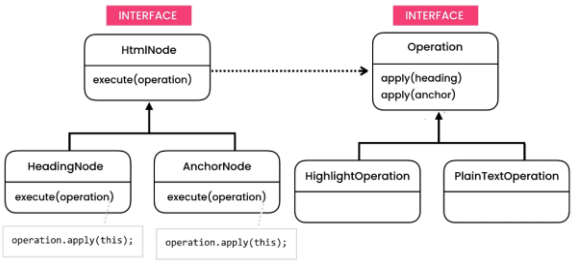
Visitor Design Pattern

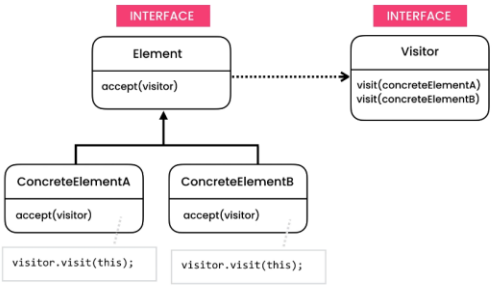
This pattern allows us to add new operations to an object structure without modifying it.

Class Diagrams

Our Example



The pattern in Gang of Four's book



Explanation

In this example, our imaginary application is an Html editor. Suppose that there is two HTML tag in our editor, <h1> and <a>. These tags are defined by the HeadingNode and the AncharNode classes that are implementing the HtmlNode interface. Suppose that there are two operations in our editor, highlight and extracting plain text. These operations are defined by the HighlightingNode and the PlainTextOperation classes that are implementing the Operation. So in that way, for adding a new operation we just need to change the Operation interface and the classes below. HtmlDocument class has some field and method for saving nodes and execute an operation on them. This class is not a part of the pattern.