

**These must be completed and shown to your lab TA by the start of your next lab.**

Complete the binary tree program (available under Lab 4 on the course web page).

**Note that the tree is not a binary search tree.**

This program has a makefile. Run the program by typing "make clean" followed by "make".

1. You will need to complete the following functions in Bintree.cpp:

```
// Counts the leaves in a tree rooted at rootNode
// PRE: rootNode is a valid Node address
// POST: returns the number of leaves in the tree rooted at rootNode
int countLeaves( Node* rootNode )

// Counts the nodes of the tree rooted at rootNode
//
// PRE: rootNode is a valid Node address
// POST: Returns the number of nodes in the tree rooted at rootNode
int size( Node* rootNode )

// Deletes a node containing item in the tree rooted at rootNode
//
// PRE: rootNode is a valid Node address
// POST: If item is in tree rooted at rootNode, the Node containing it
// is removed from the tree and true is returned;
// otherwise, false is returned.
bool delete_node( Node*& rootNode, TYPE item )
```

2. What does the q2c() method do?