

Seatwork 9.2	
Implementing Trees 2	
Course Code: CPE010	Program: Computer Engineering
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<p>1. What is a binary search tree? So, basically a binary search trees are trees that have nodes in which each node has a maximum of two children. The left always contains a child of a smaller value than the parent and the right one of greater value. The use of the rule gives the user the possibility to find, insert, or delete values fast in the tree.</p> <p>2. Where can binary search tree be used? It's for those requiring that the data are kept sorted. For instance they may support databases or fast access to a certain element like a word in the dictionary and if also they are incorporated in programs that have the need for fast data insertion or deletion.</p> <p>3. What is a tree traversal. Tree traversal refers to the process of visiting or accessing each node of a tree exactly once in a specific order and here in traversal type the root could either be the first or the last node to be visited. A user here can read, search, and all other operations can be done on the tree nodes which come traversally.</p> <p>4. Differentiate a post-order and pre-order traversal give examples. First is the Preorder traversal it is defined as a type of tree traversal that follows the Root-Left-Right policy where The root node of the subtree is visited first and the left subtree is traversed also the right subtree is traversed. And in Post order traversal it is defined as a type of tree traversal that follows the Left-Right-Root policy such that for each node the left subtree is traversed first then the right subtree is traversed and finally the root node of the subtree is traversed.</p> <p>5. What is a parse tree and its use? A parse tree or also called a syntax tree, is a tree-like hierarchical representation of the derivation of a string a parse tree is also very useful in a way of showing how a string or program would be derived from a grammar. It does this by breaking down components of that string into smaller units, showing the detail about the grammatical structure that was employed in its creation to obtain an input string.</p> <p>Reference: https://www.geeksforgeeks.org/compiler-design/parse-tree-in-compiler-design/ https://www.geeksforgeeks.org/dsa/preorder-vs-inorder-vs-postorder/</p>	
9. Assessment Rubric	