# **Lab 6\_1 : Binary Search Tree (BST)**

# **Week beginning 16th October 2023**

The code for some of BST is given on OneDrive

Use JUnit to test the methods that you write.

1. Use debug mode to step through the insertSub() method to see the recursive calls.

2. Write an iterative version of insert() method.

Firstly write an algorithm for this:

Algorithm for iterative insert() method of BinarySearchTree

Header is:

public void insertIterative(E element)

Algorithm:

create newNode with element as data

if root == null

root = newNode

else {

current = root;

….

// to be completed.

// Look at recursive version for idea how to complete this

3. Write isEmpty() method. What is the header?

4. Write a contains() method. The header is:

public boolean contains​(E element)

(Same as contains() method of Collection interface)

Firstly write an algorithm for this method. Write it either iteratively or recursively, whichever you find easier. Then write the other version.