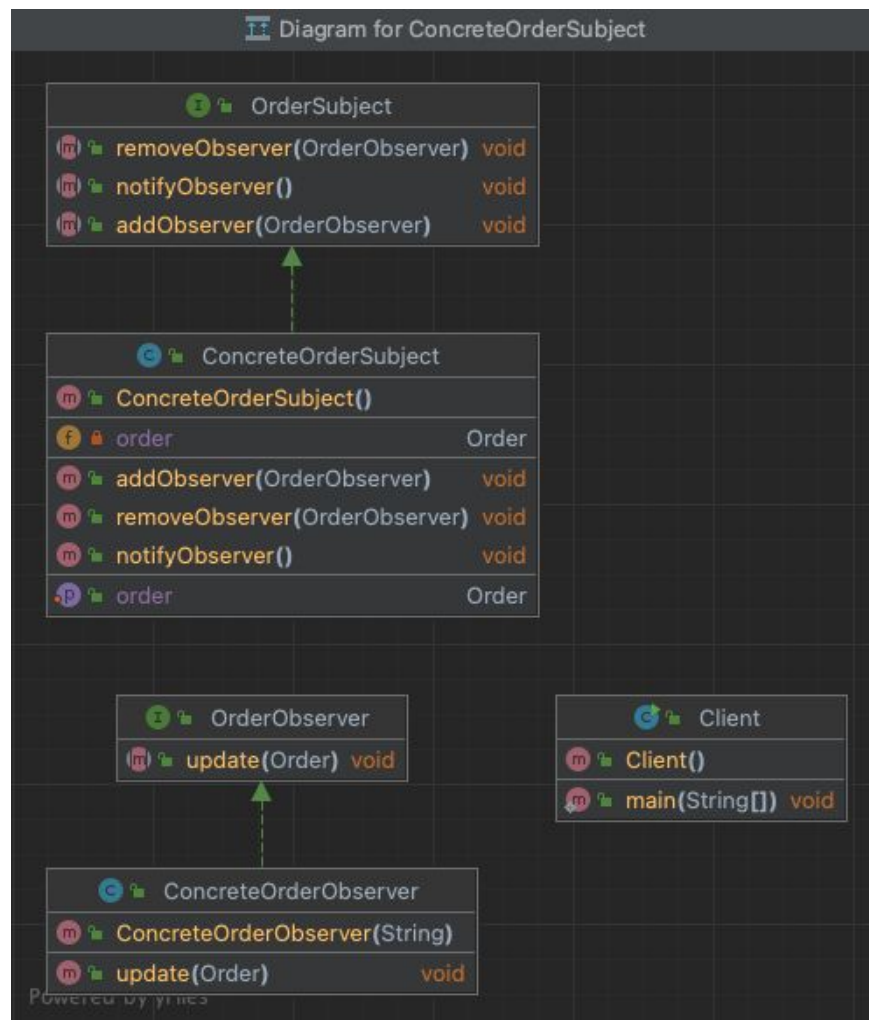


```
// Using builder pattern to create an order
OrderBuilder orderBuilder = new ConcreteOrderBuilder();
Order order = orderBuilder.setProduct("Laptop")
    .setDiscount(0.1)
    .setPaymentMethod("Credit Card")
    .setOrderAddress("439 Cambridge St, 12345")
    .build();
```

Observer Pattern UML

How to use the Builder Pattern

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Code demo



Thank you

