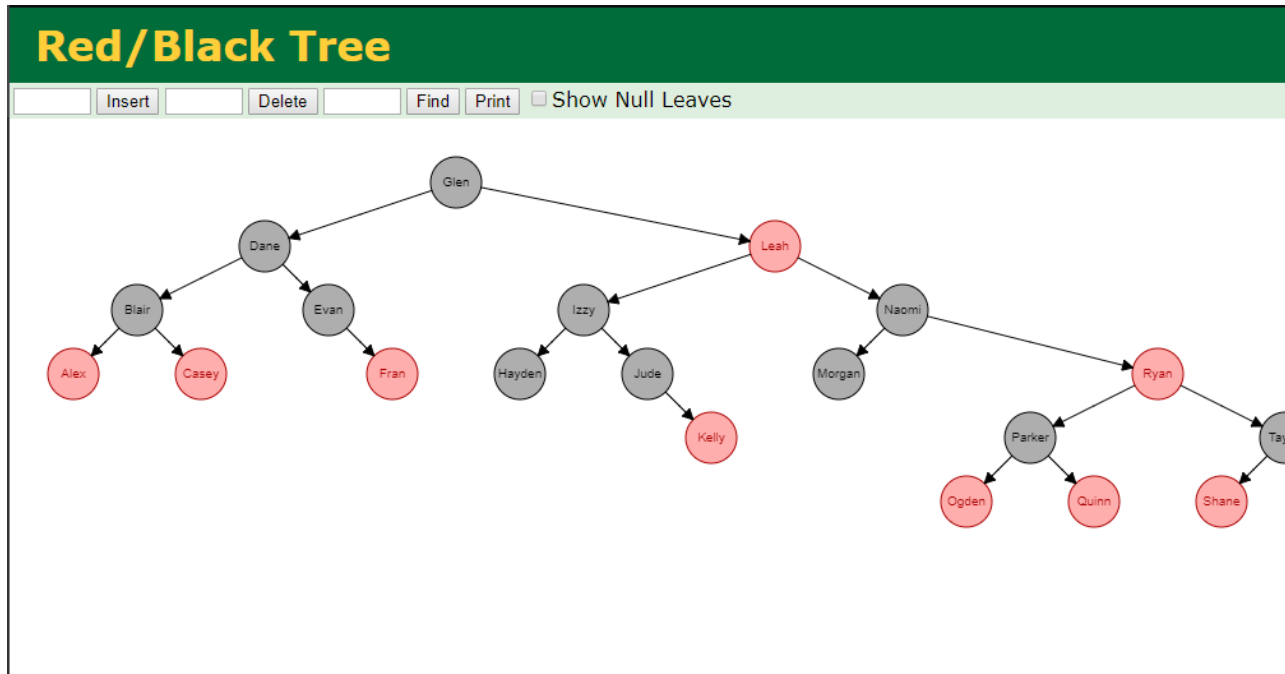


# BLG 335E

## Homework 4 Report

### 150130032 – Baran Kaya

#### Visualization of the tree



Source: <https://www.cs.usfca.edu/~galles/visualization/RedBlack.html>

**a) Briefly explain what you would do to correctly update the name of a person as a node in the Red-Black Tree.**

If we will just change the name of the node it will break the binary tree rules. We can call the fix function but it cannot fix the tree's whole ordering. So we need to delete that node from the tree and then we need to add the updated node to the tree. That is the only way to updating Red-Black tree's node's key value.

**b) Briefly explain what you would do to correctly increment (by 1) the ages of all people in the Red-Black Tree.**

Since age is not the key for RBT nodes we can increment all nodes age with inorder, preorder or postorder traversals. We do not need to change tree's shape or any nodes' location, because age is just an extra attribute for nodes.

**Compiling on SSH:** `g++ -std=c++11 RBTree.cpp -o RBT -->` It needs C++11 for 'stoi' function in reading file part.

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Baran KAYA