CSE2031 Software Tools – Lab Exercise
June 15, 2010

1   Sorting using binary tree (4 points)

Write an ANSI-C program that
- reads integers from the standard input into a binary tree,
- binary tree is sorted in such a way that left child is always less than parent and right is grater or equal
- traverses tree in order left-parent-right to and
- prints the sorted integers in the value-ascending order to the standard output.

Your program should prompt the user to enter the values at the beginning of the program. The user prompt should be **`Please enter integers to be sorted:`**

Your program should output **`Sorted integers:`** before printing the sorted values. The sorted values are separated by a **single space** and end with a **newline character**

A sample run of your program is:

`Please enter integers to be sorted:` `97 -83 835 0 -983 97 16`
`Sorted integers: -983 -83 0 16 97 97 835`

where "97 -83 835 0 -983 97 16" are the user inputs. Please note that **there is no space after the last number (e.g., 835) in the third line above but there is a newline character after it** so that the cursor is positioned at the beginning of the next line after the program finishes running.

You can **assume** that he user inputs for the integers (to be sorted) are valid integers separated by spaces, tabs or newlines. You can use `scanf()` to read them without checking their validity.