

CSE310 Data Structure and Algorithm Proj-2 Full

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1. Encountered Problems

For the full submission of proj_2, most of the problem that I encountered are from the recursion structure of the binary tree search structure. For inserting new node to the bst structure, it is relatively straightforward. However, when I implemented the range search on the bst, I do not know how to delete the part (not in the range) on the tree which saves time comparing to implementing in-order traversal. Therefore, when printing out the structure of the tree (height, left tree height and right tree height), I printed the who structure of the tree instead of the part within the range.

Another problem I encountered is how to compare two char* lexical graphically. I wrote a function of comparing it but I think there should be a better way to compare them in a easier way.

2. Bug Report

One bug I fixed is “segmentation fault”, I followed the instruction by using dynamic memory allocation for saving the structure but I still got the problem in the first place. However, I wiped out the part which I did wrongly. I listened to the Professor’s idea, which is always inserting linked list at the head of the structure to deal with the collision.

3. Interactions

The interactions I have are all on piazza. I went through everybody’s post and have found some helpful advice from them.

I also went to office hour twice. One is to solve the “segmentation fault” problem and the other one I asked the professor is how to search a range of the value I need for the bst.

4. Reference (all internet link I checked)

<https://cboard.cprogramming.com/c-programming/136477-create-array-pointers-dynamically.html>

<https://www.geeksforgeeks.org/linked-list-set-2-inserting-a-node/>

<https://www.geeksforgeeks.org/program-to-find-the-next-prime-number/>

<https://stackoverflow.com/questions/23143624/c-return-array-of-structs>

<https://stackoverflow.com/questions/49888882/c-determining-empty-cells-from-reading-in-data>

<https://stackoverflow.com/questions/2597637/finding-height-in-binary-search-tree>

