Department of Electrical and Computer Engineering

North South University

Course: Data Structures & Algorithms (CSE 225)

Section: 1

Assignment 2

Deadline: 11 April 2020

In this assignment, you are required to extend the basic binary search tree (BST) data structure that was built in CSE 225 and CSE 225L.

For this assignment, you have additional operations that you need to implement. The following are the description of these additional operations:

Operation	Description
getMax	Returns the maximum value of the items stored in the BST
getMin	Returns the maximum value of the items stored in the BST
Sort	Returns an array with the items stored in the sorted manner
ReverseSort	Returns an array with the items stored in the reverse sorted manner
getMedian	Returns the median value of the items stored in the BST. A median is a value that separates the higher half from the lower half of a data sample.

You need to make logical decision of the parameters and the return type for each of the aforementioned operations.

Deliverables:

Your solution should be reported in **a single pdf file** and uploaded via the google classroom. The report should contain (1) all source codes and (2) the explanation of the time complexity for each of these additional operations.