

Types of Binary Trees

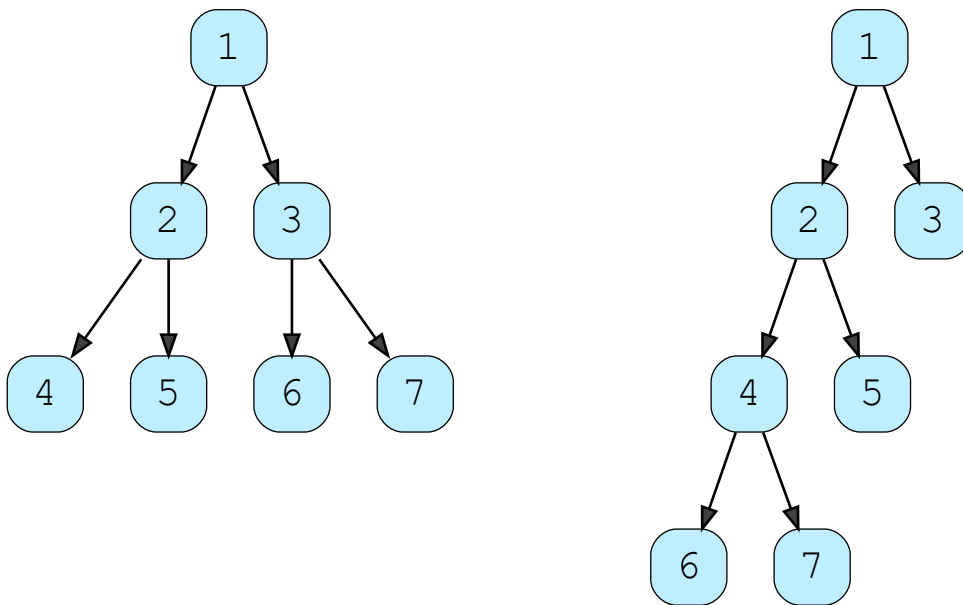
We'll go over some definitions of different types of tree. Remembering them and their properties will be useful for questions about binary trees.

We'll cover the following ^

- Full binary tree
- Complete Binary Tree
- Perfect Binary Tree

Full binary tree

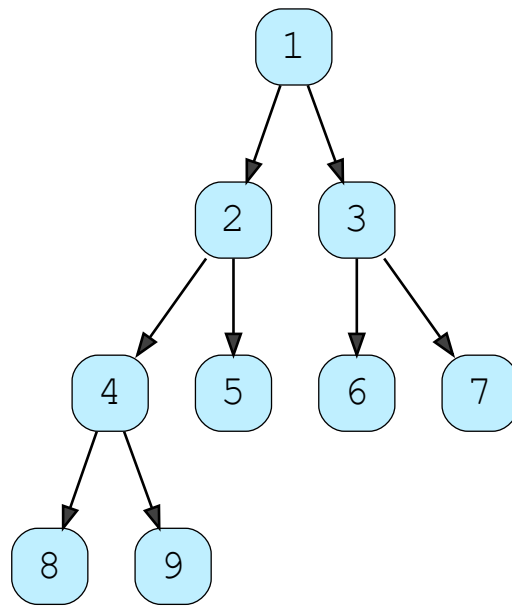
Every node has either zero or two children.



Complete Binary Tree

All levels except the last level are completely filled. In the last level, all the nodes are filled from left to right.

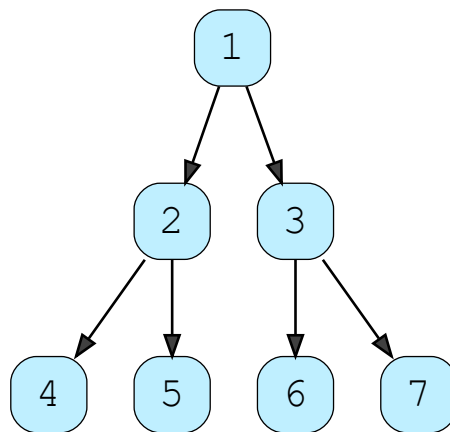
Heap, which we will discuss in later lessons, is an example of a complete binary tree.



Perfect Binary Tree

A binary tree where all internal nodes have two children and all leaves are at the same level is a perfect binary tree.

A perfect binary tree of height h has $2^h - 1$ nodes.



In the next lesson, I'll wrap up this topic with some points on binary trees in programming competitions.

