# Algorithms and Data Structures for Data Science lab\_trees

CS 277 Brad Solomon October 15, 2021



**Department of Computer Science** 

# Learning Objectives

Practice storing information in a binary tree

Implement structural functions and traversal functions

Practice manipulating tree structures while preserving content

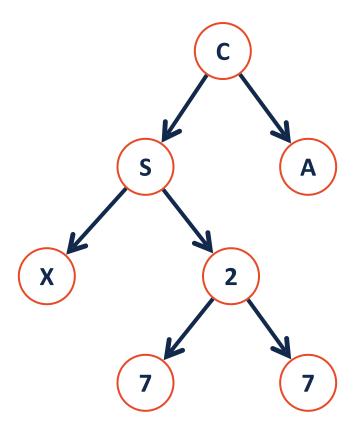
# Binary Tree

#### A **binary tree** is a tree *T* such that:

$$T = None$$

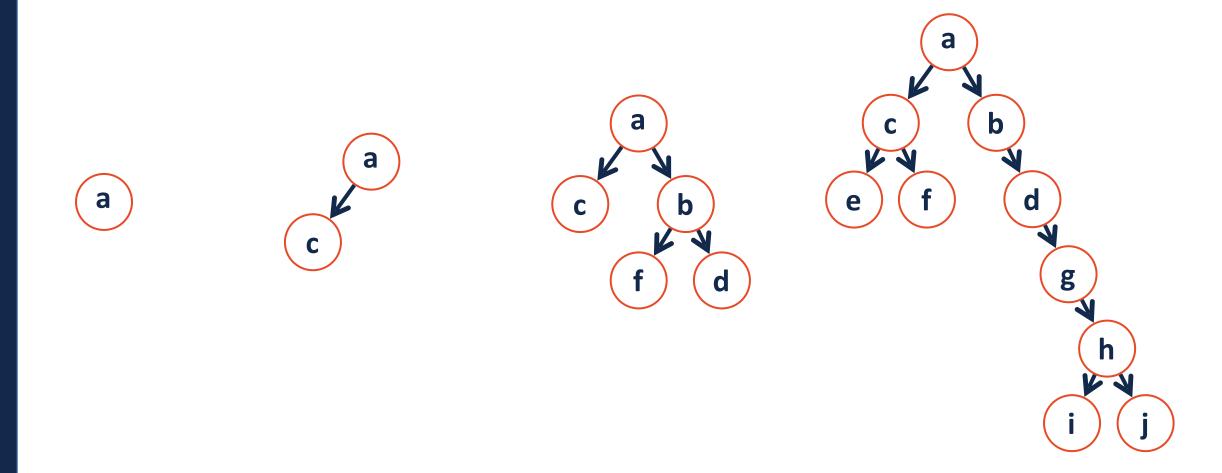
or

$$T = treeNode(val, T_L, T_R)$$

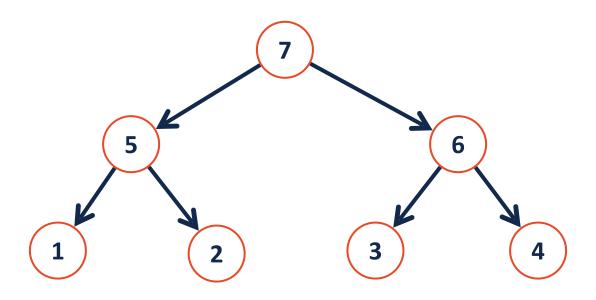


# Height

The length of the longest path from the root to a leaf



### **In-Order Traversal**



# Mirror

