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1: // A C++ program to print REVERSE Level order traversal usin
2: // This approach is adopted from following link
3: // http://tech-queries.blogspot.in/2008/12/level-order-tree-
4: #include <bits/stdc++.h>
5: using namespace std;
6:
7: /* A binary tree node has data, pointer to left and right ch
8: struct node
9: {
10:     int data;
11:     struct node* left;
12:     struct node* right;
13: };
14:
15: /* Given a binary tree, print its nodes in reverse level ord
16: void reverseLevelOrder(node* root)
17: {
18:     stack <node *> S;
19:     queue <node *> Q;
20:     Q.push(root);
21:
22:     // Do something like normal Level order traversal order. Fol
23:     // differences with normal Level order traversal
24:     // 1) Instead of printing a node, we push the node to stack
25:     // 2) Right subtree is visited before left subtree
26:     while (Q.empty() == false)
27:     {
28:         /* Dequeue node and make it root */
29:         root = Q.front();
30:         Q.pop();
31:         S.push(root);
32:
33:         /* Enqueue right child */
34:         if (root->right)
35:             Q.push(root->right); // NOTE: RIGHT CHILD IS ENQUEUED B
36:
37:         /* Enqueue left child */
38:         if (root->left)
39:             Q.push(root->left);

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40:     }
41:
42:     // Now pop all items from stack one by one and print them
43:     while (S.empty() == false)
44:     {
45:         root = S.top();
46:         cout << root->data << " ";
47:         S.pop();
48:     }
49: }
50:
51: /* Helper function that allocates a new node with the
52: given data and NULL left and right pointers. */
53: node* newNode(int data)
54: {
55:     node* temp = new node;
56:     temp->data = data;
57:     temp->left = NULL;
58:     temp->right = NULL;
59:
60:     return (temp);
61: }
62:
63: /* Driver program to test above functions*/
64: int main()
65: {
66:     struct node *root = newNode(1);
67:     root->left = newNode(2);
68:     root->right = newNode(3);
69:     root->left->left = newNode(4);
70:     root->left->right = newNode(5);
71:     root->right->left = newNode(6);
72:     root->right->right = newNode(7);
73:
74:     cout << "Level Order traversal of binary tree is \n";
75:     reverseLevelOrder(root);
76:
77:     return 0;
78: }

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79: