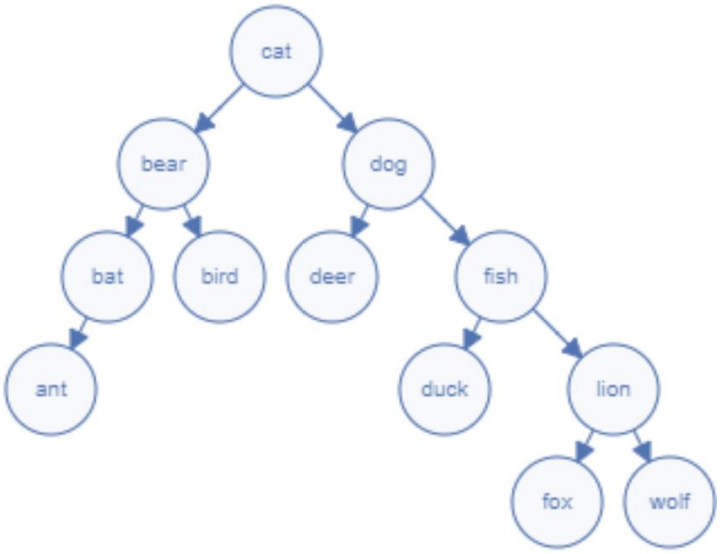
In this Lab submission, you will practice some coding with Binary Search Tree. You can take help from the uploaded code and examples in the pdf files.

You need to read a text file with a list of words and you need to build a binary search tree with those words. As we need to compare the data in nodes in the tree and the node we want to insert, we can use strcmp() function to compare them and based on that we can decide where to insert the new node.

An example content of the text file and a tree constructed from the words are shown below. The first line of the file indicates how many words are available in the file:

in.txt

```
12
cat
bear
dog
bat
bird
ant
deer
fish
lion
fox
wolf
duck
```



- After building the tree, print the tree in in-order traversal.

```
ant bat bear bird cat deer dog duck fish fox lion wolf
```

- ```
  Print total characters from the tree:
  Total characters: 43
  ```
- ```
  Searching in the tree (enter "exit" to exit):
  ```

    - Enter a word to search: deer
    - Output: found
    - Enter a word to search: ant
    - Output: found
    - Enter a word to search: exit
    - (Note that in the above sequence of string input, your code might skip taking input one after another. In that case use the loop provided in slide 63 of the c_review.pdf file)
- Height of the tree:
    - Height of the tree is: 4
- Write and use any two functions of your choice from the BinaryTrees-practice problem.pdf file.

Submit the .c file to webcourses.