CS 200
Lab 4
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Important Guidelines:

1- There will be a deduction of 10% for every lab submitted which is submitted late from now on.

2- Talking to each other is strictly prohibited. If you do so, your lab will be cancelled immediately.

3- Any case of cheating will be immediately reported to DC.

4- TAs will not help you guys in any way for the first two tasks, except for clarifying the concepts. You have to figure them out for yourself.

Problem 1: (Marks 30)

You have to implement a my_string class using char arrays. The max length of the character array will be passed as a parameter. If a length is not specified assume the max length of string is 10. Your my_string class should have the following functions:

1- Another constructor which takes a character array and size and initializes your my_string class to it.

2- substr() tells if a given char array is substring of my_string class.

3- length() returns the current length of the my_string.

4- get() takes an integer and returns that character.

5- compare() takes another character array and returns 1 if your my_string class is greater than it, 0 if they are equal, and -1 if it is less.

Example: Abc > Aac, abc < cab, lol < hi

Note: Above are not the correct prototypes for the function, figure them out for yourself.

Problem 2: (Marks 30)

You have been given a code with a segmentation fault in it. Debug it.

Problem 3: (Marks 40)

You have been given a pointer to a sorted integer array (whose last element is 0. 0 will only be at the end of the array). You have to implement a function, which takes an integer and returns its index if it is in the array otherwise returns -1. But you have to do it using binary search and you are not allowed to use indexing. Instead you have to use pointer arithmetic to access elements of the array. In other word, you are only allowed the following operations on the array pointer:

+=, -=