BLG 335E, Analysis of Algorithms I

Project 4 Report

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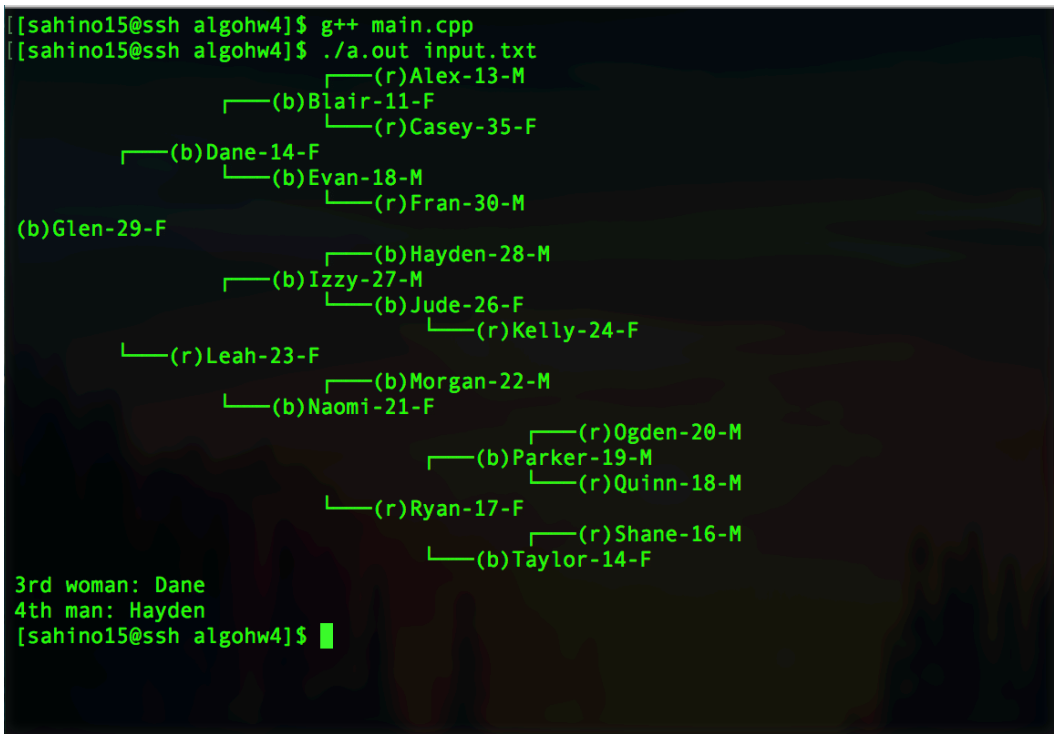
OUTPUT OF MY CODE:



1) To correctly update a person's name, firstly I would implement a delete operation, which can be implemented in O(logN). Then, I would delete the person that I want to update from the tree and insert the updated version. Since both deletion and insertion are in O(logN), update operation will also be in O(logN).

2) To correctly increment the ages of all people in the Red-Black tree, I would implement a traversing method, which could be either in-order, pre-order or post-order. As I traverse each node, I would increment the age of that node.