# Day 22: Binary Search Trees

# **Objective**

Today, we're working with Binary Search Trees (BSTs). Check out the Tutorial tab for learning materials and an instructional video!

#### Task

The height of a binary search tree is the number of edges between the tree's root and its furthest leaf. You are given a pointer, **root**, pointing to the root of a binary search tree. Complete the *getHeight* function provided in your editor so that it returns the height of the binary search tree.

## **Input Format**

The locked stub code in your editor reads the following inputs and assembles them into a binary search tree:

The first line contains an integer, n, denoting the number of nodes in the tree.

Each of the n subsequent lines contains an integer, data, denoting the value of an element that must be added to the BST.

#### **Output Format**

The locked stub code in your editor will print the integer returned by your *getHeight* function denoting the height of the BST.

### Sample Input

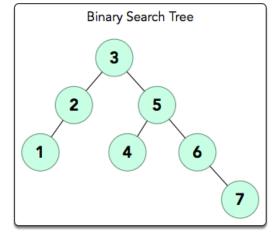
7
3
5
2
1
4
6
7

#### **Sample Output**

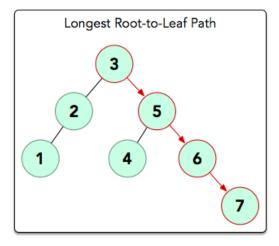
3

### **Explanation**

The input forms the following BST:



The longest root-to-leaf path is shown below:



There are  $\bf 4$  nodes in this path that are connected by  $\bf 3$  edges, meaning our BST's  $height=\bf 3$ . Thus, we print  $\bf 3$  as our answer.