Programming and Data Structures Lab (CS2710)
Assignment-06: *Binary Tree*

Lab-work:

1. Write two programs to construct binary tree from the given travarsal information:
   (a) Inorder and Preorder
   (b) Inorder and Postorder
   Inputs: Two travarsal information / sequence
   Outputs: The Binary Tree which will produce those two travarsals

2. Given an infix expression, write a program using binary tree ADT to convert it into prefix and postfix expressions.
   Inputs: An infix expression
   Outputs: The corresponding prefix and postfix expression
   Hint: Build a binary tree from the infix expression and then use tree travarsals

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Home-work:

1. Implement Huffman Coding Algorithm using Binary Tree ADT
   Inputs:
   (a) A set of alphabets,
   (b) A string/word made using the alphabets
   Outputs: The binary encoding of each alphabet
   Objective: Minimize the length of encoded string

2. Write a program that accepts a binary tree representing an expression and returns the infix version of the expression that contains only those parentheses that are necessary.
   Example:
   Inputs => Binary Tree from the expression ((A + B) * C) - (D)
   Outputs => (A + B) * C - D