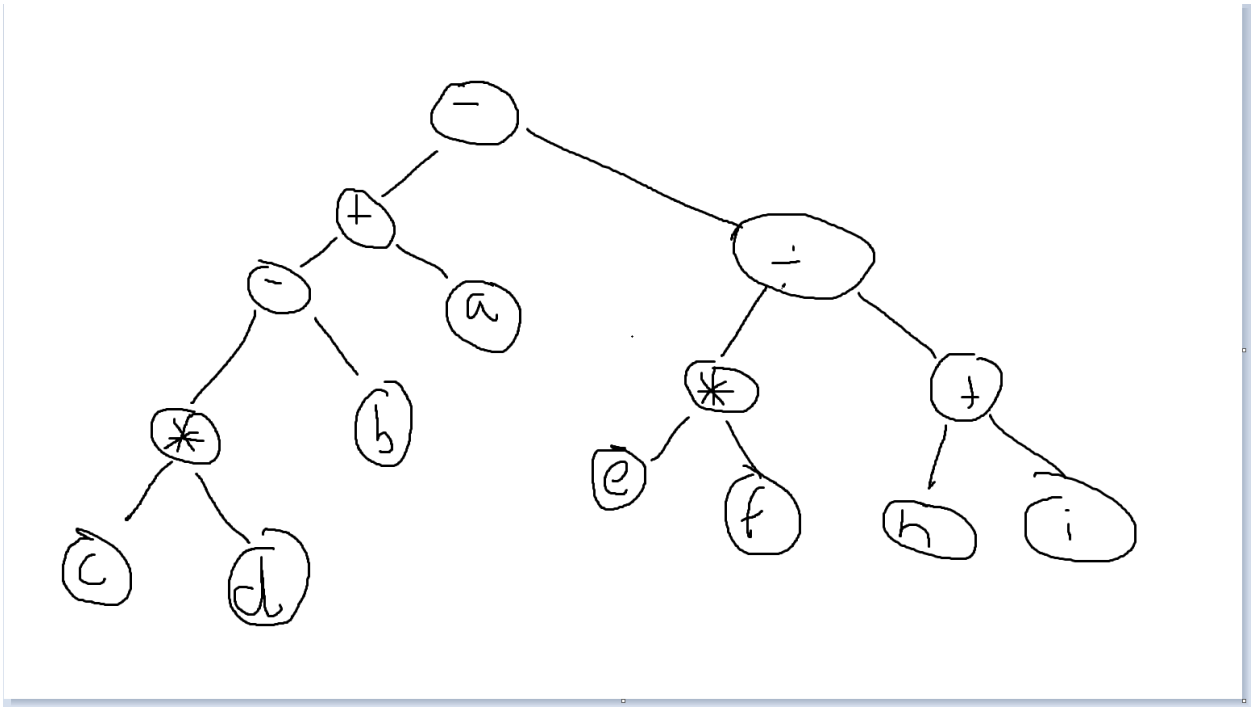
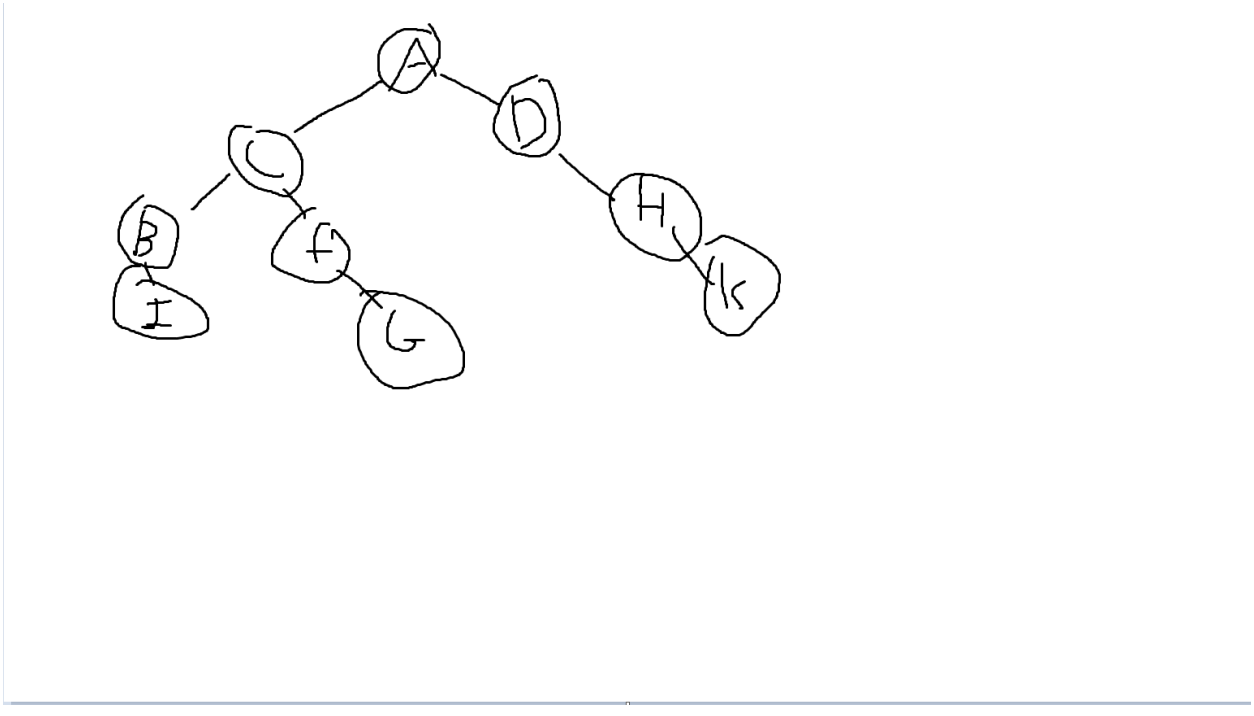
1. 

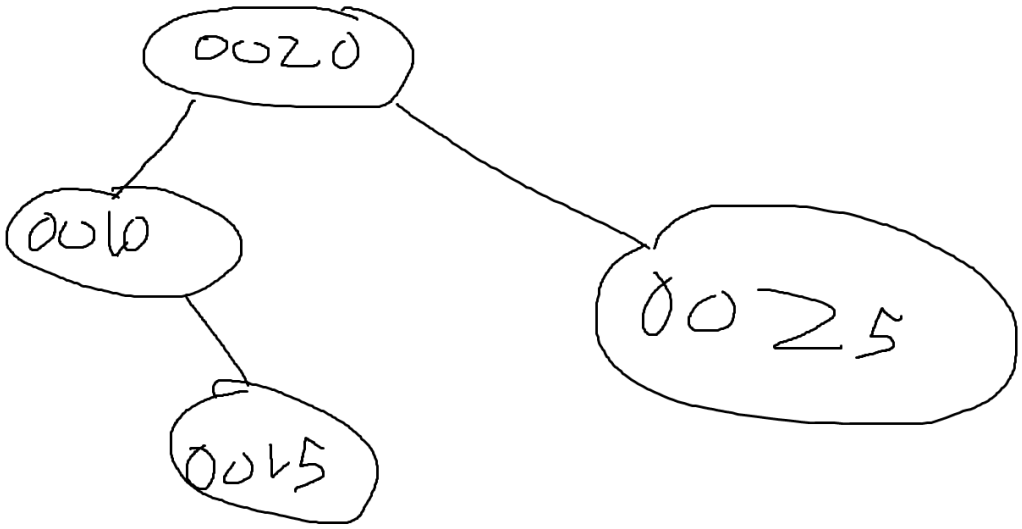
2. 

3. A. This tree has a height of 4
   B. The tree has a depth of 4
   C. The root node is at level 0
   D. The depth of node 0020 is 3
   E. The leaf nodes are 0001, 0020, 0052, 0083, 0099, 0125, 0152
   F. The height of node 0020 is 0

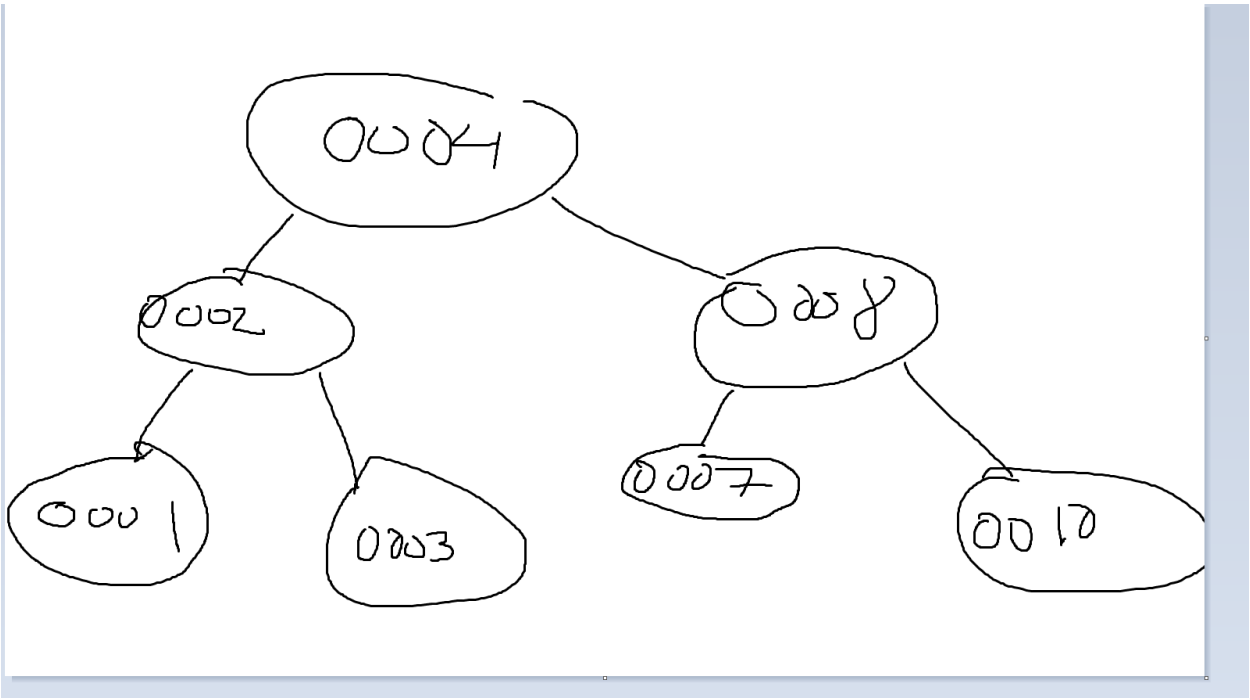
G.

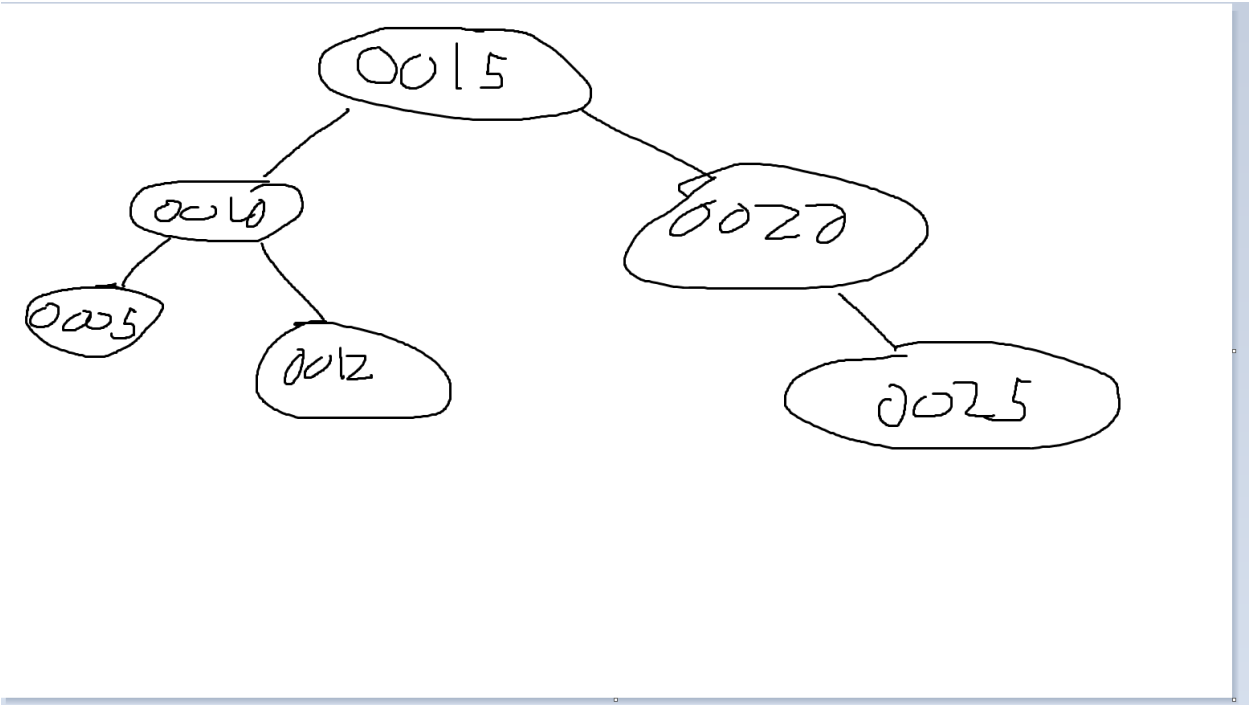
Pre: 0100, 0050, 0003, 0001, 0020, 0080, 0052, 0090, 0083, 0099, 0150, 0125, 0152
In: 0001, 0003, 0020, 0050, 0052, 0080, 0083, 0090, 0099, 0100, 0125, 0150, 0152
Post: 0001, 0020, 0003, 0052, 0083, 0099, 0090, 0080, 0050, 0125, 0152, 0150, 0100

4. A. An AVL tree is a self-balancing binary search tree, that will balance itself through rotating nodes through recursion.
   B. The purpose of the tree is to check the right and left sub trees and makes sure there isn't a height difference of more than once before it will self-balance.



5.

6. 
0004
0002
0008
0001
0003
0007
0010

7. 
0015
0010
0020
0005
0012
0025