## **Assignment 4**

Within a binary search tree, a predetermined target value has been specified. You are asked to: a) print the path(s) where target value is present and

- b) find the next greater element of the target value in the binary search tree.
- c) implement recursive methods for inorder, preorder and postorder traversal
- d) add a method to count the total number of nodes in the binary search tree.

## Input:



Target: 6

Path(s): 4-6-8

Output: 8 is next greater element of the target value

Inorder Traversal: 1 2 3 4 6 8 Preorder Traversal: 4 2 1 3 6 8 Postorder Traversal: 1 3 2 8 6 4

Number of nodes: 6

## Input:



Target: 4

Path(s): 5 - 3 - 4

Output: 5 is next greater element of the target value

Inorder Traversal: 2 3 4 5 6 7 8 Preorder Traversal: 5 3 2 4 7 6 8 Postorder Traversal: 2 4 3 6 8 7 5

Number of nodes: 7

## Input:

Target: 3

Path(s): 5-3-25-3-4

Output: 4 is next greater element of the target value

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