IIT Goa – II Semester, 2021-2022

Course No: CS F222 **LAB EXERCISE 01** **Course Title: Algorithm Design**

Date: January 24 2022

Write a program that implements subroutines that deploys the basic operations of a binary search tree (BST). The program should have 5 functions createNode(), insertNode(), searchNode(), deleteNode(), and displayBST(). The prototype and other details for each of those functions are encoded as comments within the "tentative" (hasn't tested for bugs) wrapper program provided with. You may start with the wrapper program as such and modify.

You have been provided with the file testCaseForBST.txt from which your program reads the input. Before termination, the program makes a call to the function diplayBST() which prints the elements (the whole student record) sorted in descending order of roll numbers.

Further, implement the subroutine kthStudent() that reads a value k and prints the details of the kth student in the sorted list.