System Software Project

Text Editor

The goal of this project is to implement a text editor that can handle text files with different fonts and styles. It should be based on the simple editor presented in the course (http://ssw.jku.at/Teaching/Lectures/SSW/Editor.zip). Since this prototype is written in Java the natural choice for the implementation language of your editor is Java as well, but you can also use C# or C++ instead. The project *cannot* be implemented in teams, i.e. you have to implement it alone.

Your editor should have the same basic functionality as the prototype editor, i.e.:

- It should be able to read and display a text file. Long lines are not wrapped but simply clipped at the right margin.

- The user should be able to type and delete characters in the text.

- There should be a caret and a selection. Words should also be selectable with a double click.

- The user should be able to scroll.

In addition to that, your editor should have the following features:

- The text data structure should be managed as a piece list (not as a gap text like in the prototype).

- The user should be able to set the font, size and style of arbitrary text regions. Note that a line can have characters of different height so the line metrics have to be computed on a per-character basis, and also the drawing of the lines becomes more complicated.

- Fonts and styles should be stored at the beginning of a text file as it was discussed in the course. But your editor should also be able to open standard ASCII text files without such a header.

- There should be menu commands for opening and saving text files. If a new text file is opened via a menu command it should be displayed in a new viewer.

- There should be menu commands for Cut, Copy and Paste operations. This requires an application-wide clipboard to be implemented.

- There should be a Find command for searching text pieces.

- Finally, there should be a user interface for setting the font, size and style of a text piece.

Note that you have to implement your own text class and your own viewer class, i.e. it is not allowed to use ready-made text components from a library.