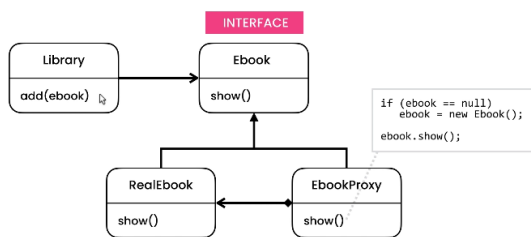


## Proxy Design Pattern

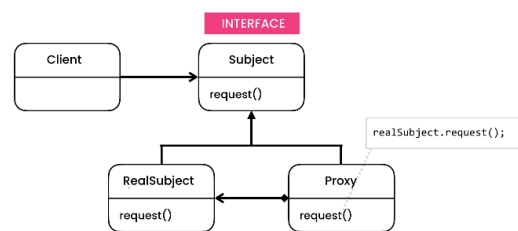
This pattern allows us to create a proxy or an agent for a real object.

### Class Diagrams

#### Our Example



#### The pattern in Gang of Four's book



### Explanation

In this example, we want to load ebooks only when we need to show them. The **EBook** is an interface. The **ProxyEBook** class acts like an agent, in this class, we create **RealEBook** objects on-demand. In this class, we have a private field of type **RealEBook**, but we are not initial that field ahead of time. In the **RealEBook** class, we are going to get the file name from the instructor and read the ebook from the disk and load it to the memory. The **Library** class is responsible for adding an ebook to our library or showing a book.