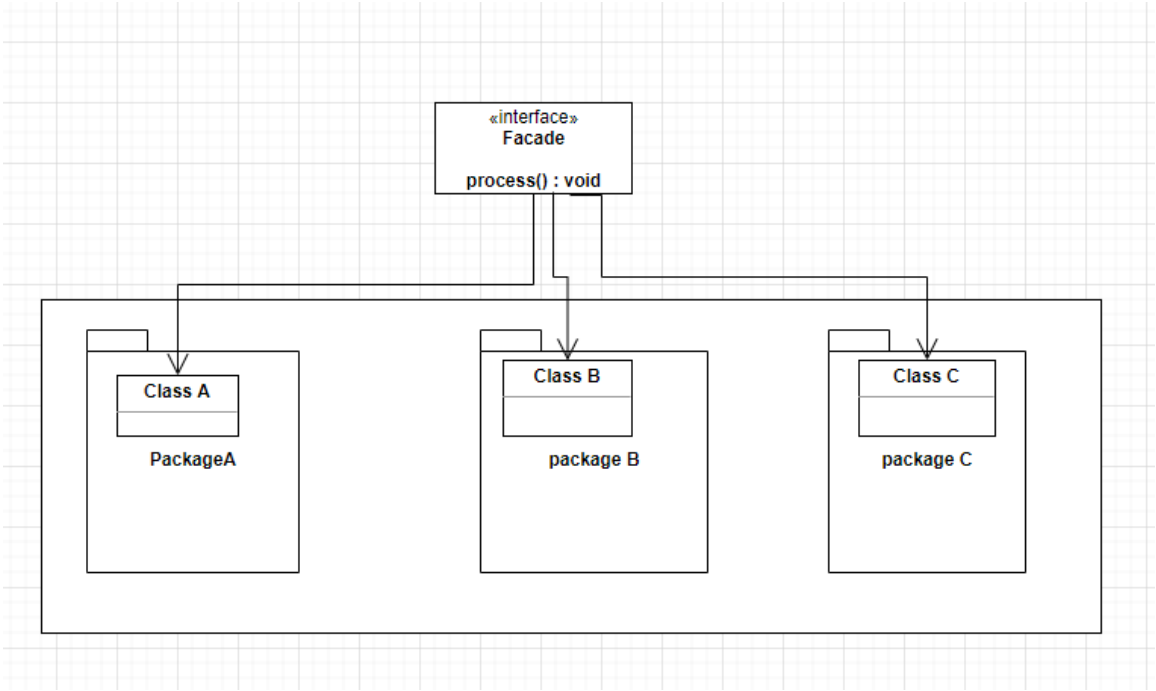
Façade Design Pattern

Structural Design Pattern

Why Façade :
Client has to interact with large number of interfaces and classes , so tightly coupled with those interfaces and classes.
Façade Solves this problem.
It hides the all complexities of subsystem.

In Façade , there is single interface which provide all functionality irrespective of client knows everything how it is implemented. Subsystem uses Packages.



Example of Façade in Java :

1. **Java.net.URL class has method openStream().**
2. In Java, the interface JDBC can be called a facade because, we as users or clients create connection using the "java.sql.Connection" interface, the implementation of which we are not concerned about. The implementation is left to the vendor of driver.

Real Life Examples of Facade Design Pattern

Example 1:

When you are using an ATM, and you want to withdraw some amount, for instance, 10,000 Rupees. So, you need to insert your bank debit card in the ATM and enter the required password which is the passcode. Once you trigger the 10000 amount button, the following things will happen behind the screen.First, the machine will check if the account is valid or not. Then it will check whether you have sufficient funds to withdraw the entered amount. Then it'll check whether the pin code is correct or not. After validating all these things, the amount will be withdrawn. This complicated procedure is handled behind the screen, but for the user, the interface is pretty simple.

1. Abstract Factory can serve as an alternative to Façade when you only want to hide the way the subsystem objects are created from the client code.

2. Flyweight shows how to make lots of little objects, whereas Facade shows how to make a single object that represents an entire subsystem.
3. A Façade class can often be transformed into a Singleton since a single facade object is sufficient in most cases.

Façade PartOne : Component Diagram :