

CS180 - Binary Trees

Note Title

10/22/2010

Announcements

- Next program is up -
due next Thursday
- ↳ use list STL

A Note on next Program:

Const iterators : Why?

If we have const list, the
compiler will object to normal
iterators.

class const_iterator:

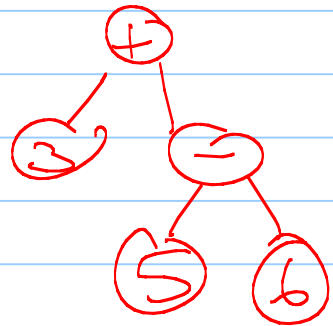
all same functions, but no live reference

Binary Tree class

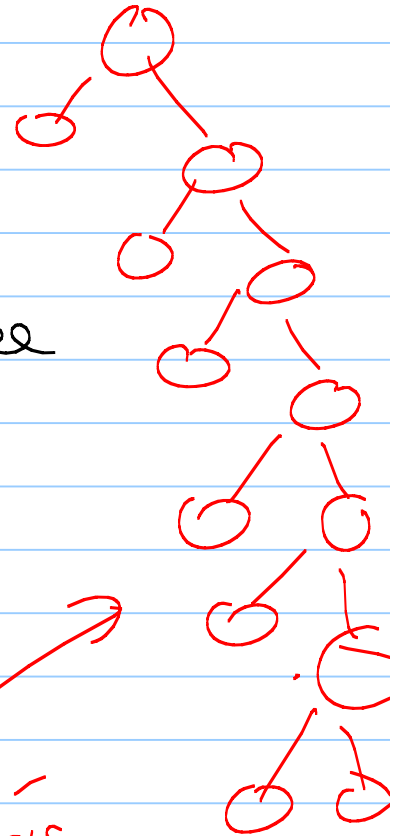
We want to code a generic binary tree class. (linked)

Get basic functionality down & when we code later tree structures:

Inheritance!

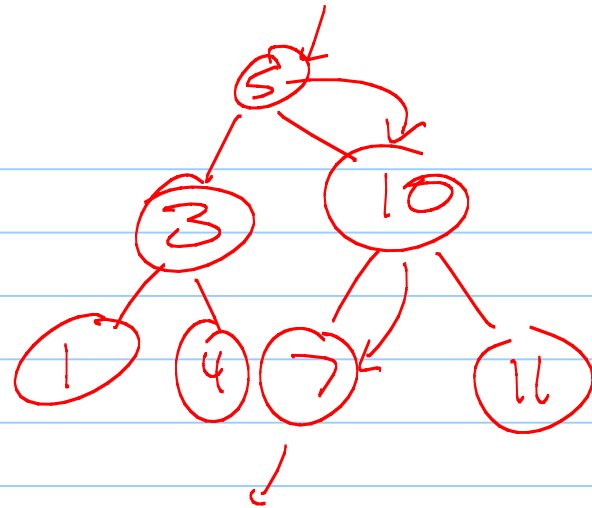


14 nodes
 $2^4 = 16$



Brain storm:

→ Private data?
- size
- root



Related classes/structs?

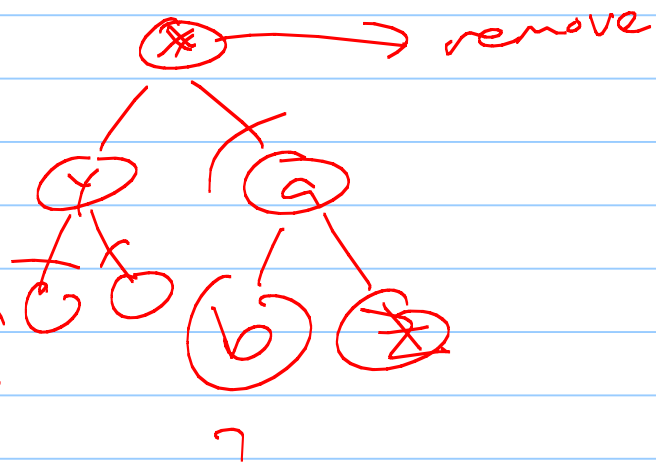
Node Struct → data
parent pointer
child pointers
not important → aux

Iterator implementation
left, right, parent, ~~isLeaf~~, isRoot, etc.

Functions?

remove:

remove and promote left
" " " right



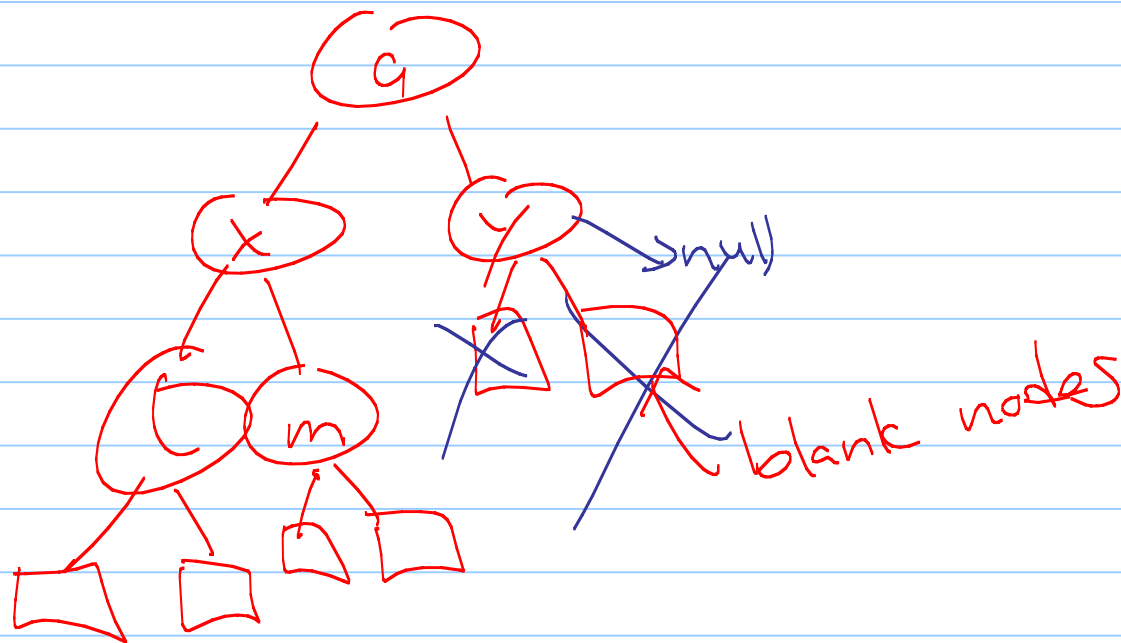
protected functions:

- copy subtree

- remove subtree

Note about text book:

"leaf" is actually an internal node:



char a = 'c';
char &b(a);

