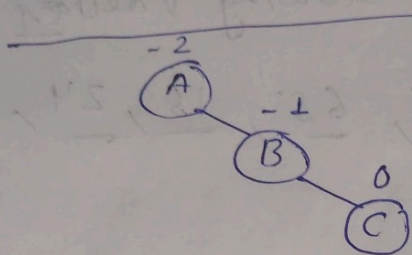


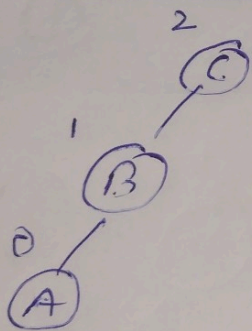
# AVL Tree (Height Balance tree)

$Bf = \text{Height of left subtree} - \text{Height of right subtree}$

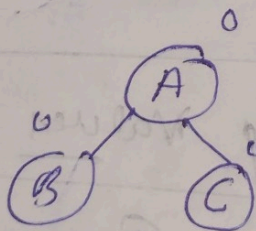
must be  $\Rightarrow 0, 1, -1$



$\rightarrow$  Not a Balanced Tree



Not a Balanced Tree



Balanced Tree



## AVL Rotation

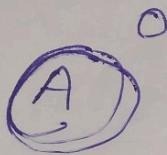
### Left Rotation

AVL

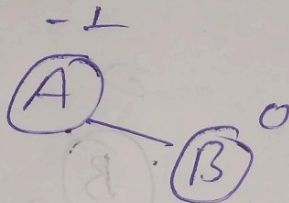
- 1) make a tree with following values.

A, B, C

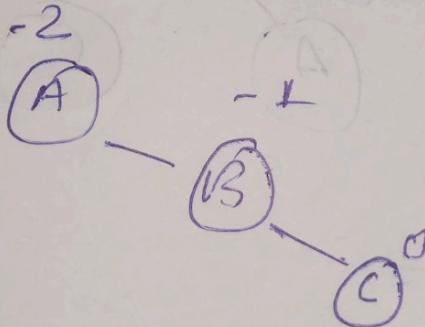
①



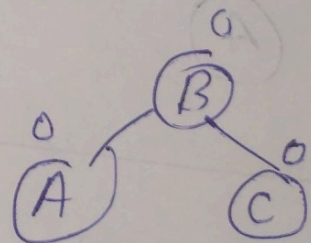
②



③



Left Rotation

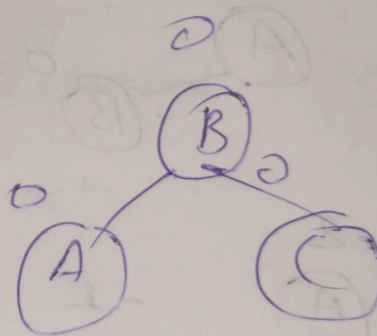
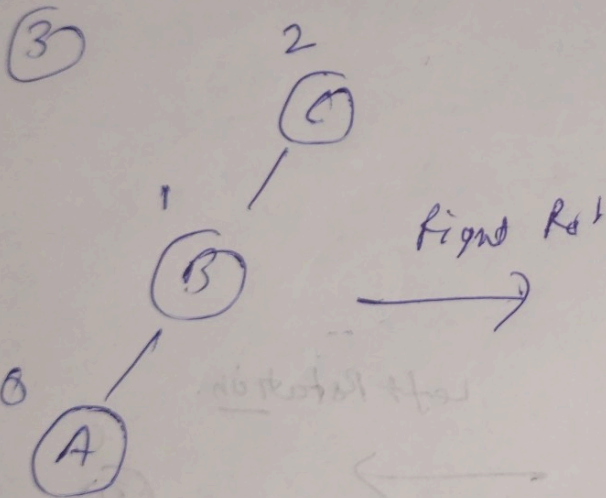
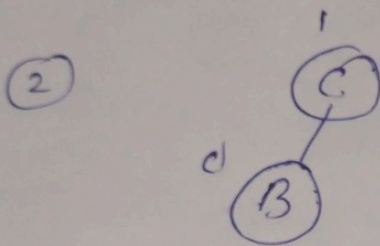




## Right Rotation

2/ make a AVL Tree with following values.

C, B, A



---

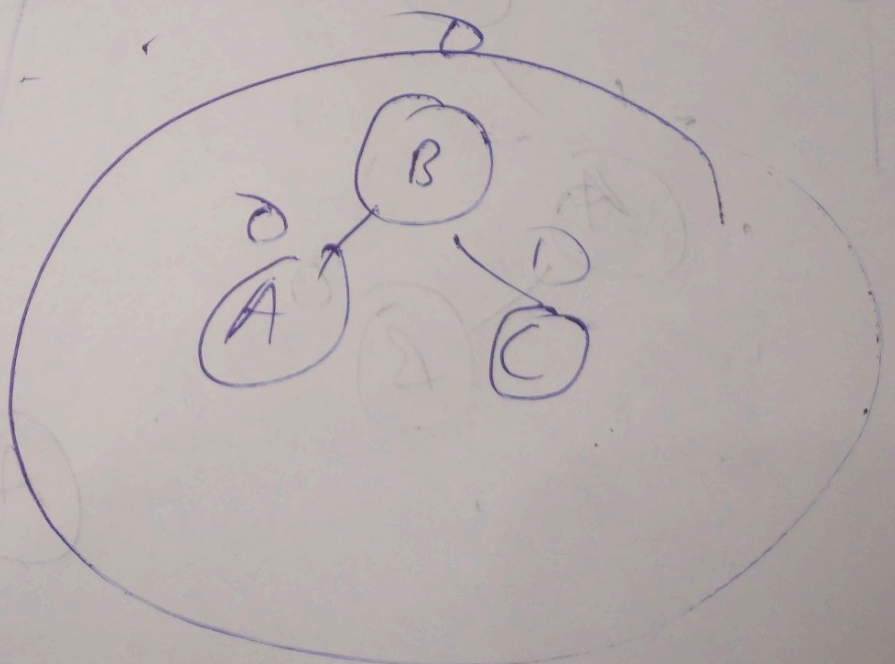
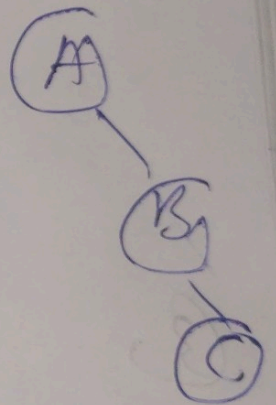
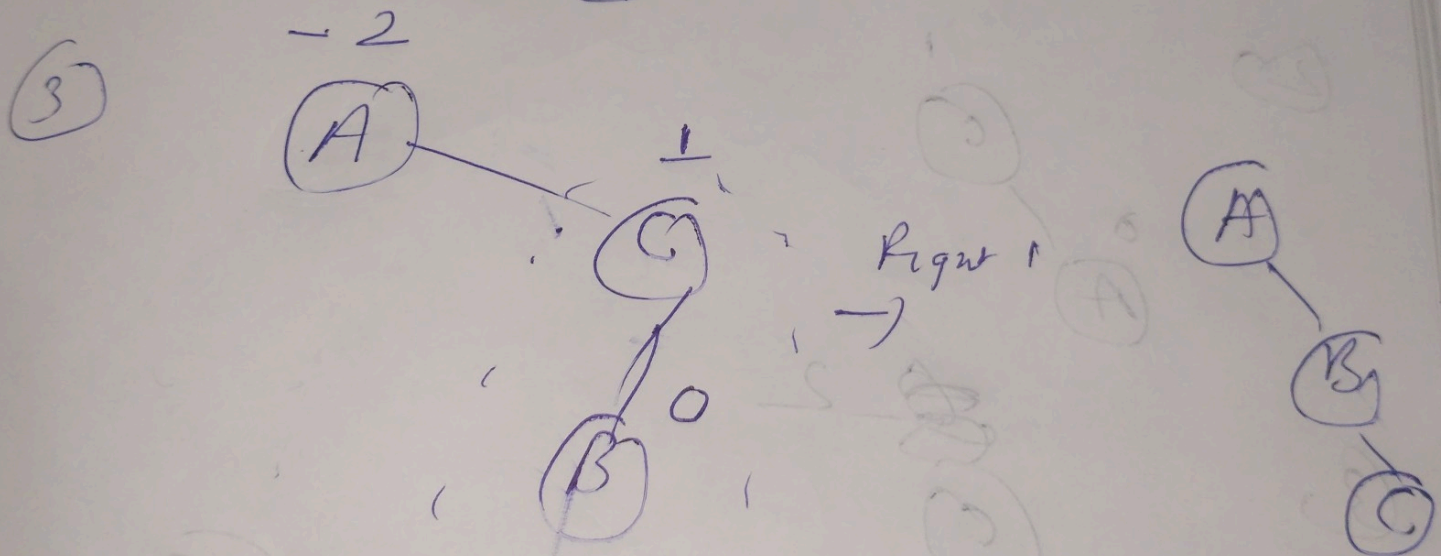
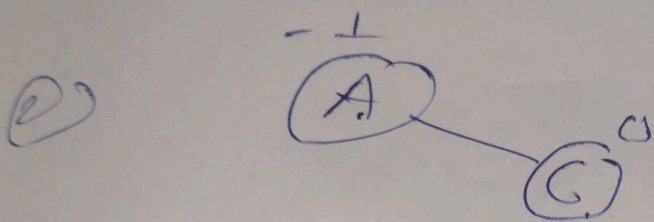
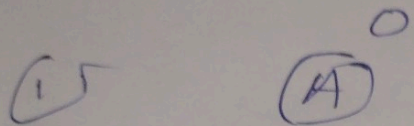
## Right Left Rotation

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make a AVL tree with nodes  
A, C, B

R L (Right  
Left rotation)

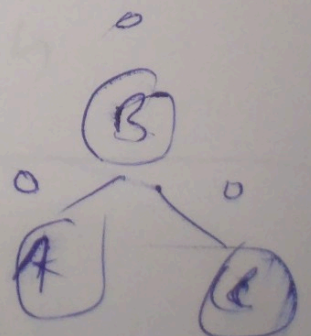
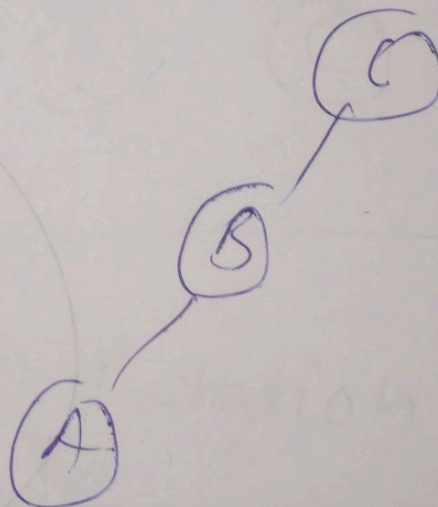
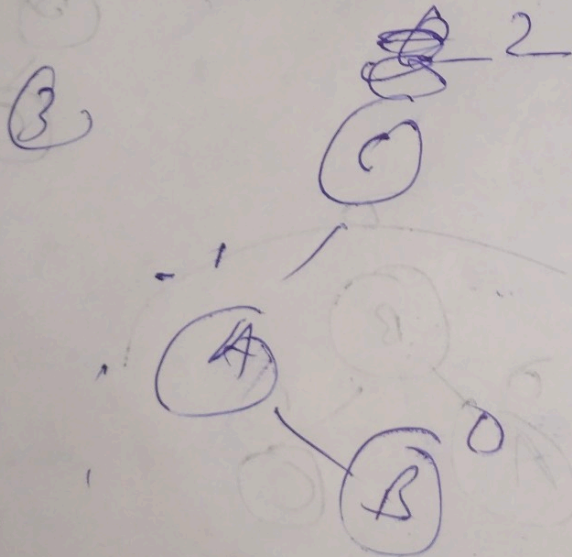
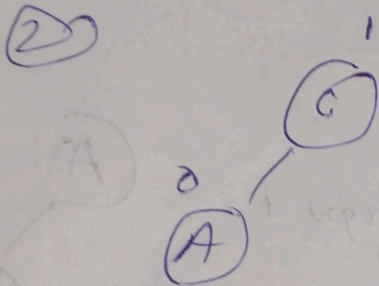
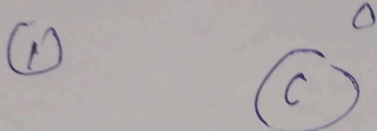




# LR (Rotation)

make a AVL Tree with  
following val

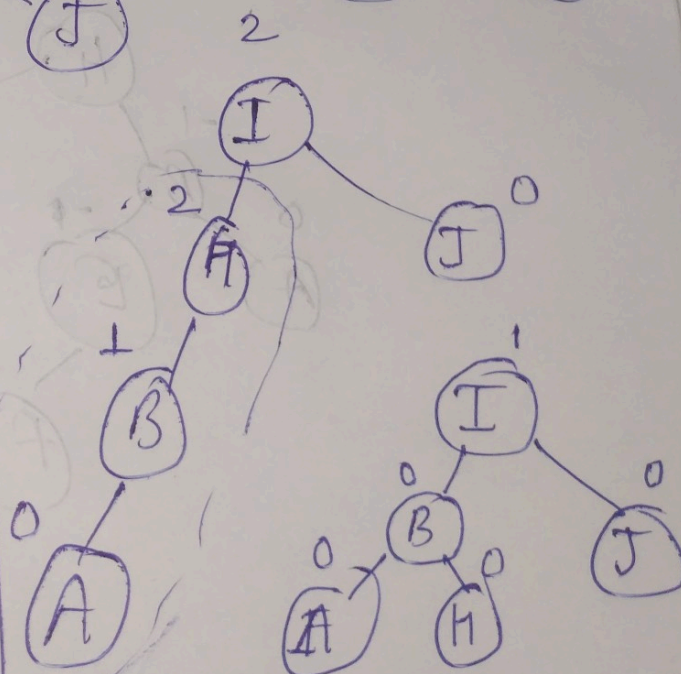
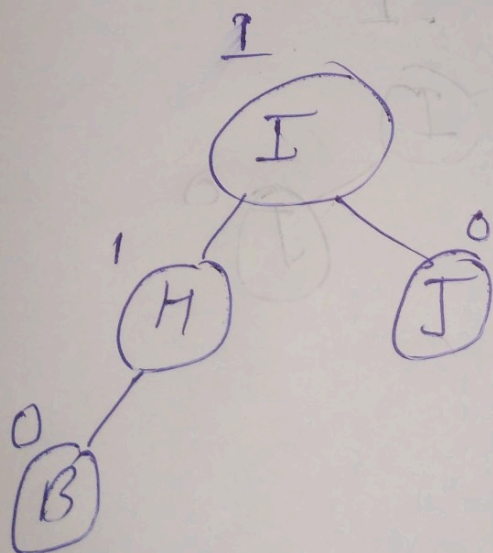
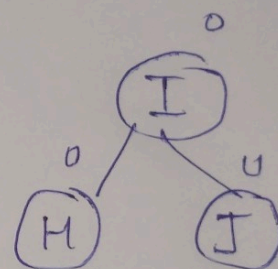
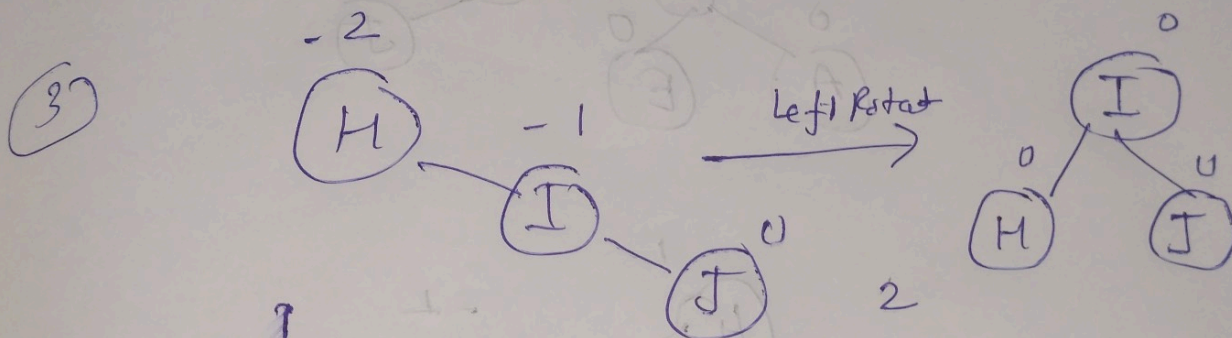
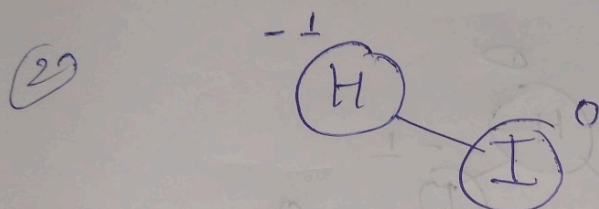
C, A, B



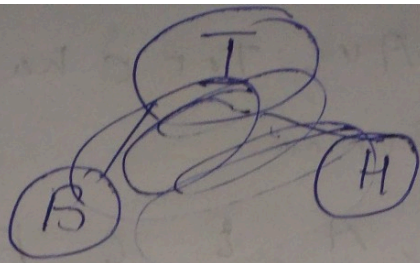


Construct a AVL Tree having following elements

H, I, J, B, A, E, C, F







6)  $\bar{E}$

