COS 226 Fall 2009 Class Exercise 1 *6 questions; 2 pgs.* *Due 2009-09-01 3:15 p.m.*

Name: _____

1. Write your group's name in the space provided above.
2. List the members of your group below:

3. 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).

4. Provide an algorithm to systematically generate all the trees from Question 3. Explain why your algorithm is correct.

5. Quantify the running time of your algorithm analytically.

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