

GROUP PROJECT

By Group A





OUR TEAM

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INTRODUCTION

Facade pattern hides the complexities of the system and provides an interface to the client using which the client can access the system.

This type of design pattern comes under structural pattern as this pattern adds an interface to existing system to hide its complexities.

This pattern involves a single class which provides simplified methods required by client and delegates calls to methods of existing system classes.

CODE

```
# Subsystems classes

class FlowerSelector:
    def choose_flowers(self, occasion):
        print(f"Selecting flowers for {occasion}...")

class BouquetPreparation:
    def arrange_bouquet(self):
        print("Arranging the bouquet...")

class Packaging:
    def wrap_bouquet(self):
        print("Wrapping the bouquet...")

class Delivery:
    def deliver(self, address):
        print(f"Delivering the bouquet to {address}...")

class Payment:
    def process_payment(self, amount):
        print(f"Processing payment of ${amount}...")

class orderConfirmation:
    def confirm_order(self, order_id):
        print(f"Order {order_id} has been confirmed.")
```

```
Facade class

class FlowerShopFacade:
    def __init__(self):
        self.selector = FlowerSelector()
        self.bouquet_preparation = BouquetPreparation()
        self.packaging = Packaging()
        self.delivery = Delivery()
        self.payment = Payment()
        self.orderConfirmation = orderConfirmation()

    def send_flowers(self, occasion, address, amount, order_id):
        print("Processing flower delivery order...")
        self.selector.choose_flowers(occasion)
        self.bouquet_preparation.arrange_bouquet()
        self.packaging.wrap_bouquet()
        self.delivery.deliver(address)
        self.payment.process_payment(amount)
        self.orderConfirmation.confirm_order(order_id)
        print("Flower delivery complete!")
```

CODE

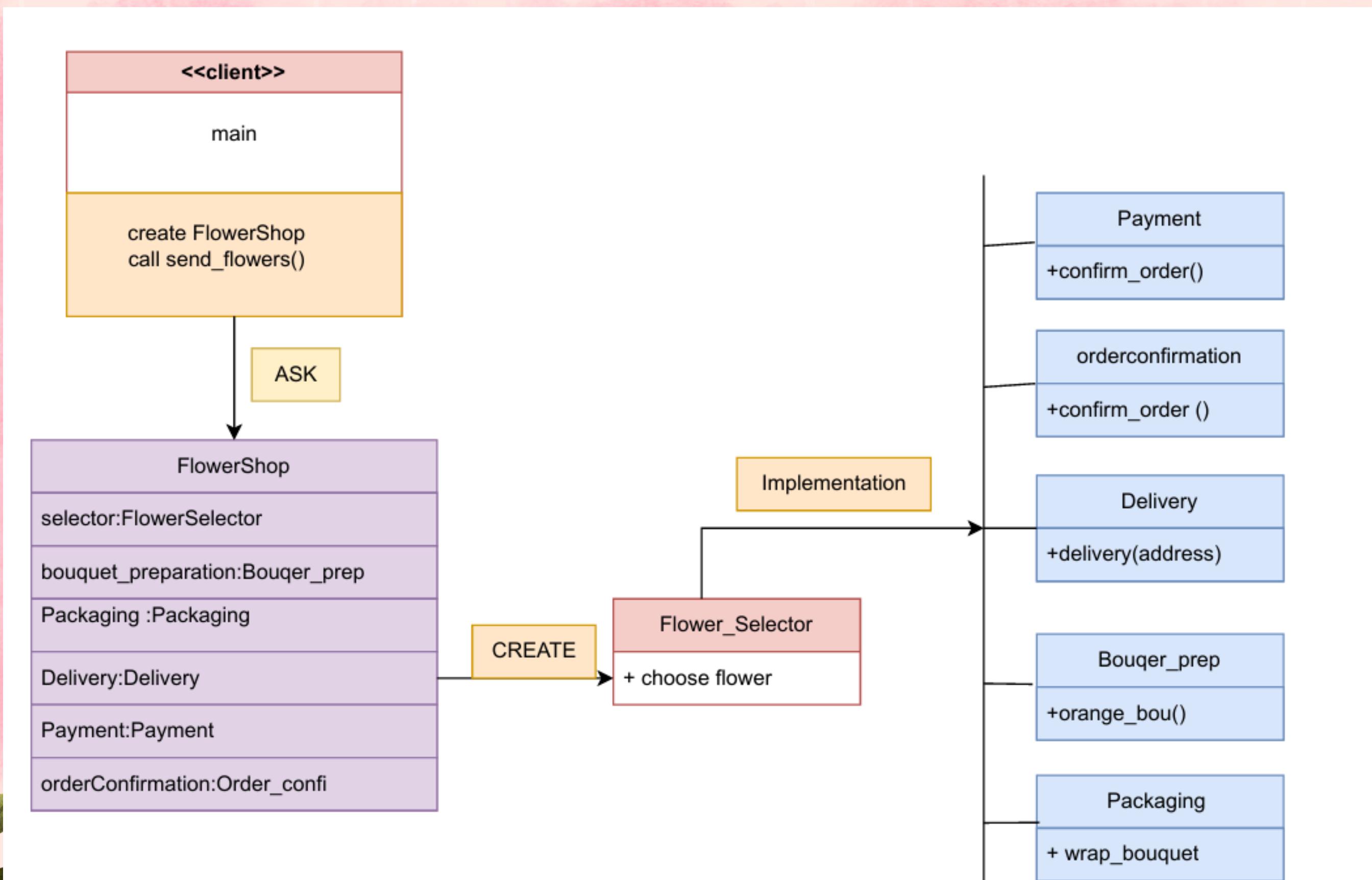
```
# Client
if __name__ == "__main__":
    shop = FlowerShopFacade()
    shop.send_flowers("birthday", "123", "hometown", "1000", "079369 \n")
    shop.send_flowers("wedding", "456", "model town", "700", "123456 \n")
    shop.send_flowers("graduation", "789", "block B", "500", "926404 \n")
```

OUTPUT

```
Processing flower delivery order...
Selecting flowers for birthday...
Arranging the bouquet...
Wrapping the bouquet...
Delivering the bouquet to 123, hometown...
Processing payment of $1000...
Order 079369
has been confirmed.
Flower delivery complete!
```

```
Processing flower delivery order...
Selecting flowers for graduation...
Arranging the bouquet...
Wrapping the bouquet...
Delivering the bouquet to 789, block B...
Processing payment of $500...
Order 926404
has been confirmed.
Flower delivery complete!
```

DIAGRAM



THANK
YOU

