

# Assignment -3

1. Implement the following function to find the height of a binary tree.

```
int height();
```

Can use the following link to test the correctness of the algorithm/code.

<https://www.hackerrank.com/challenges/tree-height-of-a-binary-tree/problem>

2. Implement a function to find the smallest element in a binary search tree.

Find the time complexity of the algorithm.

```
int findSmallest();
```

3. Implement a function to find the largest element in a binary search tree.

Find the time complexity of the algorithm.

```
int findLargest();
```

## Practice problem:

1. Insert into a Binary Search Tree

<https://leetcode.com/problems/insert-into-a-binary-search-tree/>

2. Delete Node in a BST

<https://leetcode.com/problems/delete-node-in-a-bst/>

3. Binary Tree Level Order Traversal

<https://leetcode.com/problems/binary-tree-level-order-traversal/>

4. Binary Tree Level Order Traversal II

<https://leetcode.com/problems/binary-tree-level-order-traversal-ii/>

5. Diameter of Binary Tree

<https://leetcode.com/problems/diameter-of-binary-tree/>

6. Convert Sorted Array to Binary Search Tree

<https://leetcode.com/problems/convert-sorted-array-to-binary-search-tree/>

7. Convert Sorted List to Binary Search Tree

<https://leetcode.com/problems/convert-sorted-list-to-binary-search-tree/>