Abhishek Singh Kushwaha
19BEC001, Section B
CS102 Assignment ~~2~~
to be submitted on April 4, 2020

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Section (B). CS102 Assignment to be submitted on April 04, 200

Assignment 01 ⇒ Tree Questions Quiz

Question ① ⇒

Inorder ⇒

AKBJCLIDEHFG

Preorder ⇒

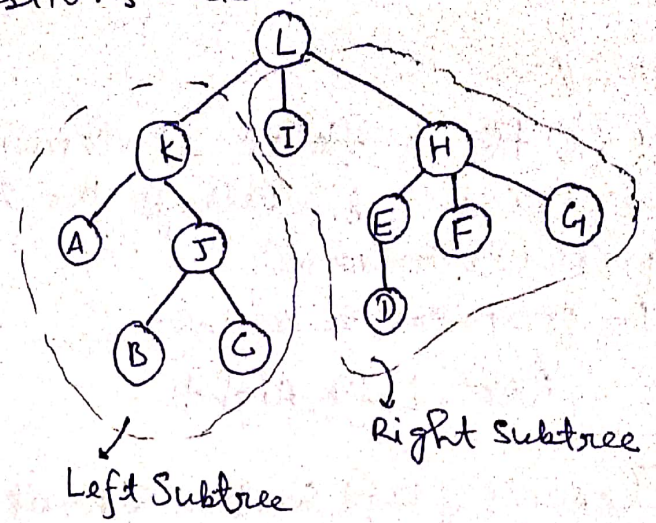
LKAJBCIHEDFG

Post Order ⇒

ABCJKIEDFGHL

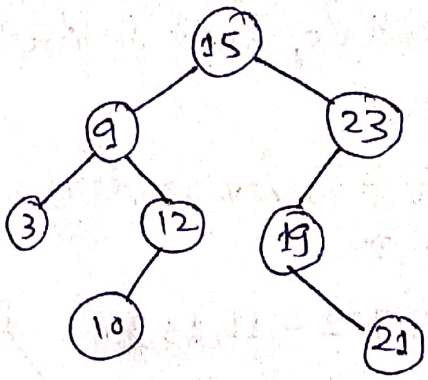
Breadth-First order ⇒

LKIHAJEFGBCD



Question ② ⇒

I have added the python file having code ~~for~~ to add 6, add 15, delete 23, and delete 9.



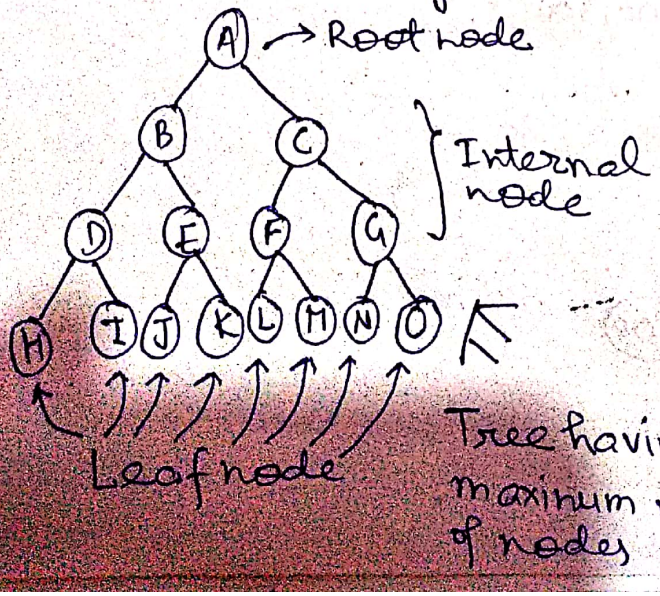
Yes, the given tree is AVL.

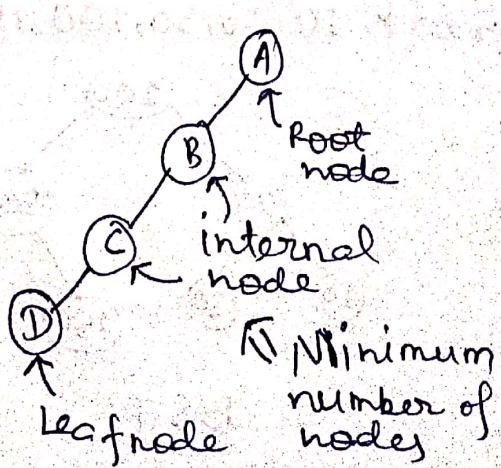
Yes, the given tree is binary search tree.

Question ③ ⇒ $h = 3$

Max. number of nodes $= 2^{h+1} - 1 = 2^4 - 1 = 15$

Min. number of nodes $= h + 1 = 3 + 1 = 4$





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Assignment 01 ⇒ Tree Question Quiz

Question (4) ⇒

It is a false statement that the first item printed out is always the smallest one in preorder traversal.

In preorder traversal ⇒

Root, Left, Right

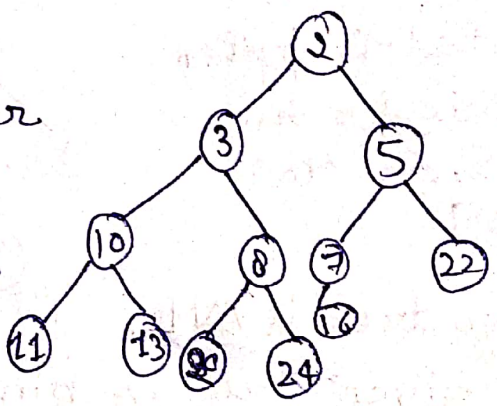
Elements of Left Subtree < Root < Elements of right Subtree in a BST

So, always the first item is greater than elements of left subtree.

Question (5) ⇒

Breadth First or level order Traversal ⇒

2, 3, 5, 10, 8, 7, 22, 11, 13, 20, 24, 16

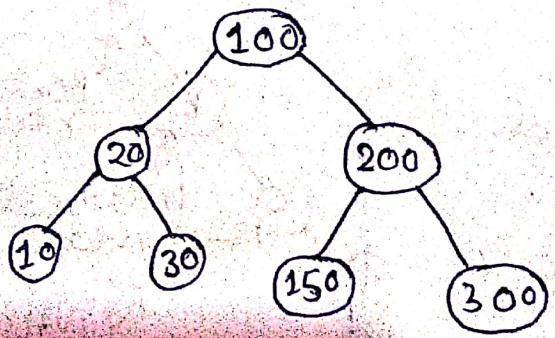


2	3	5	10	8	7	22	11	13	20	24	16	NONE	NONE	NONE

Question (6) ⇒

Postorder ⇒ 10, 30, 20, 150, 300, 200, 100

Inorder ⇒ 10, 20, 30, 100, 150, 200, 300



BST

Assignment 01 ⇒ Tree Question Quiz

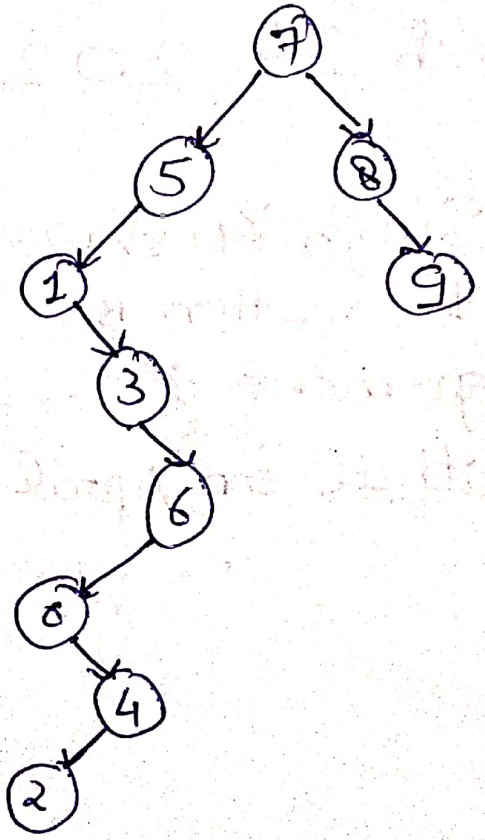
Question (7) ⇒ given number ⇒ 7, 5, 1, 8, 3, 6, 0, 9, 4, 2

~~1306~~

~~16~~ Inorder ⇒

1302465786

It doesnot meet with any option

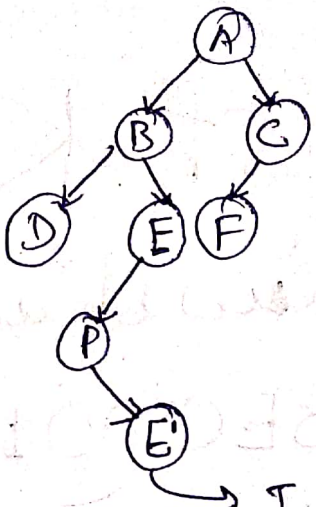


Assignment 01 → Find out Traversal Node of Figure (2)

Zoom Class - Trees DS - 30032020.pdf

Slide No. 154

figure (2)



I am refering this node as E'

Inorder →

D B P E' E A F C

Preorder →

A B D E P E' C F

Postorder →

D E' P E B A F C A

Breadth First or level order Traversal →

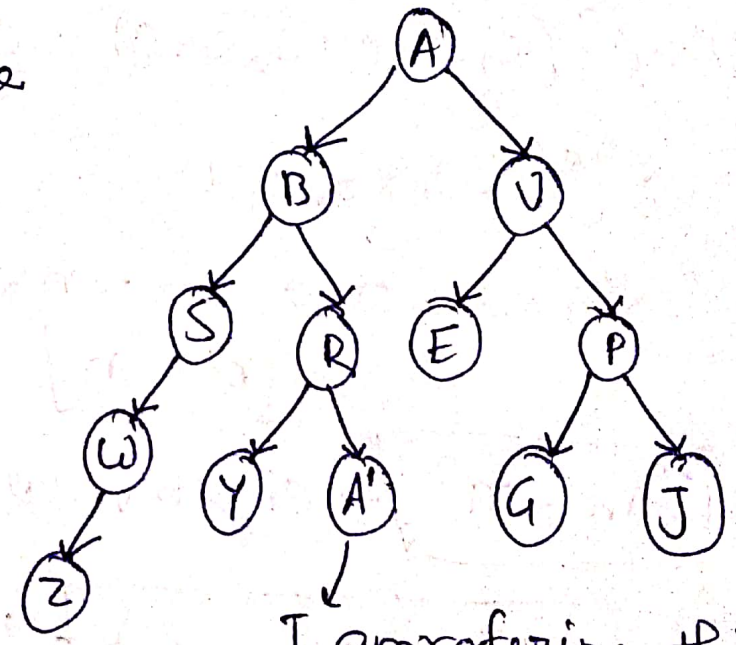
A B C D E F P E'

Zoom Class - Tree1 - 26032020.pdf ⇒ Slide no. 39

~~Inorder~~ Assignment 1 ⇒

Find out Traversal Node of Figure (2).

figure (2)



I am refering this node as A'.

Inorder ⇒ ~~AKBJCLIDEHFG~~

Preorder ⇒ ~~LKAJBCIHEDFG~~

Inorder ⇒ ZWSBYRA'AEUGPJ

Preorder ⇒ ABSWZRYA'UEPGJ

Postorder ⇒ ZWSYA'RBEGJPUA

Breadth First or level Order Traversal ⇒

ABUSREPWYA'GJZ