4.1 - For the tree in Figure 4.74:
a. Which node is the root?
b. Which nodes are leaves?

4.2 - For each node in the tree of Figure 4.74:
a. Name the parent node.
b. List the children.
c. List the siblings.
d. Compute the depth.
e. Compute the height.

4.3 - What is the depth of the tree in Figure 4.74?

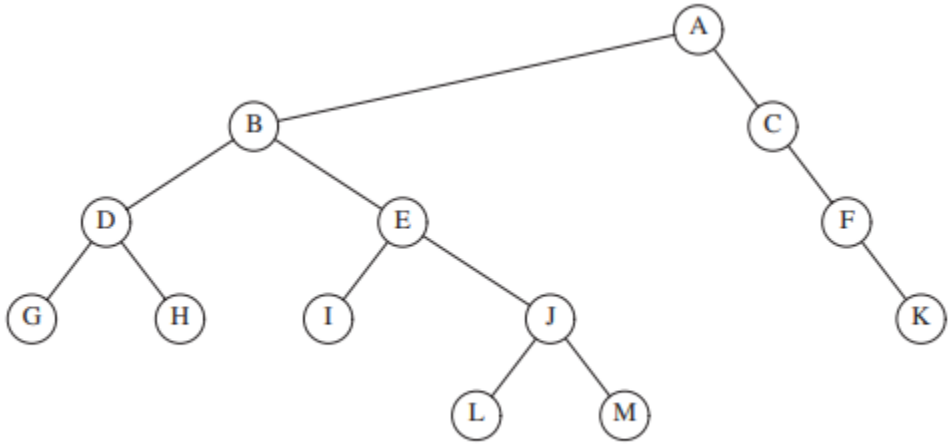

Figure 4.74 Tree for Exercises 4.1 to 4.3

4.4 - Show that in a binary tree of N nodes, there are N + 1 nullptr links representing children.

4.5 - Show that the maximum number of nodes in a binary tree of height h is 2^(h+1) − 1.

4.6 - A full node is a node with two children. Prove that the number of full nodes plus one is equal to the number of leaves in a nonempty binary tree.