

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 really have to go through that every time?
- ▶ Does every client need to figure out the logic of all the subsystems?

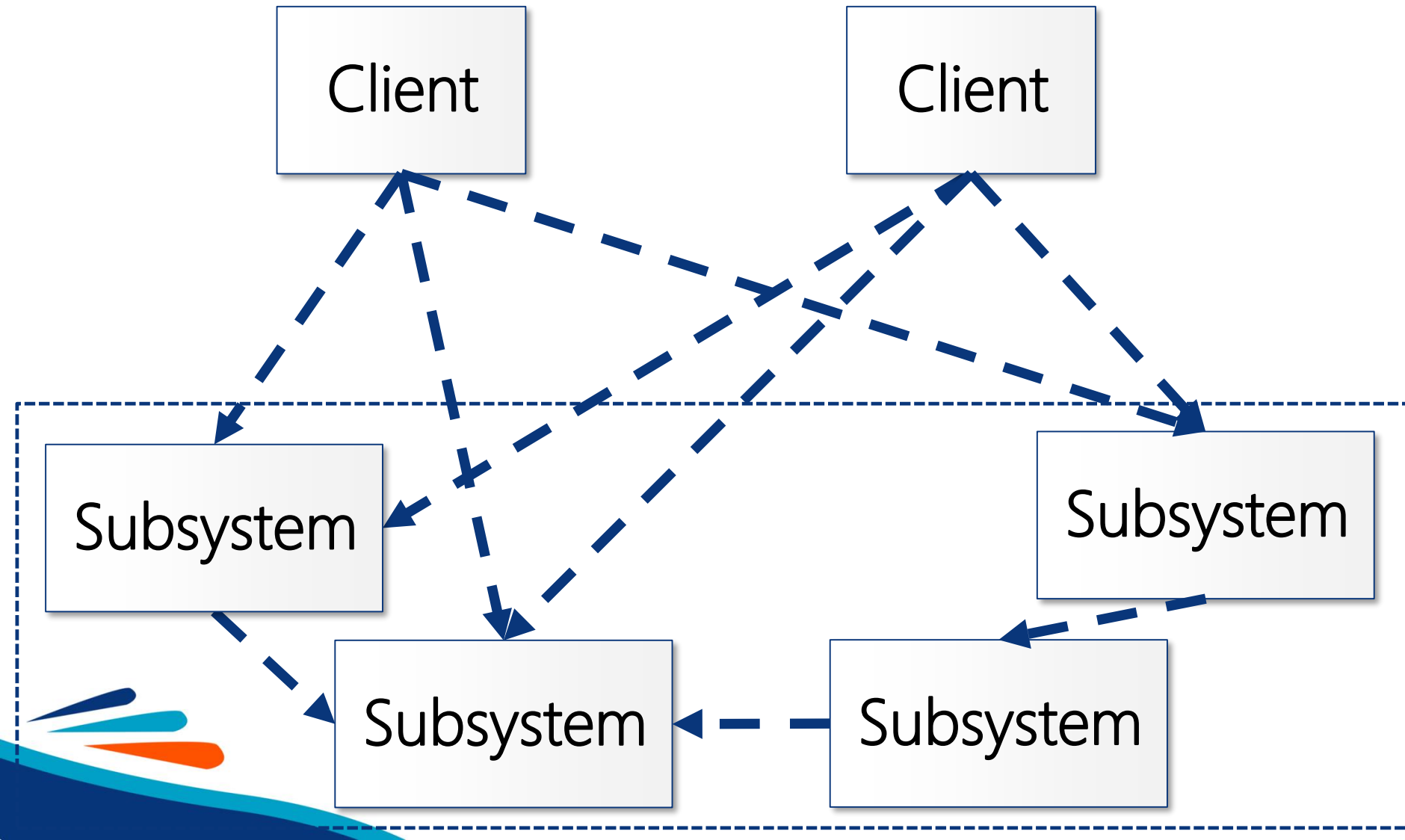


Pattern: Façade

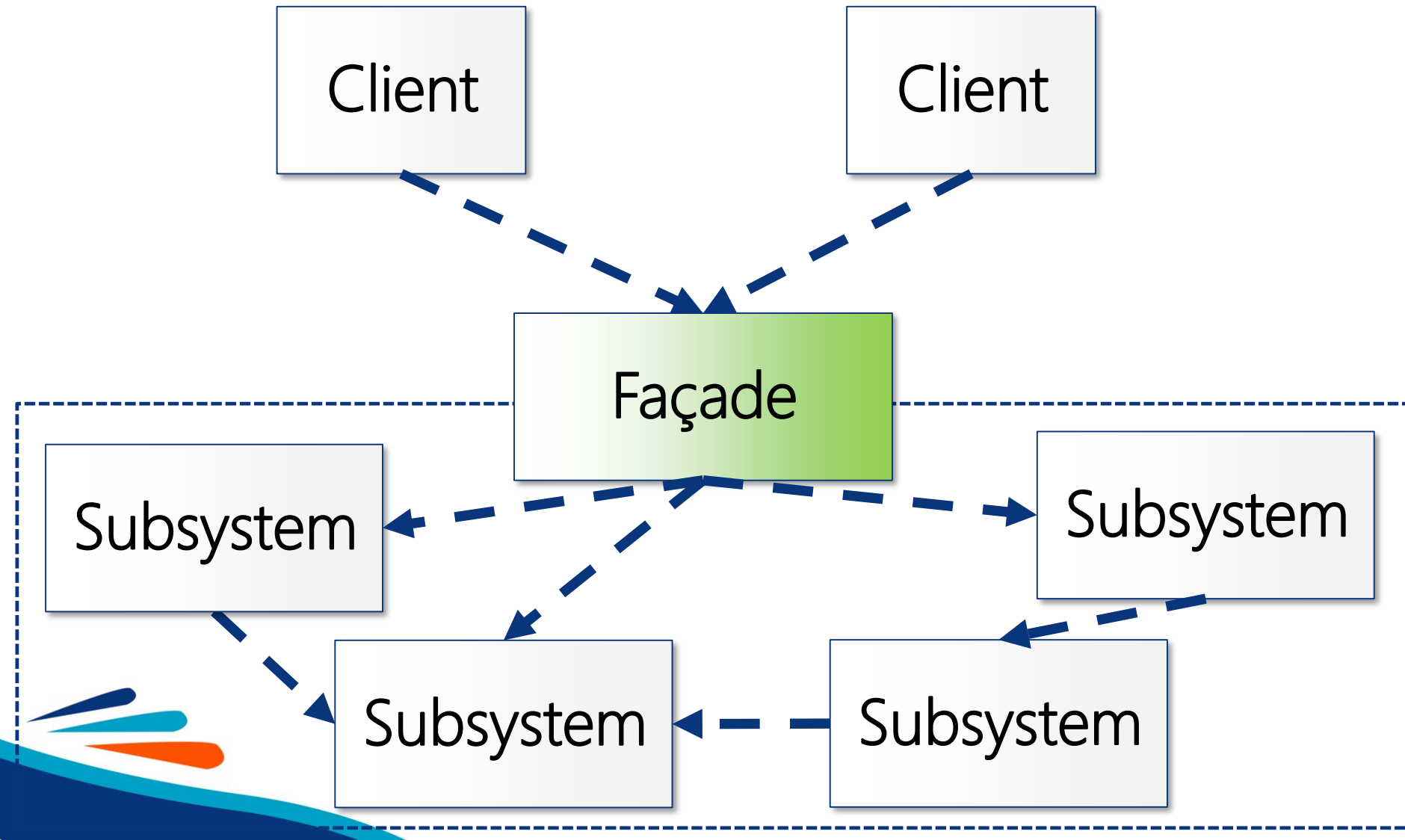
- ▶ *Provide a unified interface to a set of interfaces in a subsystem. Façade defines a higher-level interface that makes the subsystem easier to use.*
- ▶ Outline
 - Isolate subsystems' intricacies from client
 - Make subsystem functionality reusable by clients
 - Loosely couple clients and subsystems
- ▶ 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
 - Overlaying
- ▶ 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!





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