

CSCI803 Assignment

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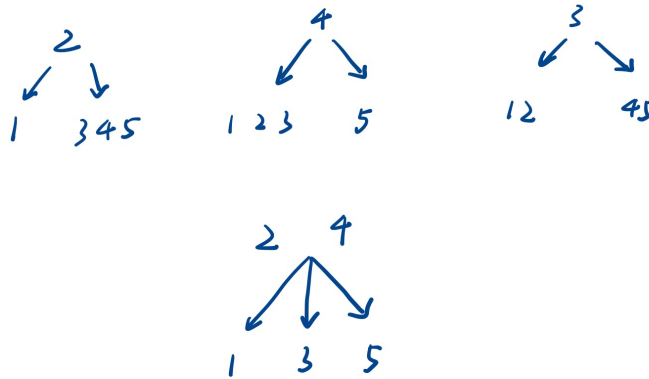
October 23, 2020

1 Problem 1

AVL tree: An AVL tree is a self-balancing binary search tree, balanced to maintain $O(\lg n)$ height. And it is usually used for in memory backed search trees.

B-tree: A B-tree is a balanced tree, but it is not a binary tree. Nodes have more children, which increases per-node search time but decreases the number of nodes the search needs to visit. And it is primarily used as a storage backed search tree for very large datasets because it requires less reads to disk (since each node contains N keys where $N > 1$).

2 Problem 2

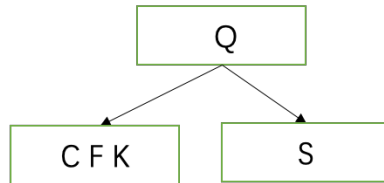


3 Problem 3

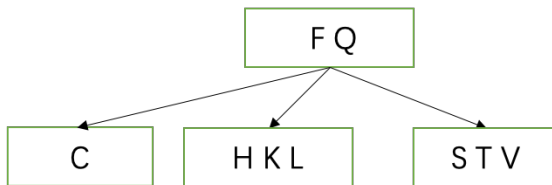
1. Insert F, Q,
S



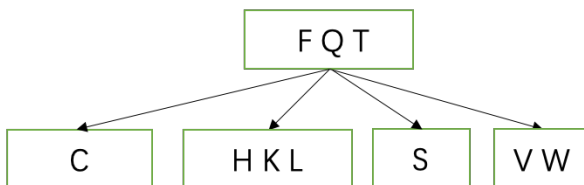
2. Insert K, C



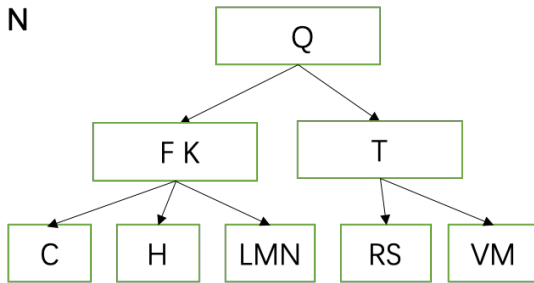
3. Insert L, H, T, V



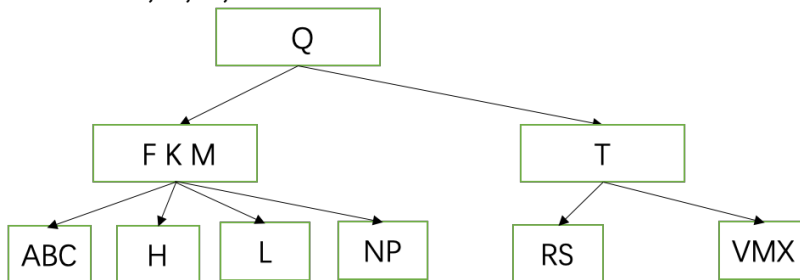
4. Insert W



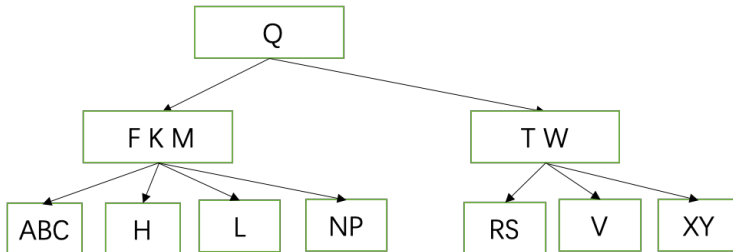
5. Insert R, M,
N



6. Insert P, A, B, X



7. Insert Y



8. Insert D, Z, E **FINAL CONFIGURATION**

