**DEVELOPER EXERCISE:**

**Sorting Characters in a paragraph**

Our resident conspiracy expert, Dr. X, is looking for hidden messages in the collected publications of Hugh Hefner. Dr. X believes the message is hidden in the individual letters, so rather than get distracted by the words, he’s asked us to write a program to take a block of text and return the letters it contains, sorted. Given the text:

|  |  |
| --- | --- |
| 1  2 | When not studying nuclear physics, Bambi likes to play  beach volleyball. |

our program would return:

|  |  |
| --- | --- |
| 1 | aaaaabbbbcccdeeeeeghhhiiiiklllllllmnnnnooopprsssstttuuvwyyyy |

The program ignores punctuation, and maps upper case to lower case.

Are there any ways to perform this sort cheaply, and without using built-in libraries?

**Below are some general guidelines.**

* Plan accordingly to where you are not interrupted. Exercise generally should not take more than 45-60 mins to complete.
* Test Drive your solution if possible using Java or JavaScript.
* Ideally the solution should be provided on a Git Repository like GitHub.
* Commit incrementally as it makes sense to you.
* Clearly indicate worst case and best case time complexity of your algorithm(s).