2-3-4 Tree Class Implementation (Part 2)

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Cpt S 223 Homework Assignment

Submission Instructions:

Submit source code (zipped) to Angel <u>BEFORE</u> the due date/time. If the Angel submission is not working, then submit to TA via email <u>BEFORE</u> the due date/time. Optional: Include a readme.txt file in the zip with any relevant information that you want the grader to be aware of.

Assignment Instructions:

Read all the instructions carefully before you write any code.

Continue where you left off on part 1 for this assignment.

Implement the Remove function for the 2-3-4 tree (10 points):

The project files from the previous homework have the declaration (but not implementation) for the removal function. You must correctly fuse nodes and handle all fusion cases:

- 1. Take from left child
- 2. Take from right child
- 3. Take from parent
- 4. Fuse root if the above three are not options

Use the removal scheme that is an inverse of the insertion scheme: while traversing through the tree for a removal, if you encounter any node that has only 1 value in it, then fuse (root being a special case).