2021–2022 SPRING SEMESTER

CS202 - Fundamental Structures of

Computer Science II

Homework 2 - Trees
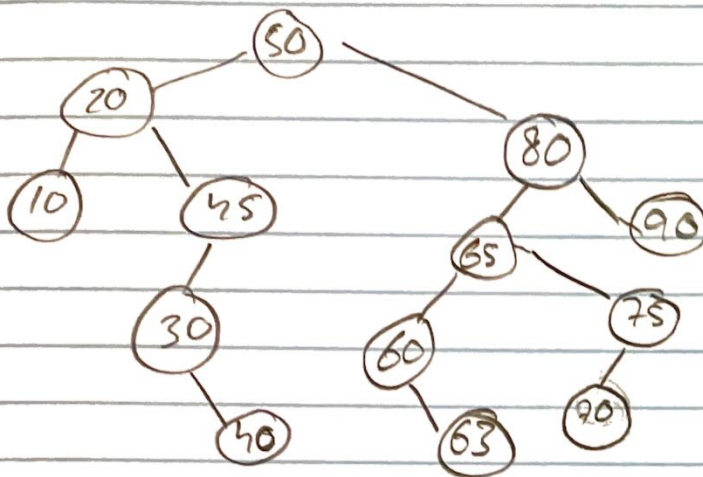
NAME: ABDULLAH RIAZ

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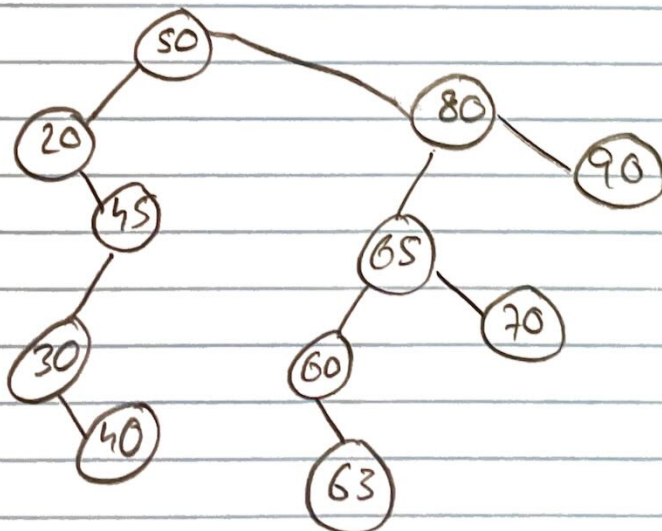
SECTION: 03

Q1a) Prefix: X U A B ∩ ∖ C D E

Infix: A U B X C ∖ D ∩ E
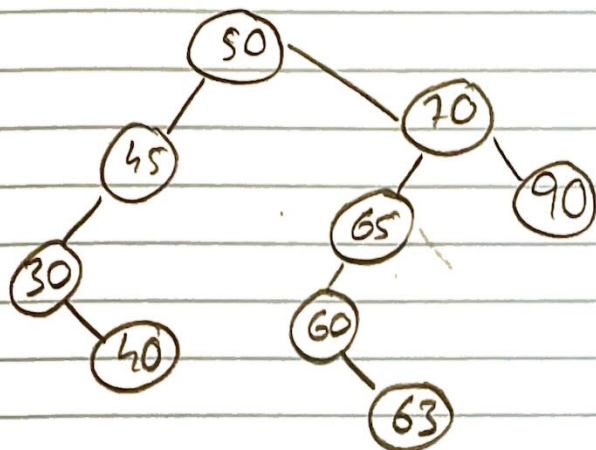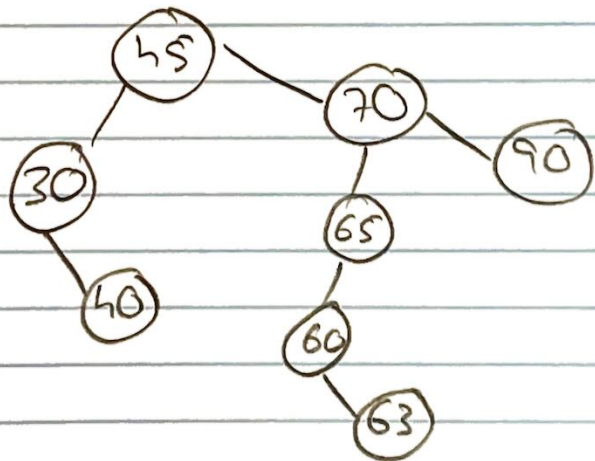
Postfix: A B U C D ∖ E ∩ X

b)

After deleting 10 & 75
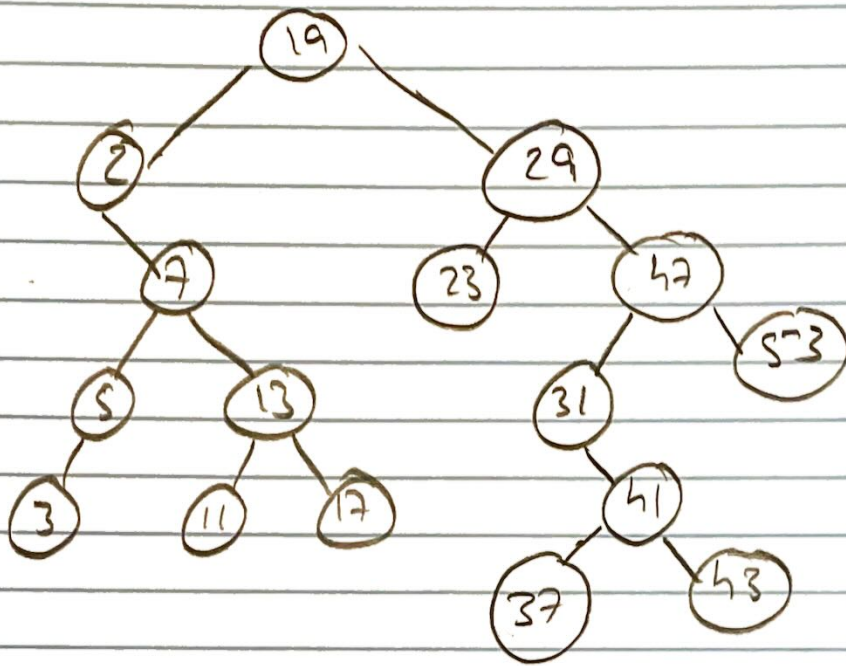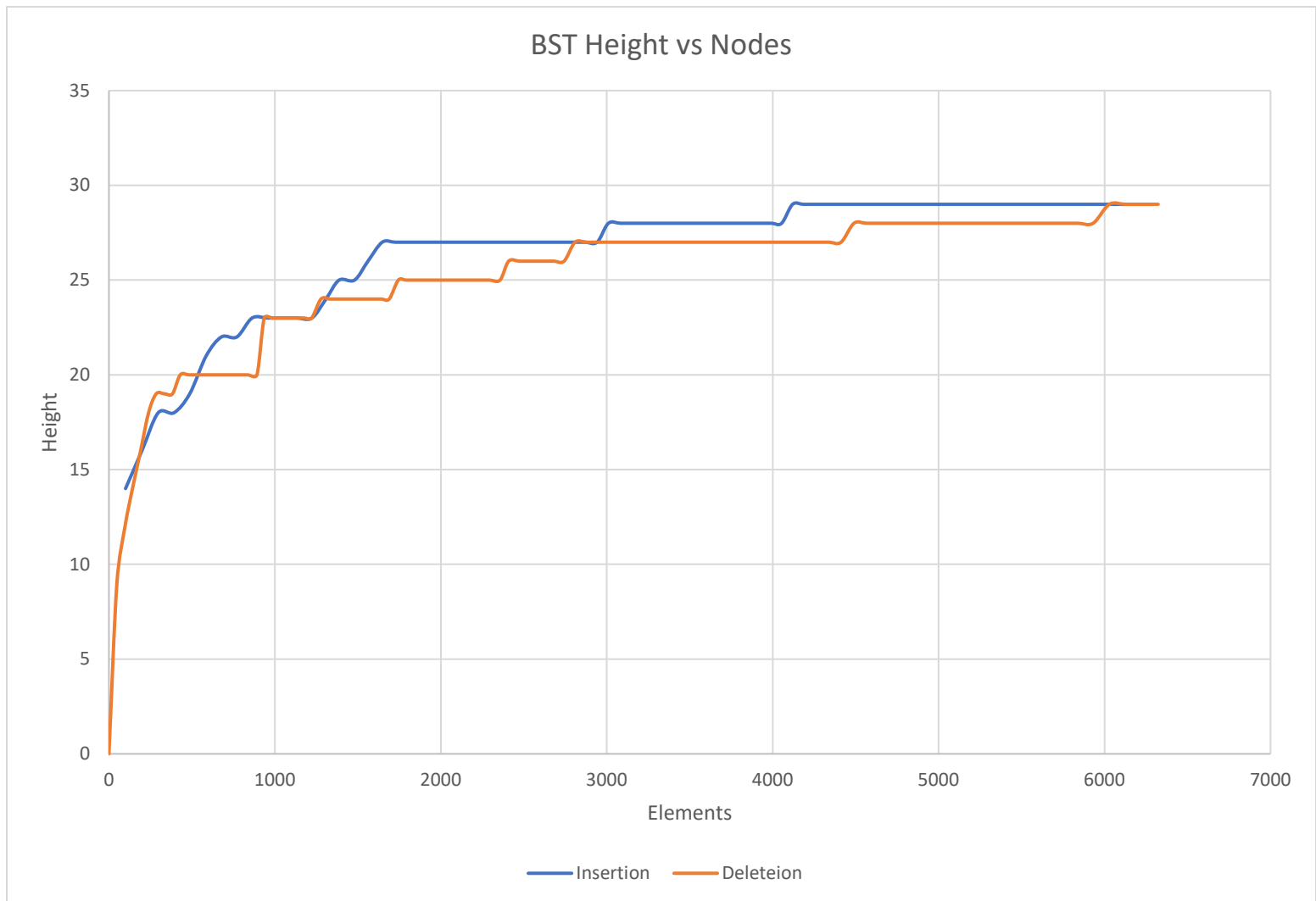
After deleting 80 & 20

After deleting 50

c) PostOrder: 3, 5, 11, 17, 13, 7, 2, 23, 37, 43, 41, 31, 53, 47, 29, 19

In Order : 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53

(19)

Preorder : 19, 2, 7, 5, 3, 13, 11, 17, 29, 23, 47, 31, 41, 37, 43, 53

Q3)

BST Height vs Nodes

The graph roughly looks like logn graph. The results match my expectation more or less since insert and deletion in Binary Search Tree are O(logn) time complexity theoretically. The data gathered from running it and plotting the graph gives a shape similar to O(logn) graph.