

CIS351-Recursion and Tree

Submission Instructions

1. Submit the completed RecursionTest.java and CompleteNodes.java file in Blackboard.

Download Materials

Download the following files from Blackboard:

- RecursionTest.java
- Node.java
- CompleteNodes.java

Instructions

The goal of today's lab is to practice writing recursive methods.

Part 1: To Do for RecursionTest.java

1. First open the RecursionTest.java file.
2. All three methods in that class requires you to write code to perform a task recursively.
3. Read the associated method documentation to complete the recursive methods in this class.
You can do testing by uncommenting associated code in the main method of that class.

Part 1: To Do for CompleteNodes.java

1. First open the CompleteNodes.java and Node.java file.
2. The task of this class is -- given a binary tree, printing all nodes which are complete nodes.
Complete Nodes are nodes which has both left and right children as non-empty.

For example: The following figure illustrates the tree's complete node.

```
Input :    10
          /  \
         8    2
        / \  /
       3  5 7
```

Output : 10 8

```
Input :    1
          /  \
         2    3
        / \
       4   6
```

Output : 1 3

3. Read the associated method documentation to complete the recursive method in this class.
You can test the correctness of your method by using the testing code in the main method of this class.

Grading Criteria

Total points: 10 points

RecursionTest.java = 6 pts and CompleteNodes.java = 4 pts

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