

Binary Search Tree

Time Span: 1 lab day (a week)

Problem: Write a C program to represent the data and key fields in a Binary Search Tree and perform operations on it.

Description:

Suppose that the node type of a binary search tree is defined as follows:

```
struct NodeType {
    int key, record;
    struct NodeType *left;
    struct NodeType *right;
};
```

The key and record contains data part of a key and its associated value of the node; left and right are the pointers to the node of two children. Perform the operations by implementing the following C routines in the given tree.

Tasks:

1. **sinser**(tree, key, record) to search and insert a record with its associated key in a binary search tree pointed to by tree.
2. **sdelete**(tree, key) to search and delete a record associated with the key from a binary search tree. If such a record is found by the key, then the function returns the value of its record field; if it is not found, then the function returns 0.
3. **delete**(tree, key1, key2) to delete all records with keys between key1 and key2(inclusive) from a binary search tree whose nodes are declared in the given binary search tree.
