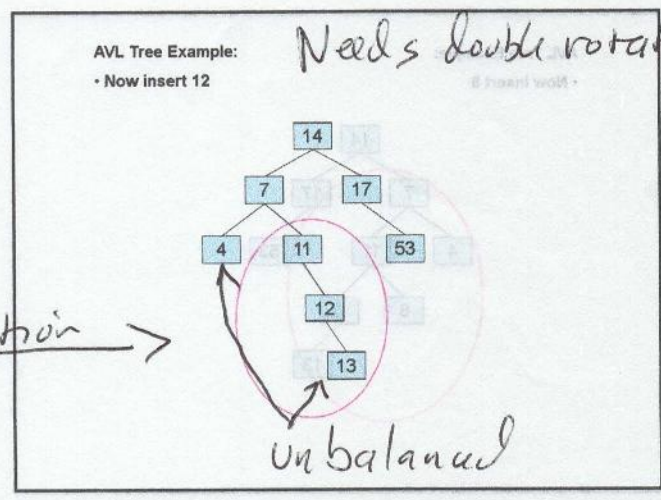
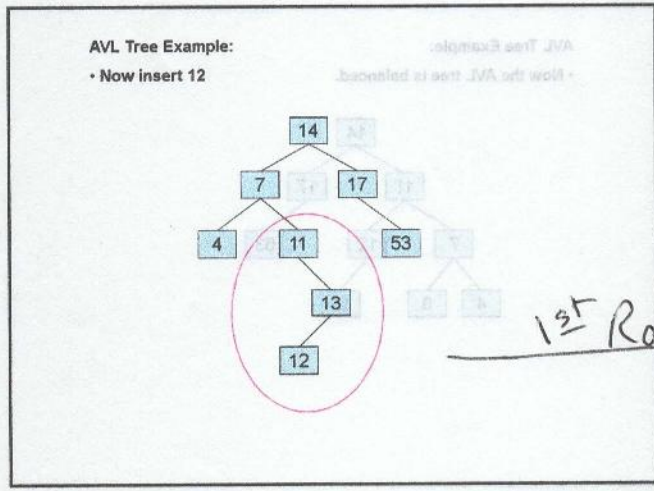


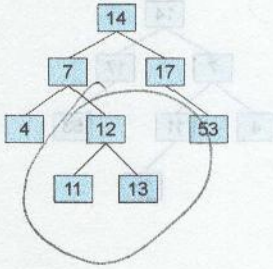
5 - to what unbalanced and →
 (so factor 2, but not on path to root. Don't need to check for unbalanced)
 13 doesn't unbalance
 ↓



OVER

AVL Tree Example:

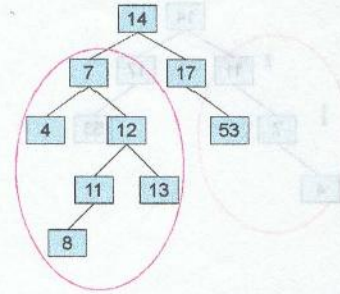
• Now the AVL tree is balanced.



2nd rotation

AVL Tree Example:

• Now insert 8

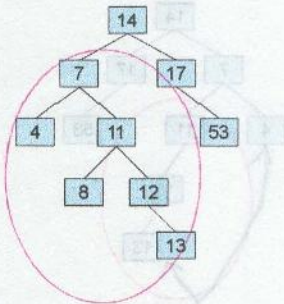


Working back up to root

← 7 has balance factor of -2
 (so does 53, but not on path to root. Don't need to check outside this path ~~any way~~ for unbalanced)

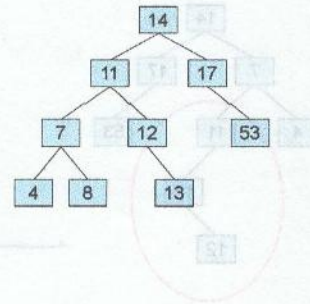
AVL Tree Example:

• Now insert 8



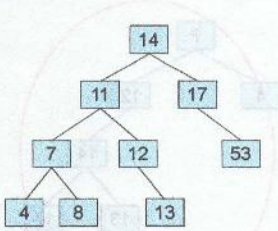
AVL Tree Example:

• Now the AVL tree is balanced.



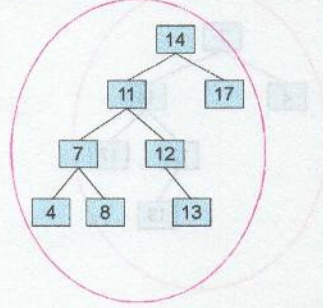
AVL Tree Example:

• Now remove 53



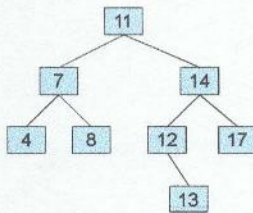
AVL Tree Example:

• Now remove 53, unbalanced



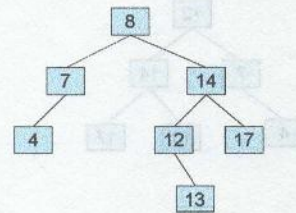
AVL Tree Example:

• Balanced! Remove 11



AVL Tree Example:

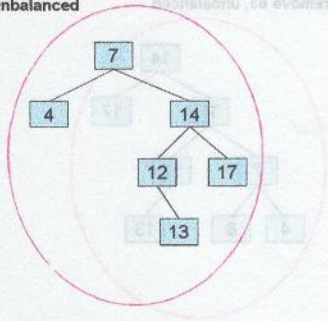
• Remove 11, replace it with the largest in its left branch



OVER

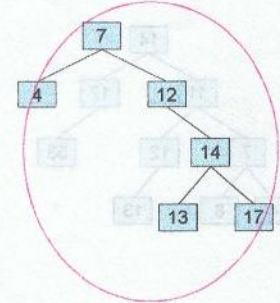
AVL Tree Example:

- Remove 8, unbalanced



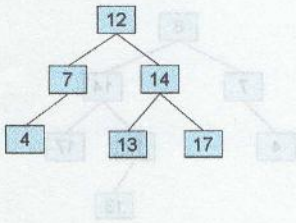
AVL Tree Example:

- Remove 8, unbalanced



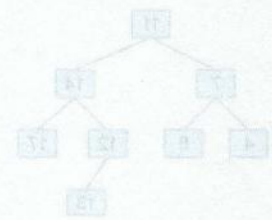
AVL Tree Example:

- Balanced!!



AVL Tree Example:

- Balanced!!



ONES