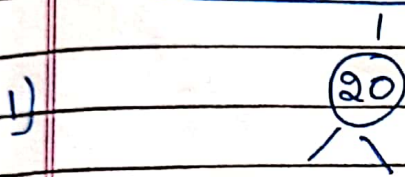


Insertion of Red-Black Tree

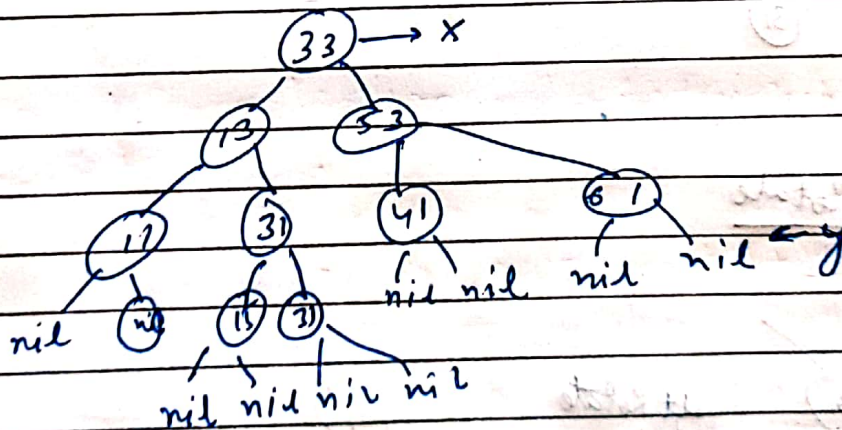
It is a self balancing search tree in which each node contains an extra bit for denoting the color, either red or black.

new node is always inserted as Red node.

insert a new node

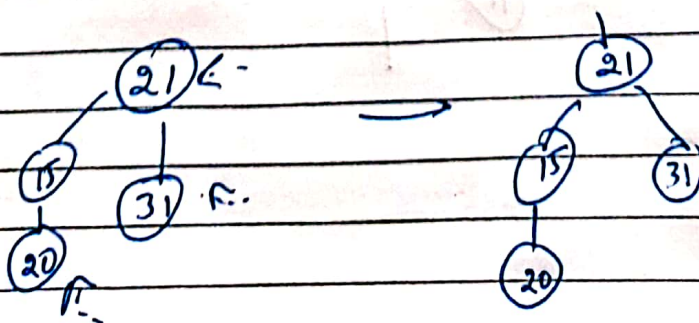


2) let y be the leaf (i.e. NIL) and x be the root of the tree. The new node is inserted in the following tree -

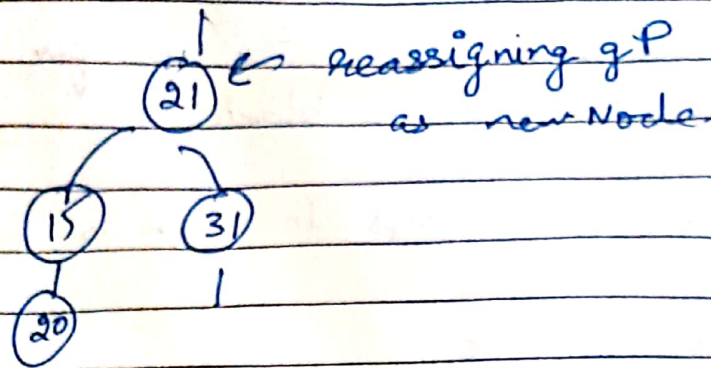


algo to maintain Red-Black property.

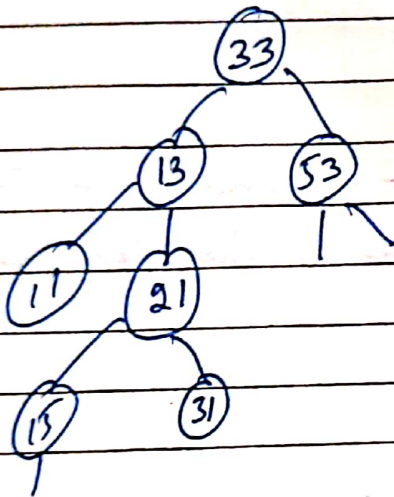
1a)



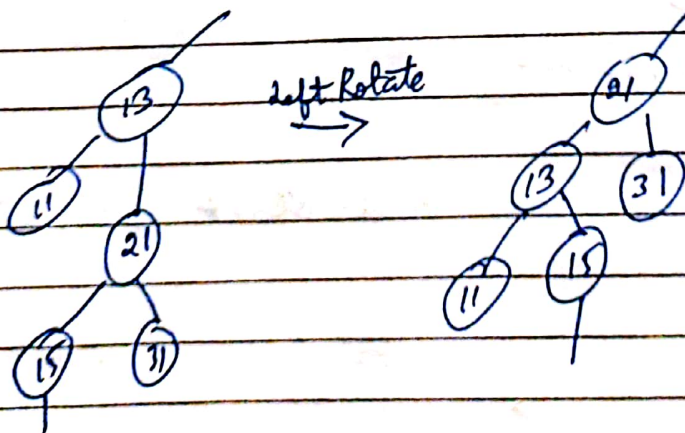
(b) Assign gp to new node



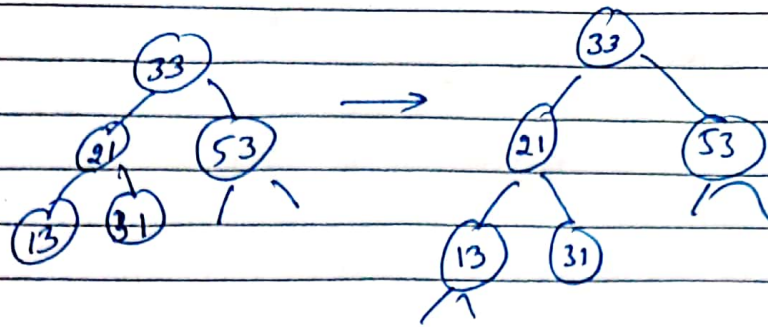
(c)



Left Rotate



Case III



Right Rotate

