CSCA48 Exercise 6
Due: June 30, 2017. 5:00pm

1 Tree Traversal

Draw the Binary Search Tree (BST) we would get if we were to insert the letters C O M P U T E R S in the order listed (i.e., C is the first letter added to the tree).

Now consider the following function:

```
def traverse(container, root):
    result = ""
    container.put(root)
    while(not container.is_empty()):
        next_node = container.get()
        if(next_node is not None):
            result += next_node.data
            container.put(next_node.left)
            container.put(next_node.right)
    return result
```

Containers

What is the result of calling `print(traverse(my_container, my_root))` when my_root is the root node of the tree you made, and my_container is:

1. A stack

2. A queue

3. An alternating queue

4. A neck queue

5. A neck stack

If you are unsure how any of the containers above work, you can ask a TA during practicals, or ask on Piazza. Make sure you understand the ADT before you start working.

You can trace the code by hand, but we recommend actually implementing each container and running it, then you can just copy/paste the output.

What to hand in

You must submit a file called `ex6.txt` with what would be printed for each of the containers listed above, in order, one container per line. For example, your file might look something like (once again, the format is correct, the answers are not):

```
COMPUTERS
SRETUPMOC
COMPSRETU
RETUSPCUP
PROCTORUS
```