



# UNIVERSITÀ DI PISA

Dipartimento di Informatica  
Corso di Laurea in Informatica

## Assignment 01

Competitive Programming and Contests

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**Exercise 1** This exercise requires the implementation of a method to check if a given tree is a **binary search tree**, which means that for each node its key  $K$  must be greater than or equal to that of its left child and less than that of its right child, we shall refer to this as the “BST condition”.

For explanation purposes, we shall call  $\mathbf{M}$  the *root* of the tree,  $\mathbf{L}$  its *left child* and  $\mathbf{R}$  its *right child*. The algorithm implemented checks whether  $\mathbf{M}$  verifies the BST condition, then it performs an in-order traversal of the tree and performs the check mentioned above for each node.

**Exercise 2**