



RedBlackTrees

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Mahmoud Kamal Mahmoud & Mohammed Magdy abd_Elghany
ID 59 & 56

Overview

This project contains an implementation about red black trees

Specifications

This section contains the order of each procedure in the red black tree.

- 1) getRoot procedure
Takes $O(1)$ time complexity.
- 2) isEmpty procedure
Takes $O(1)$ time complexity.
- 3) clear procedure
Takes $O(1)$ time complexity.
- 4) search procedure
Takes $O(\lg n)$ time complexity.
- 5) contains procedure
Takes $O(\lg n)$ time complexity.
- 6) insert procedure
Takes $O(\lg n)$ time complexity.
- 7) delete procedure
Takes $O(\lg n)$ time complexity.
- 8) ceilingEntry procedure
Takes $O(\lg n)$ time complexity.
- 9) ceilingKey procedure
Takes $O(\lg n)$ time complexity.
- 10) clear procedure
Takes $O(1)$ time complexity.
- 11) containsKey procedure
Takes $O(1)$ time complexity.

12) contains key procedure

Takes $O(\lg n)$ time complexity.

13) containsValue procedure

Takes $O(\lg n)$ time complexity.

14) entrySet procedure

Takes $O(n)$ time complexity.

15) firstEntry procedure

Takes $O(\lg n)$ time complexity.

16) firstKey procedure

Takes $O(\lg n)$ time complexity.

17) flooringEntry procedure

Takes $O(n)$ time complexity.

18) getRoot procedure

Takes $O(1)$ time complexity.

19) poolFirstEntry procedure

Takes $O(\lg n)$ time complexity.

20) floorKey procedure

Takes $O(\lg n)$ time complexity.

21) pollLastEntry procedure

Takes $O(\lg n)$ time complexity.

22) size procedure

Takes $O(1)$ time complexity.

23) values procedure

Takes $O(n)$ time complexity.

Shoots :

