#### **Advanced Object-Oriented Design**

# **About Facade**





## **Outline**

- Facade
- Avoid it
- Visitor variations

#### **Facade intent**

A facade is an object that provides a simplified interface to a larger body of code, such as a class library.

## "Expected" consequences

#### A facade can:

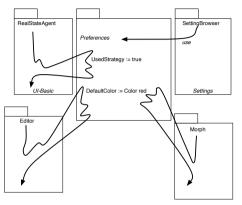
- make a software library easier to use, understand and test, since the facade has convenient methods for common tasks;
- make the library more readable, for the same reason;
- reduce dependencies of outside code on the inner workings of a library, since most code uses the facade, thus allowing more flexibility in developing the system;
- wrap a poorly designed collection of APIs with a single well-designed API.

## Seen consequences

Often people do not use Facade well

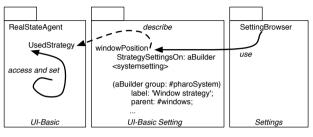
- Procedural design
  - o all the clients refers to a single point: often a singleton
- Hampering modularity
  - Difficult to layer application
  - Difficulty to unload the Facade

## **Studying Preferences Facade**



- Control flow is not local
- 180 system wide preferences
- Impossible to remove Preferences packages
- Preferences link to too many package (default PngReader)

## **Solution for preferences**



- UI-Basic has customization points.
- UI-Basic Setting describes them.

Setting collects system settings and populate setting browser.

- Each element defines its preferences
- The flow is local to the element
- The local preferences are described
- Layered architecture: we can remove Preferences



### **Conclusion**

- Facade may work
- Usually this is a plague

#### A course by

#### S. Ducasse, G. Polito, and Pablo Tesone



