Data Structures 10/28/2016

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Note Taker: Jai Punjwani

ANNOUNCEMENTS

Notes:

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

Implementing a Tree Data Structure

Methods

MakeTree(int); setleft(int, int); setright(int, int); AND traversal methods (done recursively)

// ROOT, LEFT, RIGHT

Ex: pretraversal(nodeptr tree)

{

if (tree != NULL) {

cout << tree -> info << endl;

//traverse left subtree

petraversal (tree -> left);

//traverse right subtree

pretraversal (tree -> right);

}

}

* Very similar methods exist for posttraversal, inorder

Threaded Binary Tree

* Visit each node, if it is a thread (we need a Boolean field to indicate this), we visit the node to which the thread leads to

Huffman’s Algorithm and Huffman Trees

* A common problem in CS: How to represent data in the most compressed form (ex: transmitting a message – how do we represent each character so that it takes the least space?)