Data Structures 11/2/2016

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ANNOUNCEMENTS

Notes:

PowerPoint: <http://home.adelphi.edu/~siegfried/cs343/343l5.pdf>

* General Trees: finite nonempty set of elements in which one element is a root, and the remaining elements are partitioned into m >= 0 disjoint subsets, each of which is itself a tree
* Implementing a general tree: for a binary tree we know each node will have at most 2 children, so we allocate only 2 pointers for this; however a general tree can have any number of children, so we create a linked list that can extend as long as needed for each node
* Ordered tree: tree in which subtrees of each node form an ordered set (which we called first, second, or last); usually called oldest through youngest sons; a **forest** is an ordered set of ordered trees
* Traversing general trees are done via the 3 standard methods of tree traversal (preorder, inorder, postorder)
* Ex: Preorder – root, left, right (where we go from leftmost to rightmost subtree); in a forest, we go left to right, then top to bottom