

Instructions: This quiz is to be taken in silence, without notes, books, or electronic devices (including “smart” watches or earbuds). The time limit to complete it is **15 minutes**. Answer the following questions, trying to be as clear and as accurate as possible. Take your time to read the statements carefully before trying to answer them. If you need more space, write on the back of your test page and indicate it clearly. When writing code, make sure your special punctuation characters are legible, and your lowercase and uppercase letters are easy to distinguish. As usual, every statement or series of statement is assumed to be in a valid class and method, and you can use the `C.RL()`, `C.W()` and `C.WL()` abbreviations.

_____ / 10 pts. **Question 1** Given the usual implementation of `Node`:

```
private class Node
{
    public T Data { get; set; }
    public Node left;
    public Node right;

    public Node(T dataP = default(T), Node leftP = null, Node rightP =
        ↪ null)
    {
        Data = dataP; left = leftP; right = rightP;
    }
}
```

Write an `Height` property for `Node` (i.e., a way of *computing* the longest distance between the calling `Node` and a leaf).

____ / 10 pts. **Question 2** Considering an implementation of binary search trees where `T` realizes the `Comparable<T>` interface (i.e., where the `.CompareTo` method can be used to compare values), write a `ValueGreaterThan` method that

- takes an argument `dataP` of type `T`,
- returns
 - **true** if there is a value greater than `dataP` in the binary search tree,
 - **false** if there is no value greater than `dataP` in the binary search tree or if the tree is empty.