
Algorithm 1 Path between nodes in a full BT

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1: procedure MAIN()
2:    $N \leftarrow$  Input the graph
3:   levelorder[ ]  $\leftarrow$  level order traversal array of size N
4:   Input the Levelorder for the tree
5:   Root = insertLevelOrder(levelOrder, root, 0, n)
6:   printPath(root, x, y) // path between x and y to be found out
7: end procedure

8: function INSERTLEVELORDER(arr, root, i, n)
9:   if  $i < N$  then
10:    temp = NewNode(arr[i])
11:    root = temp
12:    root->left = insertLevelOrder(arr, root->left, 2 * i + 1, n)
13:    root->right = insertLevelOrder(arr, root->right, 2 * i + 2, n)
14:   end if
15:   return root
16: end function

17: function FIND PATH(root, path, k)
18:   if root == NULL then
19:     return False
20:   end if
21:   path.pushback(root->key)
22:   if root->key == k then
23:     return True
24:   end if
25:   if (root->left and findPath(root->left, path, k)) or (root->right
and findPath(root->right, path, k)) then
26:     return True
27:   end if
28:   path.pop_back()
29:   return false
30: end function

31: function PRINTPATH(root, n1, n2)
32:   path1[] // Initialize
33:   path2[] // Initialize
34:   if (!findPath(root, path1, n1) or !findPath(root, path2, n2)) then
35:     Path Does Not Exist
36:   end if
37:   for  $i \leftarrow 0$  to  $(i < \text{path1.size}() \text{ and } i < \text{path2.size}())$  do
38:     if path1[i] != path2[i] then
39:       break
40:     end if
41:   end for
42:   for  $j \leftarrow \text{path1.size}() - 1$  to  $j \geq i - 1$  do
43:     print path1[j]
44:   end for
45:   for  $j \leftarrow i$  to  $j < \text{path2.size}()$  do
46:     print path2[j]
47:   end for
48: end function
```
