

CSCI 204
Checkpoint 2
Fall 2016
Due Oct 2

This checkpoint will focus on again building up the utilizes of the program.

I/O

1. ~~We will improve the input of a file by reading the title and author information. We will make this only an option if the file provide is from project Gutenberg. Two files of this type have already been provided in the samples on Moodle. Your goal is to write a method inside of DocumentStream that will strip this information from the file and provide to the needed class attributes.~~
2. ~~Graphic interface. We will start with the graphical user interface. First please read the following: http://python-textbok.readthedocs.io/en/latest/Introduction_to_GUI_Programming.html . Create a class called UserGUI. In this class please summarize what you read in a docstring. This is just a short overview of how TK makes windows and buttons. Moreover, use the calculator exam that will do what the main function in Checkpoint 1 will do, but this time call your matplotlib scatter graph (See additional steps in checkpoint).~~
3. ~~Graphic Plots. Use calls to matplotlib to make a scatter plot, in the plotter class. This may be referenced in the following example: http://matplotlib.org/examples/shapes_and_collections/scatter_demo.html .~~
4. ~~Graphic Plot. Similar to above make a bar graph call for use to use.~~
5. ~~Commandline Plot. We will not add to the scatter plot we started in checkpoint 1. First we will learn to scale our input based on the terminal window size. We will get the terminal window size from `os.get_terminal_size().columns/lines` . After this, we will come up with a scaling factor for the y-axis. For example, if the line = 10 and the max input is 190-200, the scale should be about 20. The choice of the cutoffs for the scaling factor will be up to you to experiment with and find what works best. Now the `ynew = y/y_scale_factor`.~~
6. ~~Commandline Plot. We will now add labels to the scatter plot. Labels should be added to the y-axis. The x-axis should be left as simple numbers. If labels exist for the axis, a key for this would be given above the scatter plot.~~
7. ~~Commandline Plot. We will use the same way we did scatter plot, (including scaling and labeling) to make a bar graph. Each bar should be a random choice character from the visible ascii chart.~~

Data Structures

8. ~~We will start to make a set of "templated standard library" of the data structure we will need in addition to the standard python ones. The first one we will make is a linked list data structure. Outline a single link list as class called sllist.~~