

```
#include <iostream>
using namespace std;
class AVL
{
    struct node
    {
        int data;
        node* left;
        node* right;
        int height;
    };
    node* root;
    void makeEmpty(node* t)
    {
        if (t == NULL)
            return;
        makeEmpty(t->left);
        makeEmpty(t->right);
        delete t;
    }
    node* insert(int x, node* t)
    {
        if (t == NULL)
        {
            t = new node;
            t->data = x;
            t->height = 0;
            t->left = t->right = NULL;
        }
        else if (x < t->data)
        {
            t->left = insert(x, t->left);
            if (height(t->left) - height(t->right) == 2)
            {
                if (x < t->left->data)
                    t = singleRightRotate(t);
            }
        }
    }
}
```