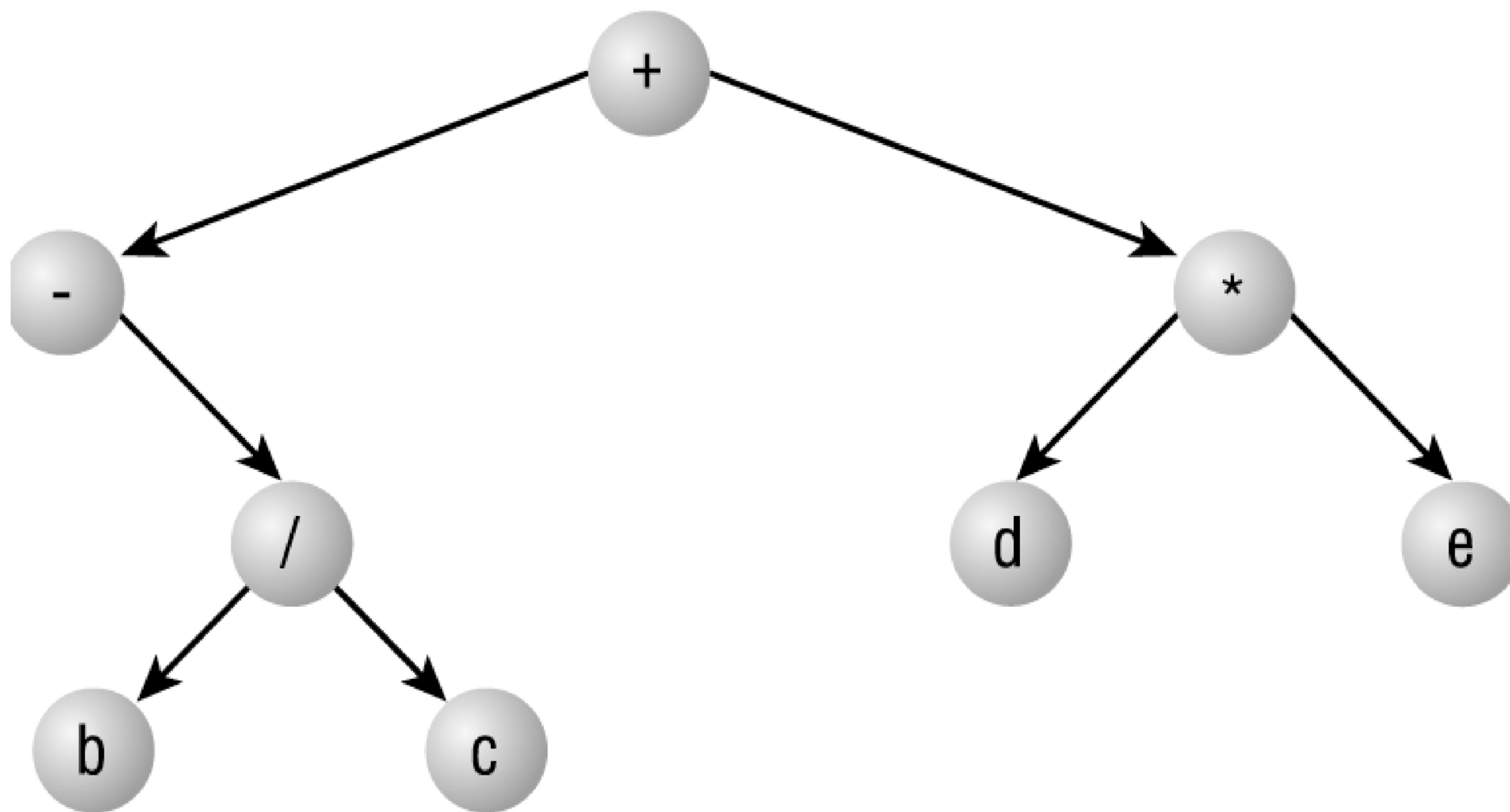


Announcements

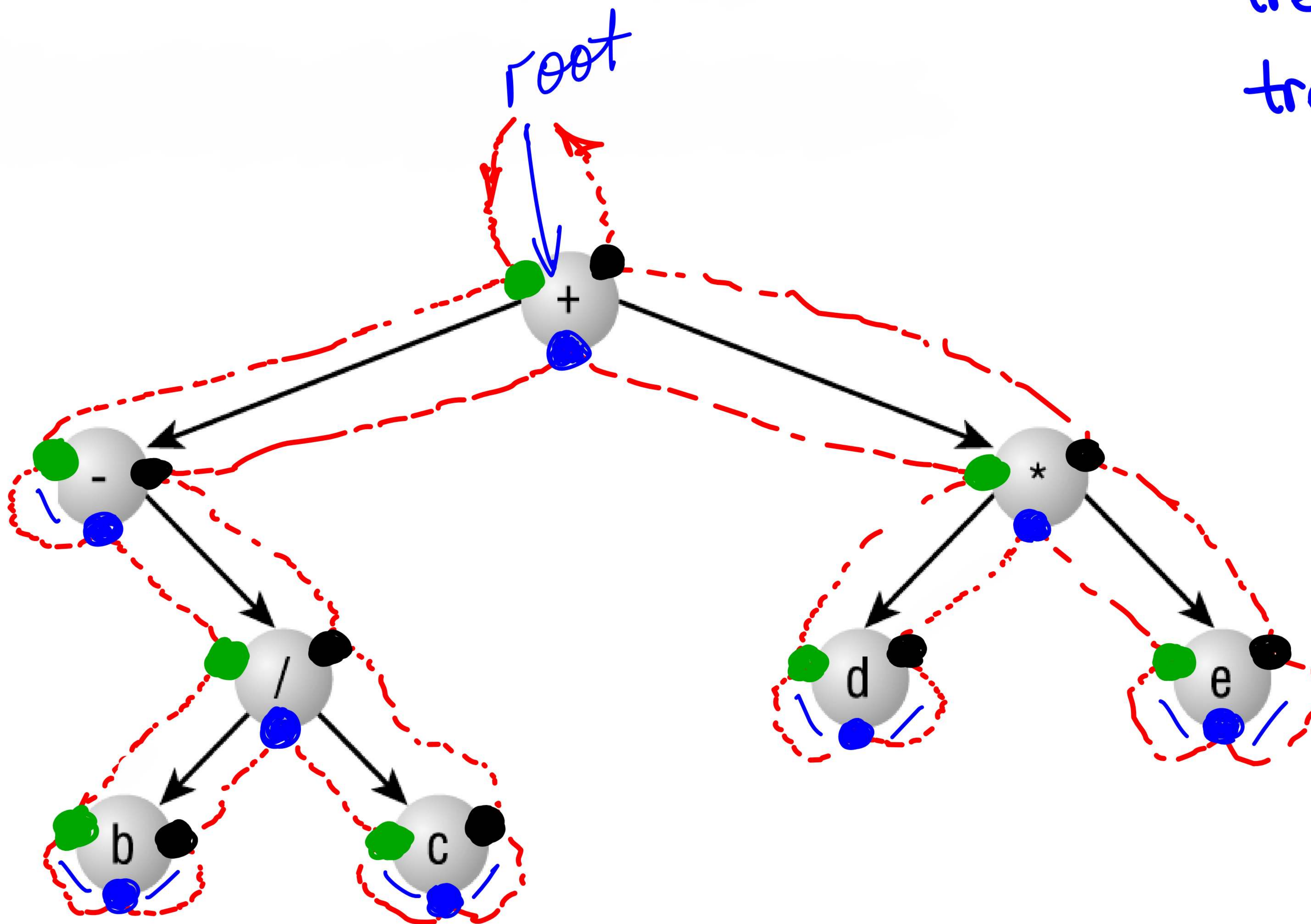
MP4 available, due **03/11**, 11:59p.

```
struct treeNode {  
    T data;  
    treeNode * left;  
    treeNode * right;  
};
```



Traversals

```
struct treeNode {  
    T data;  
    treeNode * left;  
    treeNode * right; };
```

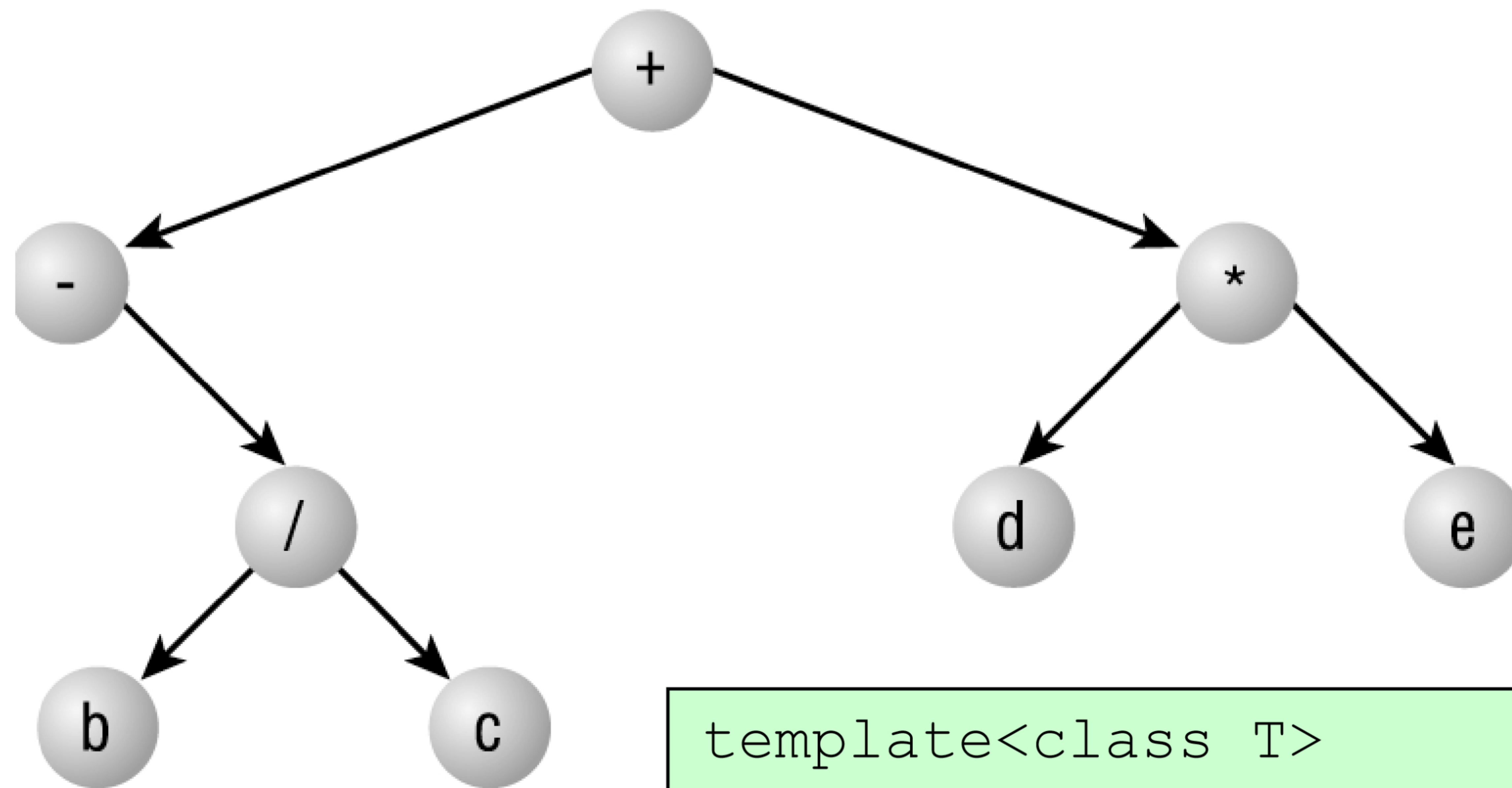


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Traversals:



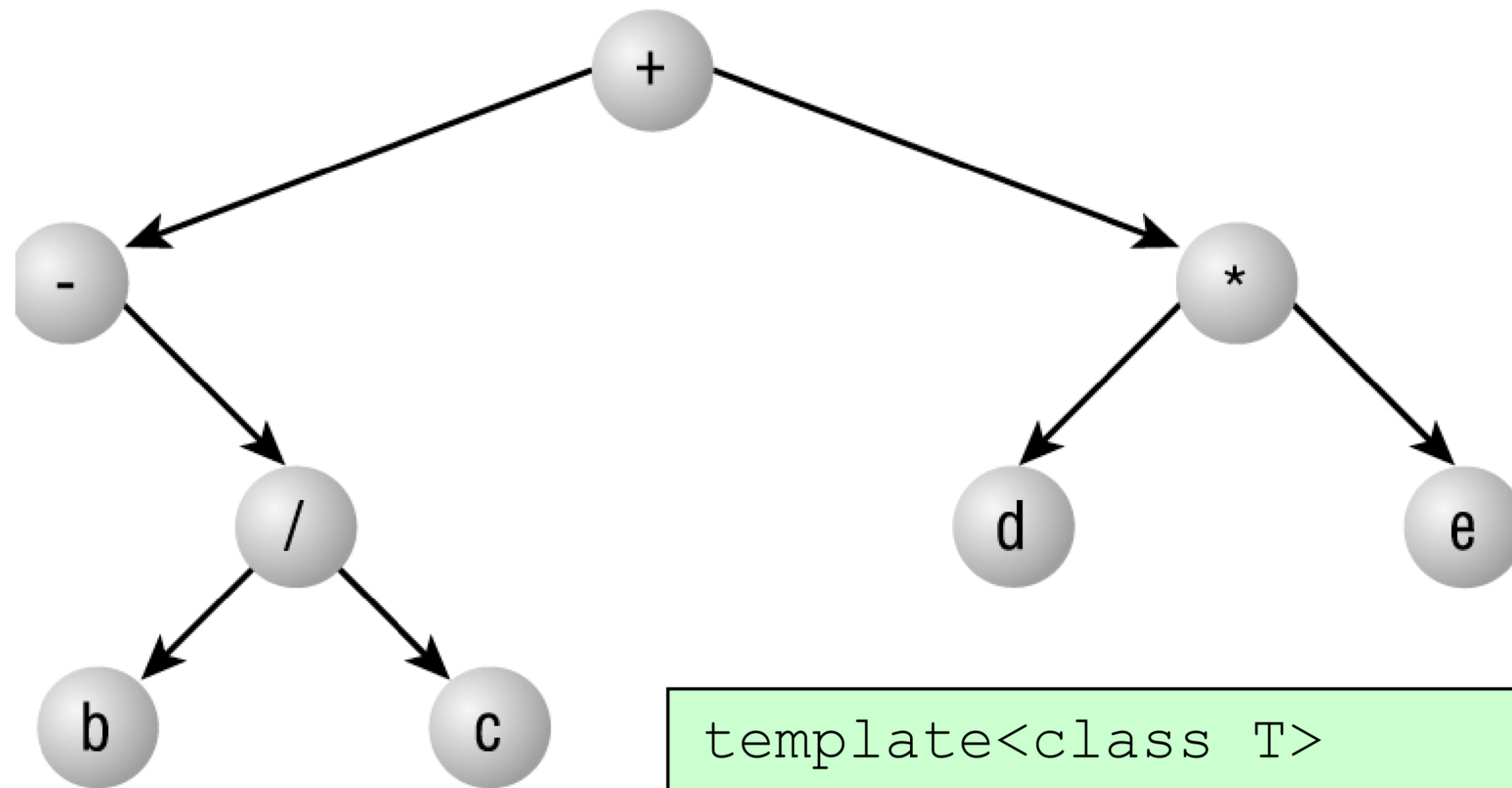
```
template<class T>
void binaryTree<T>::_____Order(treeNode * croot) {
    if (croot != null) {

        _____Order(croot->left);

        _____Order(croot->right);

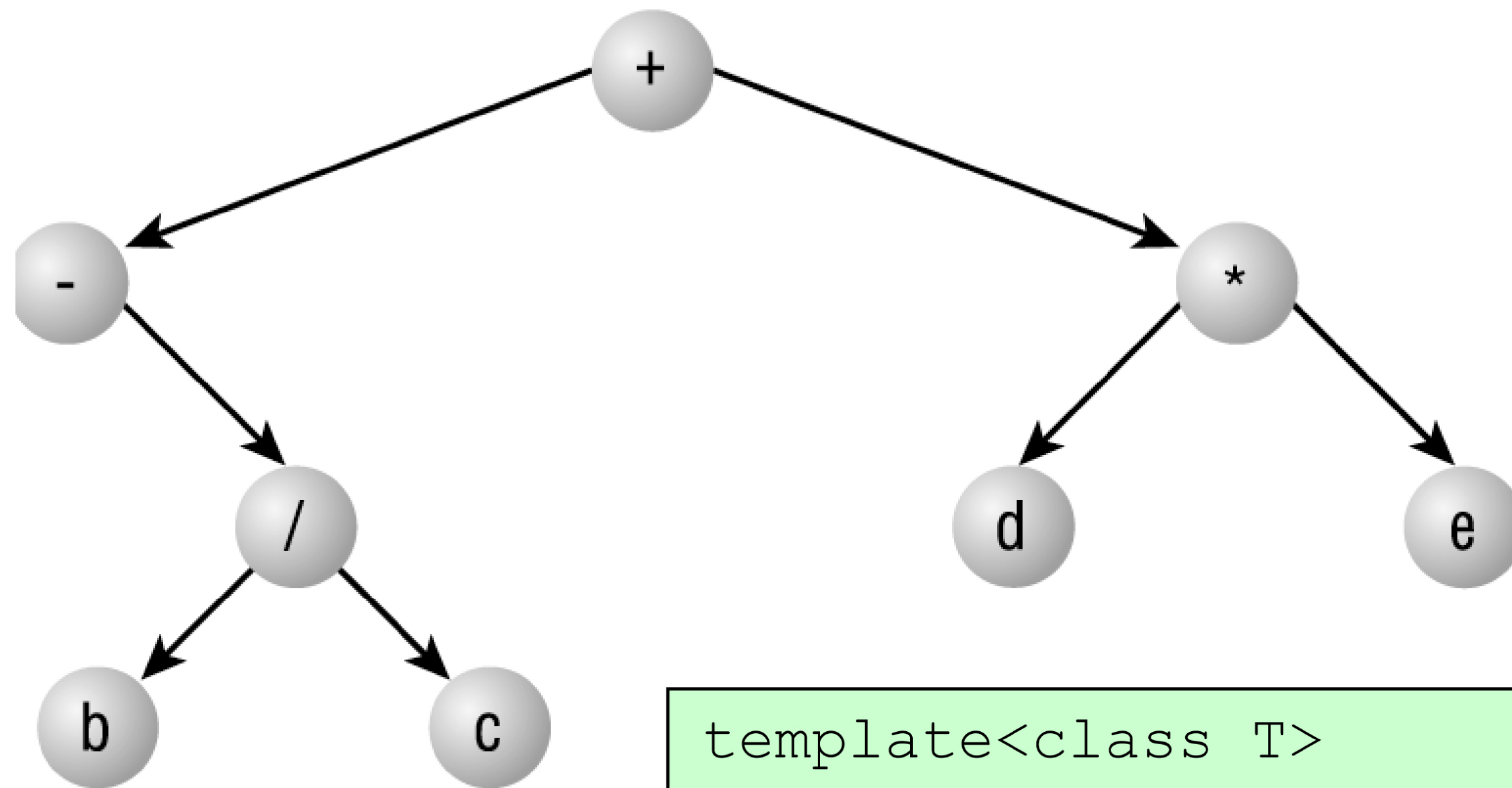
    }
}
```

Traversals:



```
template<class T>
void binaryTree<T>::_____Order(treeNode * croot) {
    if (croot != null) {
        _____Order(croot->left);
        _____Order(croot->right);
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}
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Traversals:



```
template<class T>
void binaryTree<T>::_____Order(treeNode * croot) {
    if (croot != null) {
        _____Order(croot->left);
        _____Order(croot->right);
    }
}
```

Traversals: A few mechanical questions...

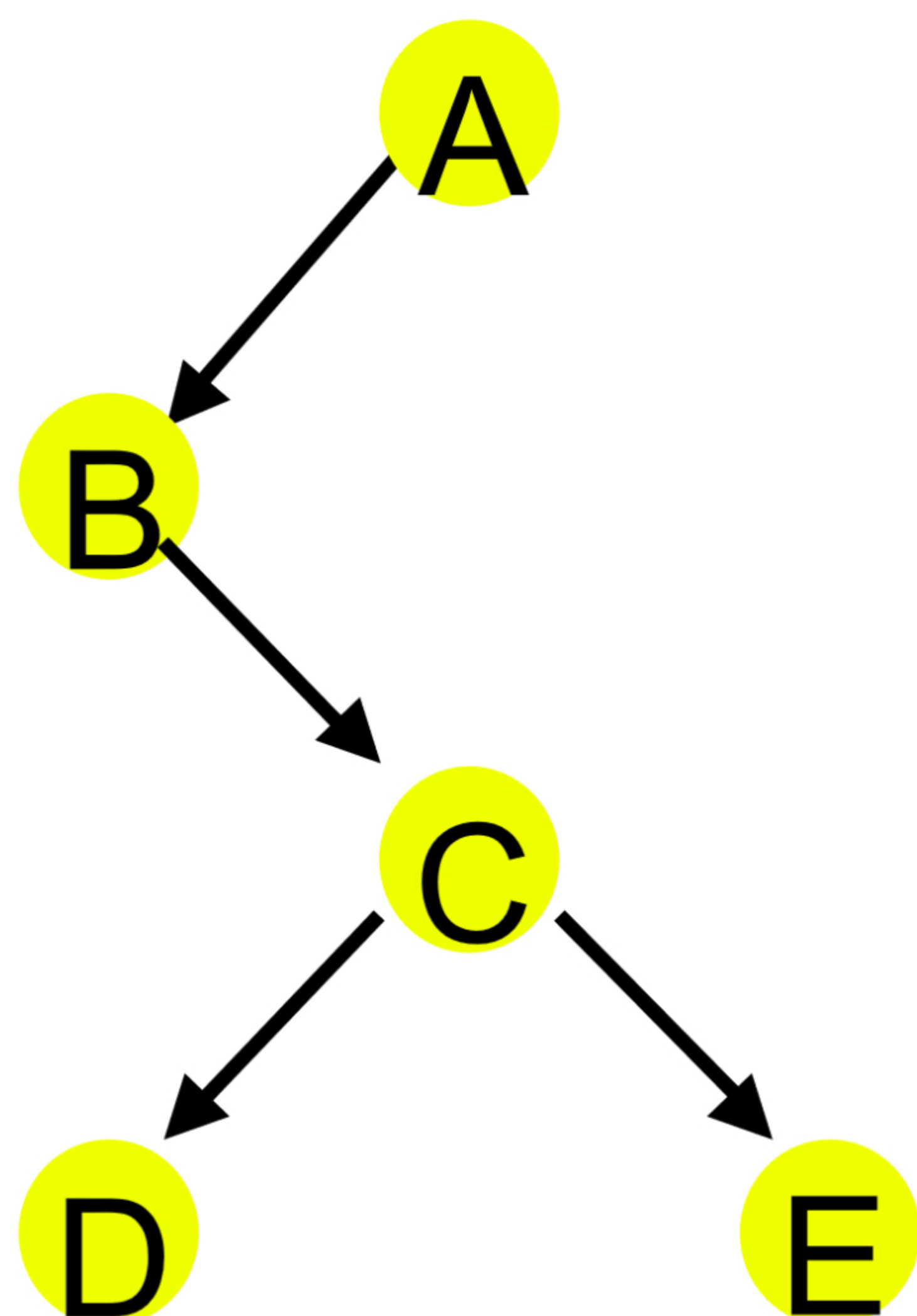
What is the 2nd letter printed in an inOrder traversal of this tree?

In what position is C printed in a postOrder traversal of this tree?

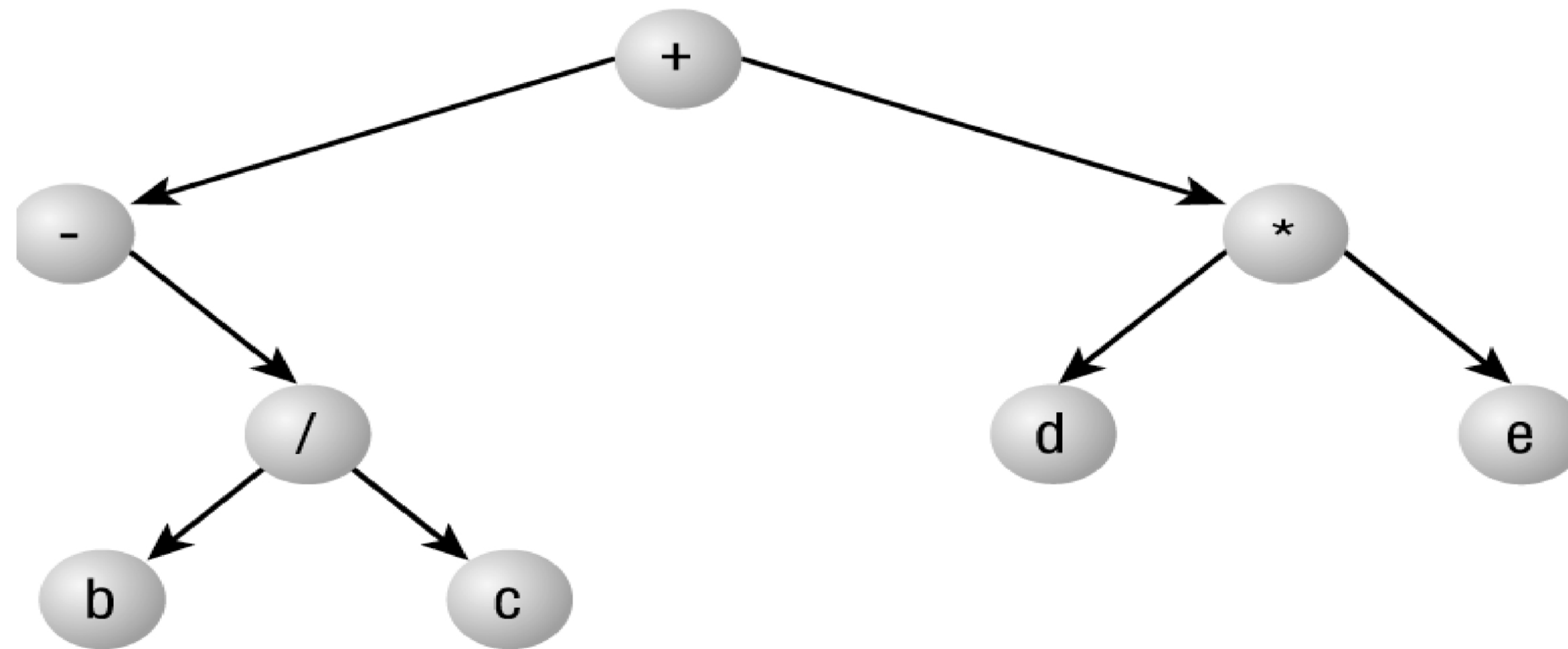
Which traversal prints the data of the tree in ABC order?

Draw and label a tree containing 8 integers so that an inOrder traversal of the tree prints the numbers in order.

Draw and label a tree containing 8 integers so that a preOrder traversal of the tree prints the numbers in order.



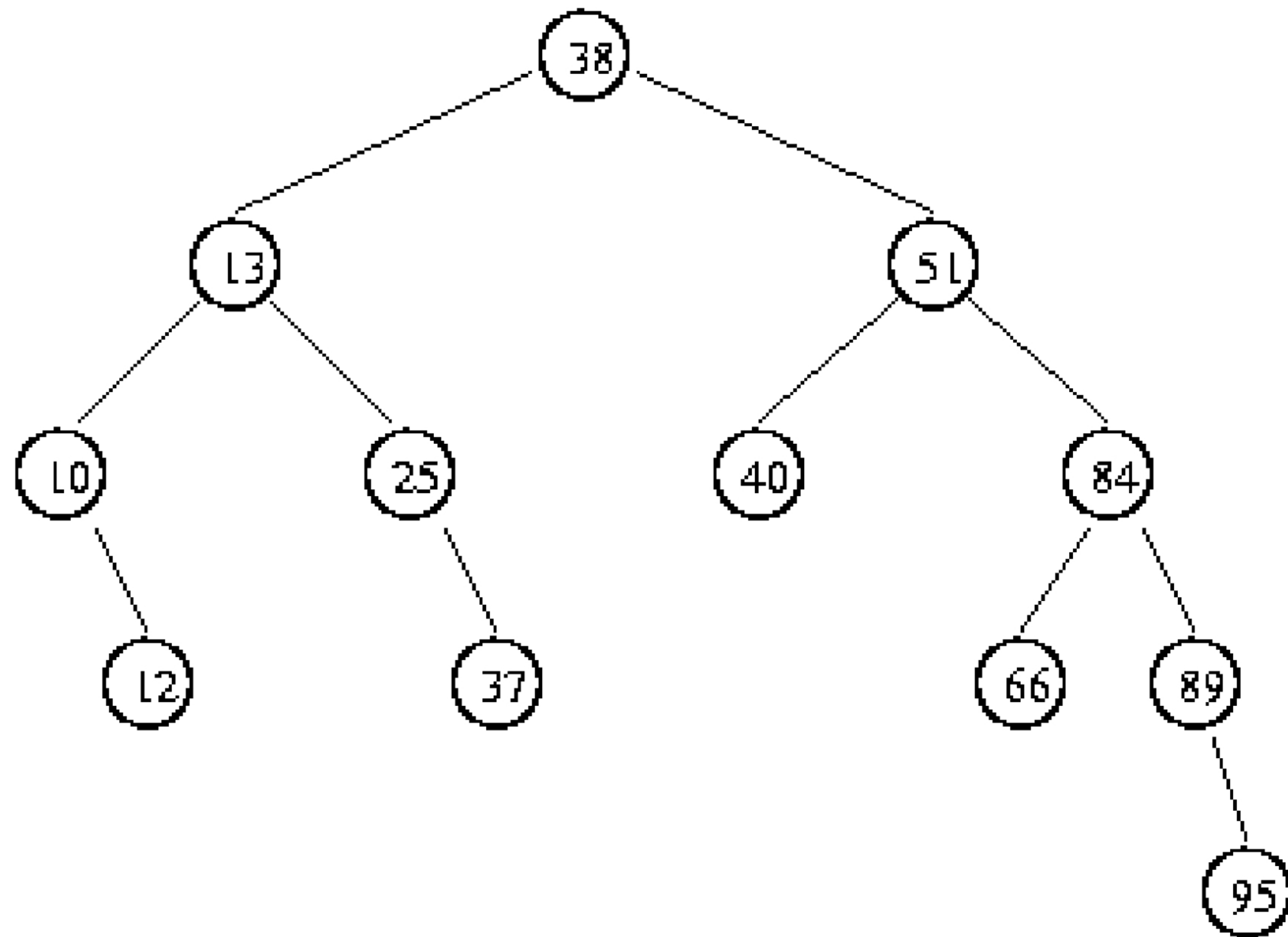
Traversals: A few discussion points...



```
template<class T>
void binaryTree<T>::preOrder(treeNode * croot) {
    if (croot != null) {
        yell(croot->data);
        preOrder(croot->left);
        preOrder(croot->right);
    }
}
```

Is preOrder public or private?

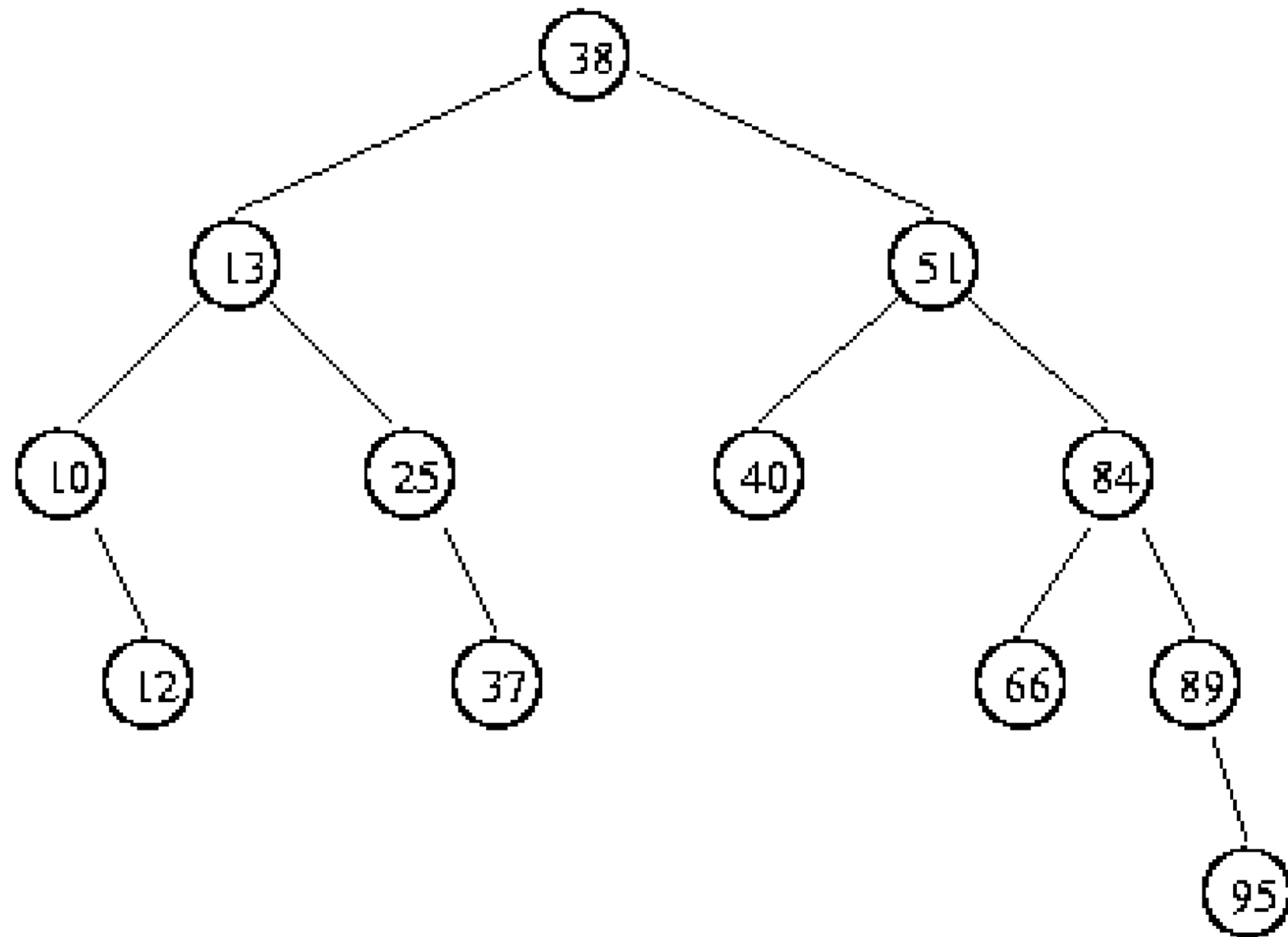
Traversals: a broader view...



```
template<class T>
treeNode * binaryTree<T>::copy(treeNode * croot) {

}
}
```

Traversals: another broader view...



```
template<class T>
void binaryTree<T>::clear(treeNode * croot){

    if (root != null) {
        clear(root->left)
        clear(root->right)
        delete root
        root = null
    }
}
```