Ex:-

32 / 2, 16 / 2, 8 / 2, 4 / 2, 2 / 2, 1

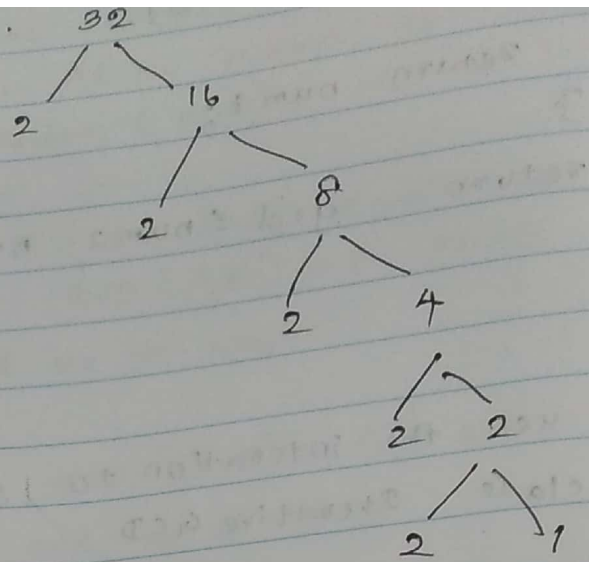Tute ⑪ / ⑫ ✓   2023/07/19

① · What are 3 types of Depth First Traversal (DFT)?

    Preorder

    Inorder

    Postorder -

② Briefly explain the identified traversal methods.

Preorder — In this method we use VLR method,
                Vist — left — Right.

Inorder   — LVR.   Left — vist — Right

Post ord = LRV   Left — Right — Vist.

③ Explain the terms used in trees.
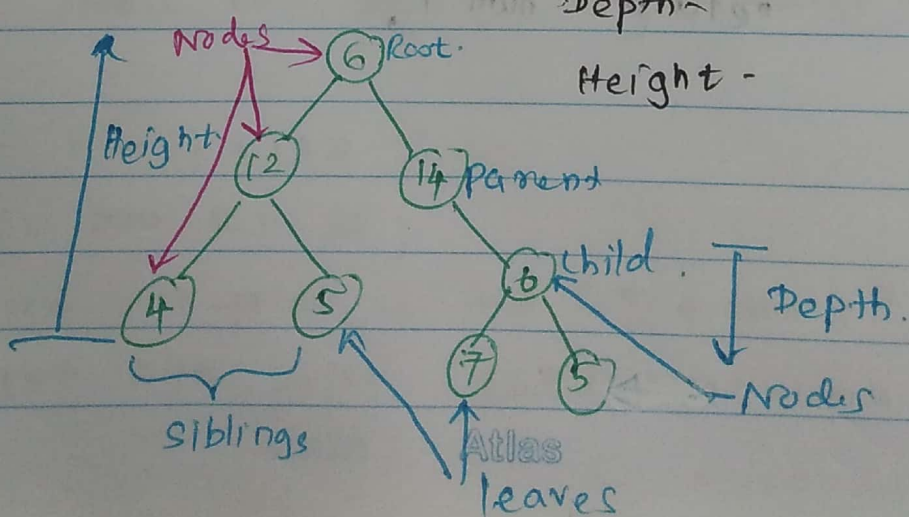
Root -   Depth~
Parent -   Height -
child -
Leaves -
Siblings -
Nodes -

Ex:-
Nodes → ⑥ Root.
Height ⑫   ⑭ Parent
④ ⑤   ⑥ child   Depth
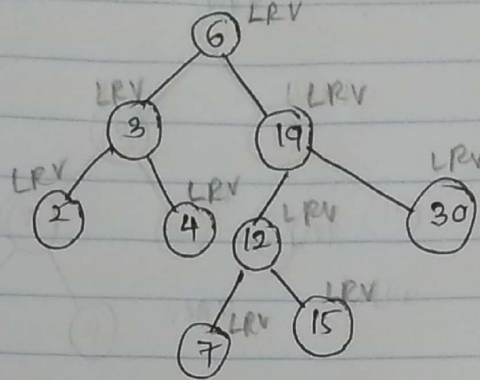   ⑦ ⑤   —Nodes
Siblings   Atlas leaves

take ⑥ as root and
compare and put the greater
value in the Right side.

① You have been given the following integer array.

Array : 6, 19, 3, 4, 2, 30, 12, 15, 7.

(a) Draw a binary Search tree based on the given array.

(b) Get the out put of pre-order, post-order and in-order using the tree that you identified.

Pre - order (VLR)

{ ⑥ 3 , 2 , 4 , 19, 12 , 7 , 15 , 30 }

  Root

In order (LVR)

{ 2, 3 , 4, 6, 7, 12 , 15, 19 ,30 }.

Post order (LRV)

                                                  30,   Root value.

{ 2, 4 , 3 , 7 ; 15, 12, 19 , ⑥ }.

⑤ Identify the practical use of the types of DFT types.

    * for sorting purposes. (Inorder)

    * can calculate a signal's frequency spectrum.