Adapter Design Pattern

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COMPUTER SCIENCE 323 – SOFTWARE DESIGN

Structural Design Pattern

Ease design by identifying simple ways to realize relationships between objects.

Adapter

Façade

Composite

Bridge....

I have an object (a missile launche) that does not have the methods my application needs

Adapter

The main goal:
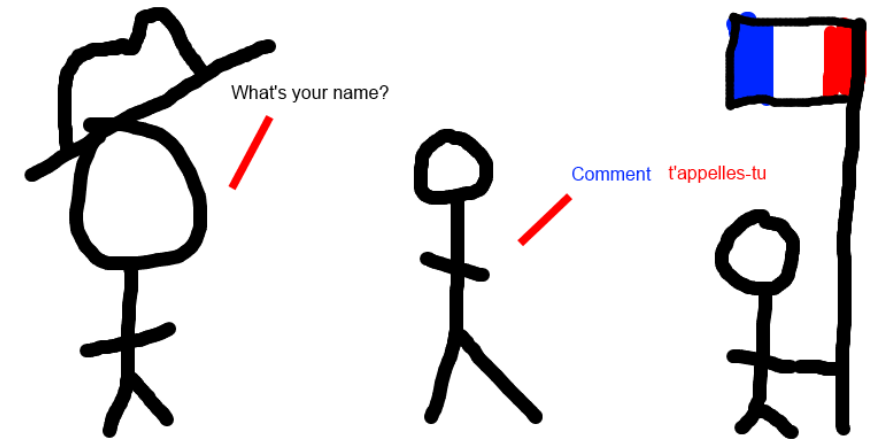Convert one interface to work with another.

"Wrapping"

Participants
Target – the desired interface
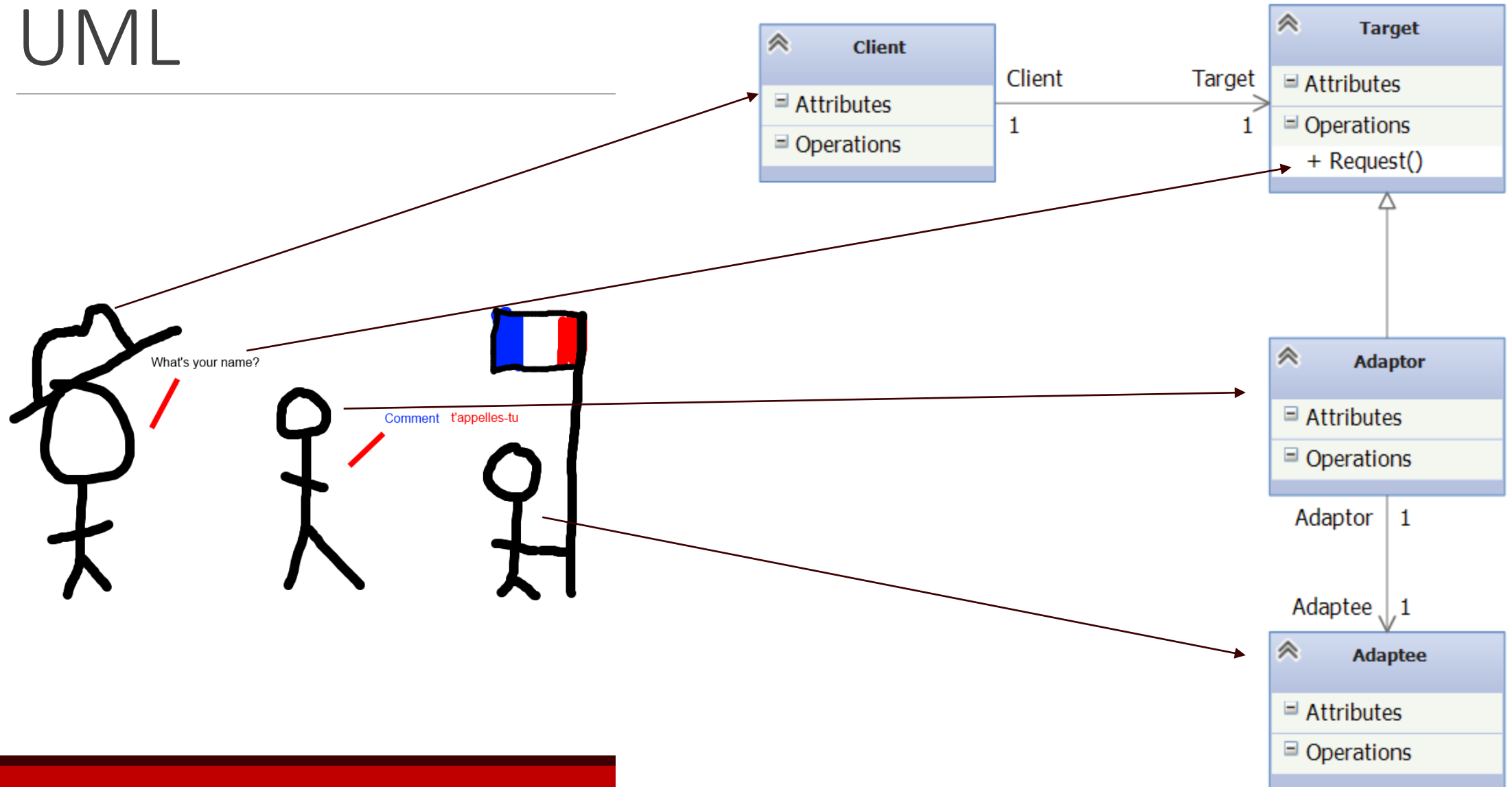
Client – object that uses adapter

Adaptee – object that gets wrapped by new interface

Adapter – object that provides new interface

UML

cd AdapterPattern

Missile Launcher

Client	Target	Adaptor	Adaptee
Your Application	IMissileLauncher	Your Object	OpenSource Missile Object
	<implied>		

UML

«C# class»
WindowsFormsApplication1::Controller

Attributes
+ Launcher : IMissileLauncher

Operations
+ Controller()
+ RunProgram()

Controller
*

Launcher 1

«interface»
«C# interface»
Windo...uncher

Attributes

Operations
+ *FireMissile(x :...*

«C# class»
WindowsFormsApplicati...MissileLauncherAdapter

Attributes
- m_launcher : AForeignMissileLauncher

Operations
+ FireMissile(x : Double, y : Double)
+ MissileLauncherAdapter()

MissileLauncherAdapter 1

AForeignMissileLauncher 1

«C# class»
WindowsFormsApplication1::AForeignMissileLauncher

Attributes

Operations
+ AForeignMissileLauncher()
+ FireZeMissile(x : Double, y : Double, z : Double)