Assignment 8, 2020-11-09

12 minutes

Decode Binary Tree to a General One.

Let a, b, c be the last 3 digits of your Student ID. Define a new integer number:

$$N = (a + b) \bmod 10.$$

(A) Redraw the binary tree in Figure 1; replace letters a, b with your values. We denote this tree by B.

(B) List all the nodes of B in their in-order DFS traversal order.

(C) Draw a general tree (denoted by G) that is obtained by decoding the tree B.
See `https://bit.ly/3kdyg8n` or Section 7.3.8, *Representing General Trees with Binary Trees* in the textbook (Goodrich2011, p.309).

(D) What is the depth of the node with number N (defined above) in the new tree G?

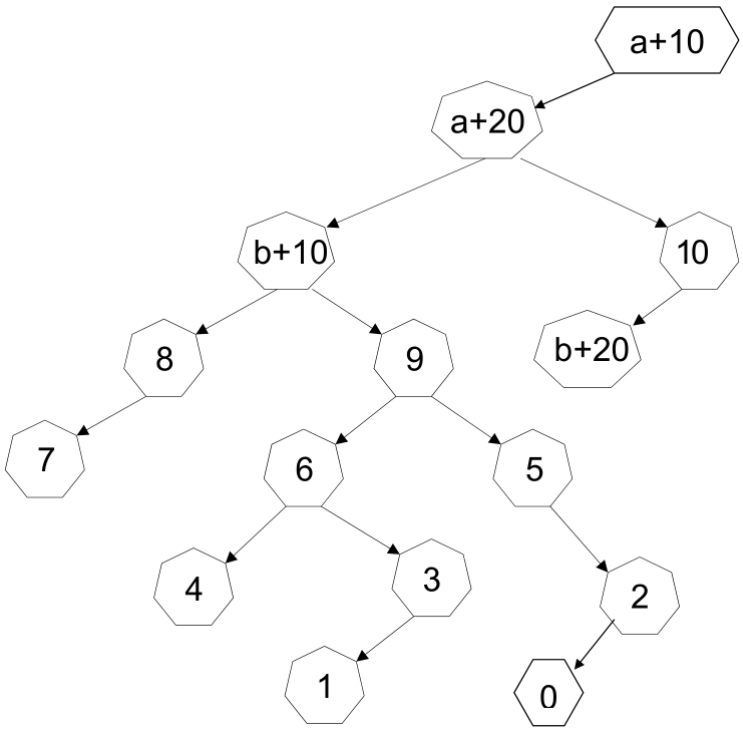

Figure 1: Binary tree B to Convert to a General Tree G