

# Making a tree using post-order & In-order.

Given :- Post-order  $\rightarrow$  used for taking roots  
 $DCBEFA$

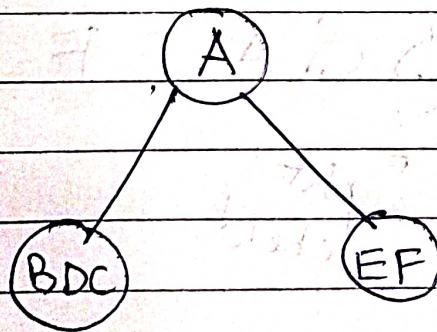
In-order  $\rightarrow$  used for analysing the child nodes  
 $BDCAEF$

S-1

Soln The right most node in the post-order is our root or the origination of the tree.  
 So,

(A)  $\rightarrow$  root of a tree

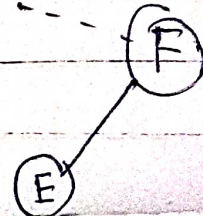
Step-2 abh A ke child nodes ke liye in-order dekhenge  $BDCAEF$   
 $\underbrace{BDC}_{\text{Left child}} \underbrace{AEF}_{\text{Right child}}$



Step 1 Abh ham 1 sub-tree ke roots ke liye firse Post-order dekhenge  $R \rightarrow L$   
 $DCBE(F)A$

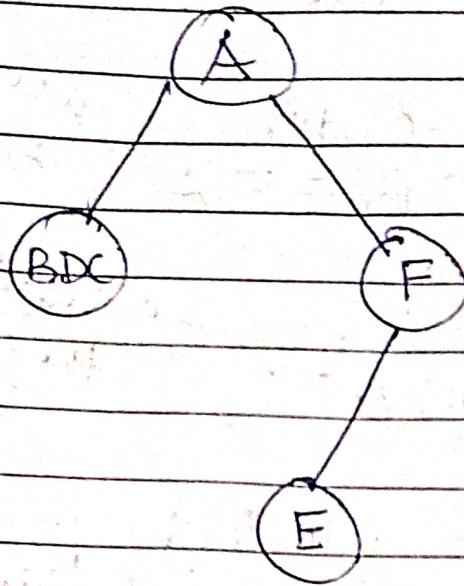
$\nwarrow$   
 next root

Step-2 aur F ke child ke liye ham in-order dekhenge  $BDCAE(F)$   
 $\nwarrow$   
 left child





This completes our right portion of the tree



Step 1 Abb firse ham  $R \rightarrow L$  bade in post-order

D C B E F A

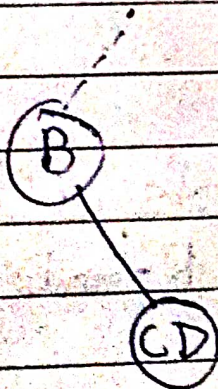
root

forms the right portion

St-2 Fir hamne in-order dekhq B ke child ke liye.

B D C A E F

right child



S-1 firse aagye bade in post-order from right  $\rightarrow$  left

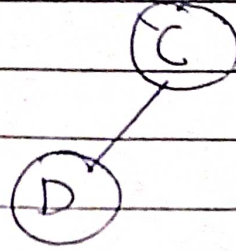
D C B E F A

next root



S-2

Ans C ke child dekha in the in-order  
B D C A E F  
    ↑  
    left



So, our complete tree will be

