King Saud University
College of Computer and Information Sciences
Computer Science Department

CSC 212 **First Semester 1437-1438**

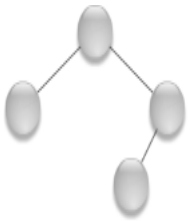
Tutorial #8

Important: This tutorial has an online part, which you should complete on LMS (tutorial section). The deadline for online task is Monday 21 November at 8:00 A.M

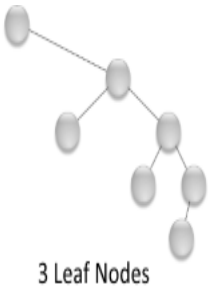
Problem 1

Write the method **LeafNodes** part of the Binary Tree ADT. It should return the number of leaf nodes in the tree.

Method: public int LeafNodes()
Examples:



2 Left Nodes

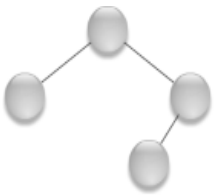


3 Leaf Nodes

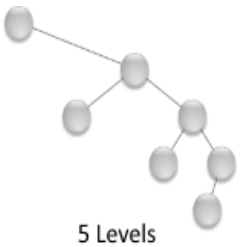
Problem 2

Write the method **TreeHeight** part of the Binary Tree ADT. It should return the height of the tree. The height of the tree is the longest path from the root to a leaf node.

Method: public int TreeHeight()
Example:



3 Levels



5 Levels

Problem 3

Write the static method **SwapMost** that takes a Binary tree **bt** and swaps the data of the left most node with the right most node.

Method: public static <T> void SwapMost(BinaryTree<T> bt)

Example: