

Assignment--Right Threaded-BST

```

struct rightThreadedBSTNode
{
    int key;
    int size; // Total no of nodes in the subtree rooted at the node.
    int rightThread; // 1, if right link is a thread to its inorder successor
    struct rightThreadedBSTNode *leftChild;
    struct rightThreadedBSTNode *rightChild;
};
typedef struct rightThreadedBSTNode rTBSTNode;
typedef struct rightThreadedBSTNode* rTBSTNodePtr;

void createRightThreadedBST(rTBSTNodePtr *root){ *rTBSTNodePtr = NULL;}
rTBSTNodePtr getRightThreadedTreeNode() //Allocate a node dynamically

void displayRightThreadedBST(rTBSTNodePtr root, char *fileName)
// Use graphviz to display tree graphically

rTBSTNodePtr rtbstSearch(rTBSTNodePtr root, int data) - O(h)
// returns the pointer of the node having key value equal to data (successful search) or
returns NULL

[15 points] void inorder(rTBSTNodePtr root, int *List);
// Non-recursive and without using stack

[10 points] int rtbstInsert(rTBSTNodePtr *root, int data) - O(h)

[40 points] int rtbstDelete(rTBSTNodePtr *root, int data) - O(h)

[20 points] rTBSTNodePtr kthElement(rTBSTNodePtr *root, int k) - O(h)
// returns the pointer of the node having the k-th smallest key value ow returns NULL

Note: Don't change the function definition. No marks for partial implementation.

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