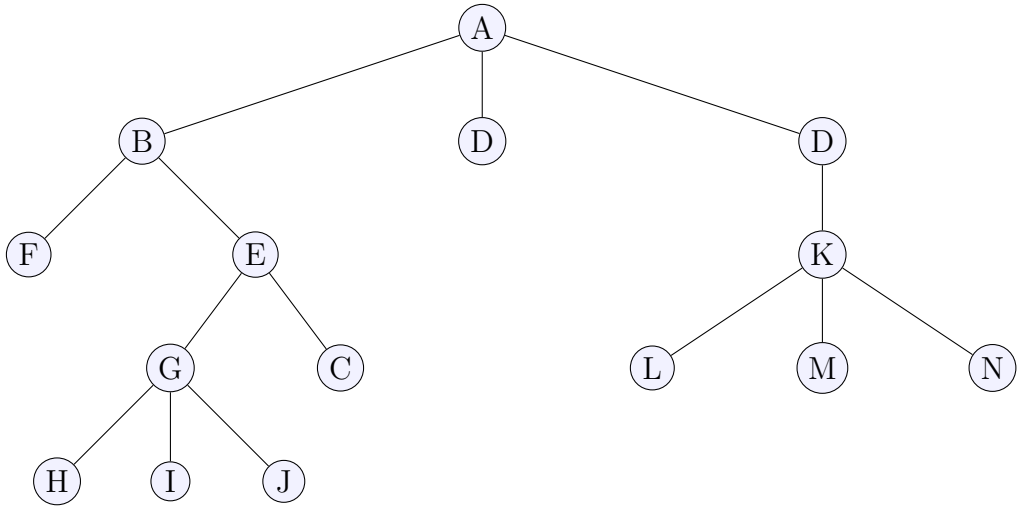
1. List the members of your group below. Underline your name.

2. Write the *depth* of each node in the following tree to the immediate left of the corresponding circle. Similarly, write the *height* of each node to its right.



3. List the nodes of the tree of Question 2 in

   preorder:

   postorder:

   inorder:

   level-order:

4. Present the *linear representation* of the tree of Question 2 using the method described in class.

5. Using the usual graphical notation, depict the tree whose linear representation is

$$(A,((B,((H,((J,())),(I,()))),(C,((E,((G,())),(F,()))),(D()))))$$

6. Represent all nonisomorphic labeled binary trees over the n nodes $[n] = \{1, 2, 3, \ldots, n\}$ for $n = 0, 1, 2, 3, \ldots$ (as high as you can manage).

[additional space for answering the earlier question]

7. Provide an algorithm to systematically generate all the trees from Question 6. Explain why your algorithm is correct.

8. Quantify the running time of your algorithm analytically.

9. (homework) Implement your algorithm and analyze its performance experimentally.