If Time Permits:

Module 11: "Façade"





Agenda

- Introductory Example: Long Walks
- Challenges
- Implementing the Façade Pattern
- Pattern: Façade
- Overview of Façade Pattern
- A Slight Word of Warning



Introductory Example: Long Walks

```
IBluetoothSettings bluetooth = settingsManager.Bluetooth;
bluetooth.IsEnabled = false;
string trackerAppName = "Exomondo";
applicationController.Start(trackerAppName);
...
applicationController.Stop(trackerAppName);
bluetooth.IsEnabled = true;
```

```
interface ISettingsManager
{
    IBluetoothSettings Bluetooth { get; }
}

interface IApplicationController
{
    bool Start( string name );
    void Stop( string name );
}
```



Challenges

- Do we <u>really</u> have to go through that every time?
- Does every client need to figure out the logic of all the subsystems?



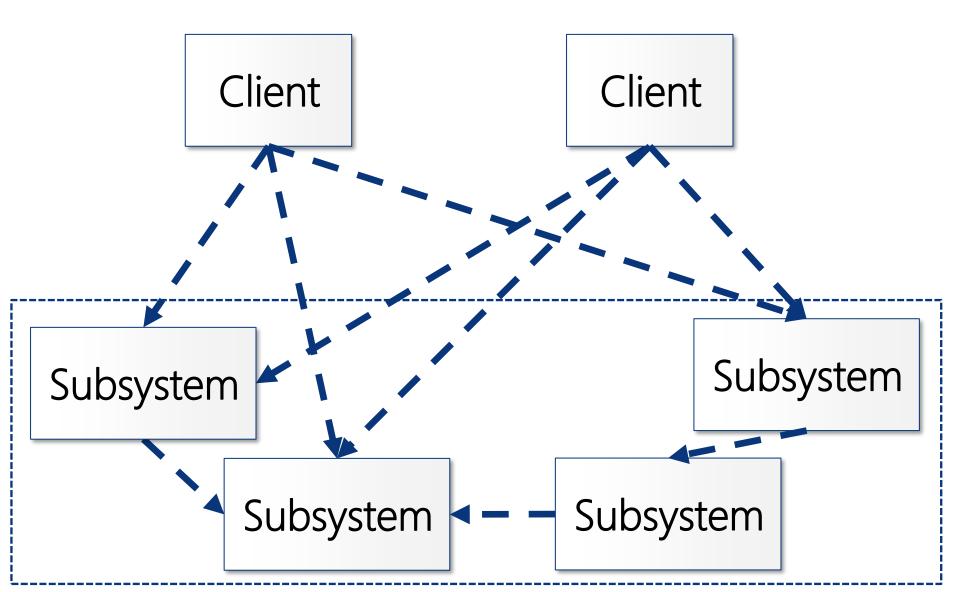
Pattern: Façade

Provide a unified interface to a set of interfaces in a subsystem. Façade defines a higher-level interface that makes the subsystem easier to use.

- Outline
 - Isolate subsystems' intricacies from client
 - Make subsystem functionality reusable by clients
 - Loosely couple clients and subsystems
- Origin: Gang of Four

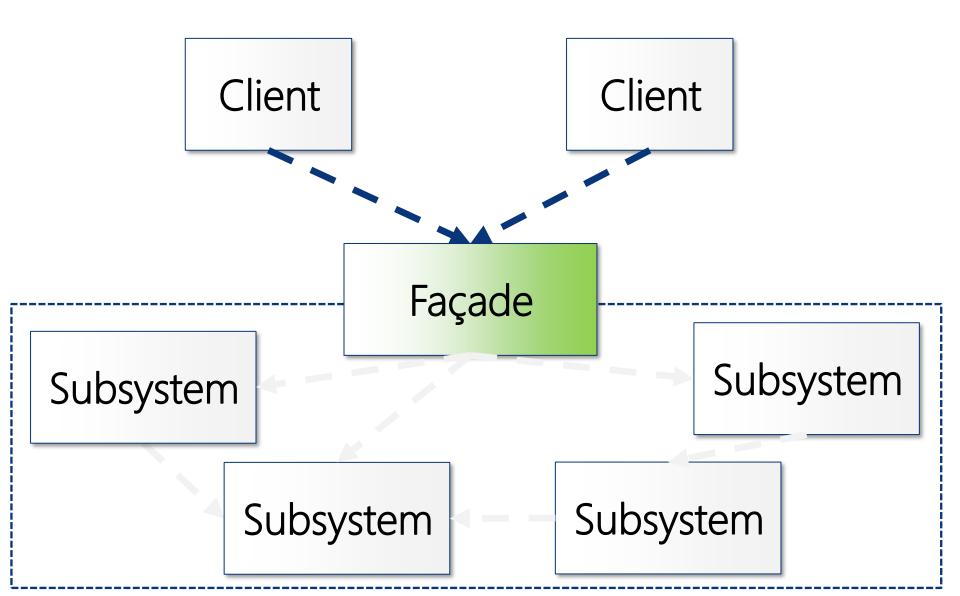


Overview of Façade Pattern





Overview of Façade Pattern





Overview of Façade Pattern

- Client
 - Accesses Subsystems only through Façade
- Façade
 - Provides an entry point for Clients
 - Shields client from subsystem intricacies and complexities
 - Loosely couples Client from Subsystems
 - Makes Subsystems replaceable by other Subsystems without affecting the Clients
- Subsystems
 - Are left unchanged



A Slight Word of Warning

- Do take a little of care in not "overfacading" everything
 - Overlayering
- Carefully consider situations where same subsystems appears in multiple façades
 - Versioning
 - Shared data contexts
 - •
- Remember to implement the Disposable Pattern on your Façade if necessary!



