

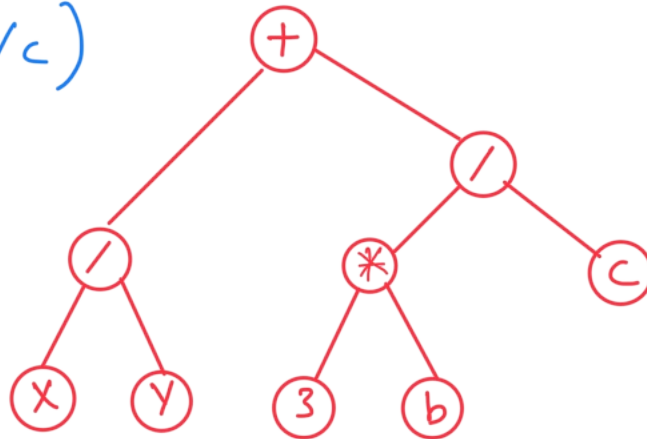
CS-303 Assignment 4

(25 points)

Q1 (15 points) Draw an expression tree corresponding to each of the following:

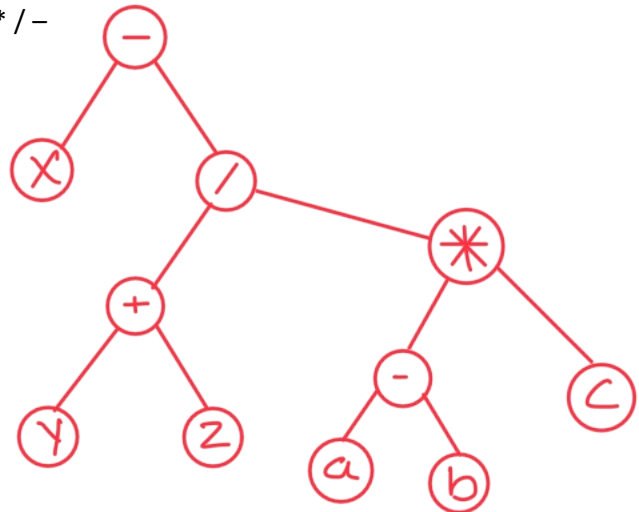
a) Inorder traversal is: $x / y + 3 * b / c$

$$(x/y) + ((3 \cdot b)/c)$$



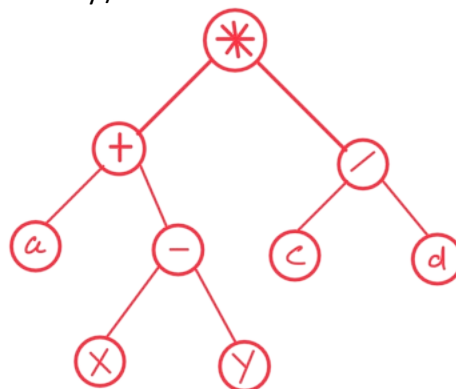
b) Postorder traversal is: $x y z + a b - c * / -$

$$x - (y + z) / ((a - b) * c)$$



c) Preorder traversal is: $* + a - x y / c d$

$$(a + (x - y)) * (c / d)$$



Q2 (10 points) Considered the output of a to_string method below and show the tree that would be built by the following data lines is the binary search tree.

30
15
4
NULL
NULL
20
18
NULL
19
NULL
NULL
NULL
35
32
NULL
NULL
38
NULL
NULL

