

# COMP 251 - Week7 – Lab 5

**Due June 7<sup>th</sup>, 2017**

**Goal:** This lab will give you practice with binary trees.

## **Getting Started**

You can have a partner for this lab, but submit individually. You can read the lectures to answer the question.

Download the files for this lab from Q-Drive. Classes `BinaryTree` and `BinaryNode` implement a binary tree. Create an empty project in Eclipse and call it 'BinaryTree'. Add classes: `BinaryTree`, `BinaryNode`. The `main()` method of `BinaryTree` includes test code. Read `BinaryTree.java` and `BinaryNode.java` to find out what methods are available. The `test1()` method in `BinaryTree` creates a tree like this:

1. Write a function `test2()` that generates a tree with 7 nodes (including root) minimum height.
2. Write a function `test3()` that generates a tree with 7 nodes (including root) maximum height.
3. Implement `height()` for `BinaryTree` (you need to define the helper function in `BinaryNode`)

## **Optional (Not Mandatory)**

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4. Implement `printPostOrder()` for `BinaryTree` (you need to define the helper function in `BinaryNode`)
5. Implement `printPreOrder()` for `BinaryTree` (you need to define the helper function in `BinaryNode`)