Object Oriented Analysis and Design (UE22CS352B)

Assignment 2: Design Patterns

Design and implement a system for the following.

- A Word Processing System deals with a lot of word objects.

- Each word has the word itself, position in sentence, type of word (verb, adjective and noun) and style (bold, italics and underline).

- The type and style of words can be shared across multiple words like there can be many bold-verbs.

- The style is handled by a set of Text Formatters with one formatter each for each style. Each word object is passed to the first text formatter and if the style of the word matches that of the formatter, it returns stylised word. If not, it lets the next formatter handle that word and so on.

- The stylised word should be in html format like enclosing the text within a tag for bold, <i></i> for italics and <u></u> for underline.

- For each word created, the styling has to be applied and then displayed based on the position in the sentence.

Represent the design (using appropriate design patterns) in a UML Class Diagram and implement the same.

Note: Design the application in such a way that extensibility is easy. It should be easy to add new word style-type combination and corresponding new style formatters.

Submission:

Prepare a PDF document with the following:
1. Title Page
2. Design patterns considered
3. Design patterns used
4. UML Class Model with Design Patterns highlighted
5. Code
6. Input and Output Screenshots for all types of word formats