

Proxy Pattern

- Definition of “Proxy”: Authority or power to act for another
 - Original Gang of Four pattern, much used
 - Stands in for a “real object” (similar to a pointer)
 - Provides a public interface to the real object
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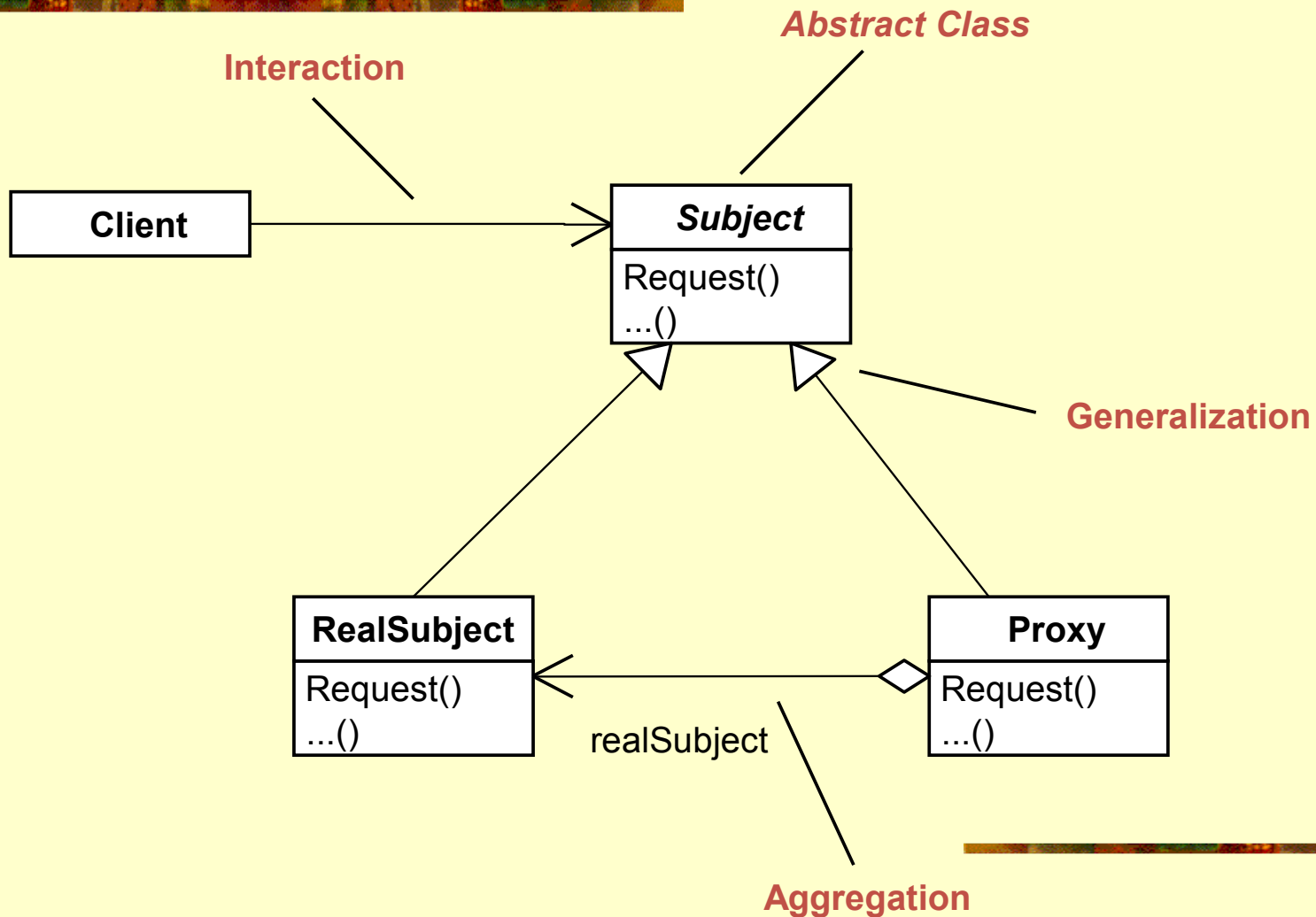
Proxy Services

- Local interface
 - Access control
 - Resource instantiation cost reduction
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Types of Proxies

- Protection Proxies grant or deny client access to the real subject (*i.e.*, check permissions)
 - Remote Proxies are a local representation of a real subject in a different host (*e.g.*, RMI)
 - Virtual Proxies represent expensive objects, such as images (*e.g.*, replies to getHeight())
 - Smart Reference Proxies can count number of times referenced, act as lock or semaphore
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Proxy UML Representation



Code Example

```
private void init() {  
    imgProxy = new ImageProxy ();  
}  
//Do stuff to image  
public ImageManipulation1() {  
    InitializeComponent();  
    init();  
}  
//Then instantiate image  
private initiate(object, args) {  
    Real.Image = imgProxy.getImage ();  
}
```