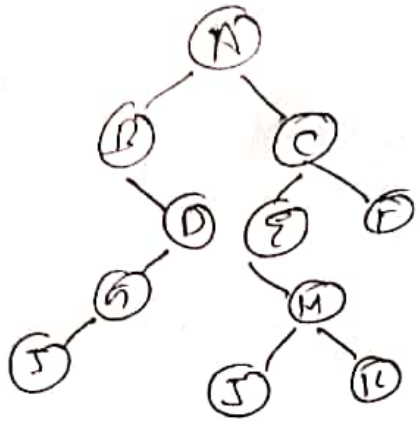
Binary Tree Assignment

By | Shaswat Mishra
19301002

1)



Height = 4
Depth = 4
Size = 11

Postorder :- I G D B J K H E F C A
Inorder :- I G D B A J H K E C F
Preorder :- A B D G I C E H J K F

2) Preorder Traversal : C A B D I H K M E F G J L N O

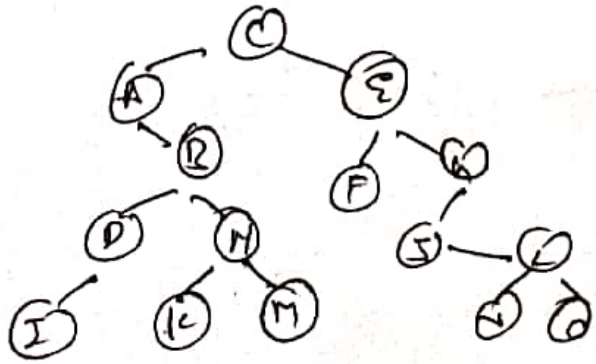
Ciswat

Inorder : A I D B K H M C F E J N L O G

no of node is 15 ie
$16-1 = 2^4 - 1 = 2^{3+1} - 1$

So the height of tree is 3

Postorder :- I D K M H B A N B J G H F E C

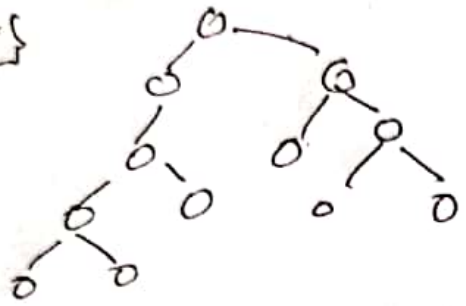


2) Skewtrees: No of children of every node is 1

e.g. -

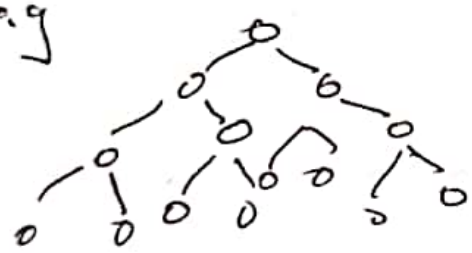
Strictly Binary tree: No of children of every node is 0/2

e.g



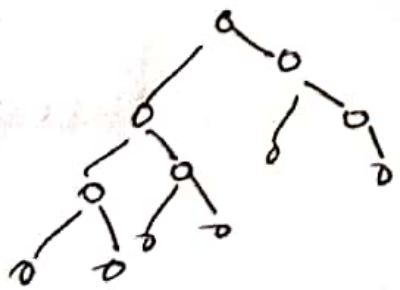
Full Binary tree: No of children of every node is 2

e.g



Complete Binary tree: No of child node of left subtree must be 1/2

e.g



4) Height = 4

max no of nodes in tree = $15 = 2^{3+1} - 1$

min no of nodes in tree = 4