

ECS 32B: Fall 2018

Homework Assignment 4

Due Date: No later than Friday, December 7, 9:00pm. Submit your solutions via Canvas in one file named “hw4.py”. Expect that you will be given Homework Assignment 5 before Homework Assignment 4 is due. Also expect that Homework Assignment 5 will be due no later later than Friday, December 7, 9:00pm. **MAKE SURE THAT YOU SUBMIT YOUR FILES IN THE CORRECT PLACES.** We do not grade homework that is submitted incorrectly.

1. Implement the level order tree traversal algorithm that we discussed briefly in class (see the slides for lecture 19). Name your function `levelorder`. Assume that your function expects one argument, a binary tree represented in the nodes and references form described in the “Nodes and References” section of Chapter 6. (That would be section 6.4.2 for those who have the paper version of the textbook.) When your function processes a node (see “process the node” in the “Level order traversal” slide), your function should just print the key for that node. So, for example, if we test your function with the binary tree drawn in the “Level order traversal” slide, your function should print “ABCDEFGHJIJ”.

You will want to construct some binary trees so that you can test your function. Use the code in the “Nodes and References” section for that purpose. Do not include that code in your “hw4.py” file. We just want your `levelorder` function and any supporting functions you create.

That’s the whole assignment. Really.