CS210 Assignment II
Deadline 11.55PM, 18th June 2014

Demo time: 21st June Saturday, 5.00PM to 7.00PM. You need to show your program and explain.

Implement a data structure (of N strings) using an dynamic array to support the followings

- Satellite data are of string type
- O(logN) time Addition(string X) // If X is in the DS then increment its counter
- O(k.logN) time to find kth element in dictionary/lexicographic order in entire data
- O(log N) time to find number of occurrence of an element (X)
- TotalSize() in O(1) time

Input to your program will be a Big Text File. Every string of the data structure have a counter that indicate the number repetition of the string in the input file.

Less marks will be awarded for DS implementation with inefficient operations as compared to specified one.

Use of dynamic array is mandatory
Use of inbuilt functions of C++ STL are not allowed
You may use any functions of <string.h> or <cstring> : Allowed
Use of self referential structure are not allowed (e.g. struct node {struct node *next;}).

Use C/C++ language and your program should be compiled using linux gcc (please don't use turbo c++/visual c++/devc++).

Submission procedure: Please email your code to asahu@iitg.ernet.in before deadline