

Design Notes

Design and Design Patterns

Architecture

In the hints file, the teacher asks us to divide the operation in the following packages:

1. model: This package contains all the classes responsible for the representation and the management of the documents
2. view: this package contains all the classes that are responsible for the visualization of the documents and the interaction with the user. In other words, this package contains the GUI
3. commands: this package contains all the classes that control the data flow between the model and the view elements. In other words, these classes realize the reactions of the application of the user input (open file, edit file etc.)
4. input: this package contains all the classes responsible for opening documents as well as loading their contents in the application
5. output: this package contains all the classes responsible for saving the document back to disk.

Command Pattern for the commands

1. Command Pattern for all the buttons in the GUI
2. Facade for easier interchange of external APIs
3. Strategy for opening and saving various files
4. Decorator pattern for decoding/encoding file contents
5. Bonus Round: Use the facade pattern while using external APIs for parsing files as well (eg the Apache POI for opening excel files)