

Complete the below AVL tree program accordingly.

```
// C program to Insert a node in Avl tree
```

```
#include <stdio.h>
#include <stdlib.h>
```

```
// An AVL tree node
```

```
struct Node
{
    int key;
    struct Node *left;
    struct Node *right;
    int height;
};
```

```
// A function to get maximum of two integers
```

```
int max(int a, int b) {
    return (a > b) ? a : b;
}
```

```
// A function to get the height of the tree
```

```
int height(struct Node *p) {
    if (p == NULL) return 0;
    return p->height;
}
```

```
/* Helper function that allocates a new node with the
given key and NULL left and right pointers. */
```

```
struct Node *newNode(int key) {
    struct Node *node = (struct Node *)
        malloc(sizeof(struct Node));

    node->key = key;
    node->left = NULL;
    node->right = NULL;
    node->height = 1;

    return (node);
}
```

```
//A utility function to right rotate subtree rooted with y
```

```
struct Node *rightRotate(struct Node *y)
{
    struct Node *x = y->left;
    struct Node *T2 = x->right;
```

```
//Perform rotation
```

```
x->right = y;
y->left = T2;
```

```
//Update heights
```

```
y->height = max(height(y->left), height(y->right)) + 1;
x->height = max(height(x->left), height(x->right)) + 1;
```

```
//Return new root
```

```
return x;
```

```
}
```

```
//A utility function to left rotate subtree rooted with x
```

```
struct Node *leftRotate(struct Node *x)
{
    struct Node *y = x->right;
    struct Node *T2 = y->left;
```

```
//Perform rotation
```

```
y->left = x;
x->right = T2;
```

```
//Update heights
```

```
x->height = max(height(x->left), height(x->right)) + 1;
y->height = max(height(y->left), height(y->right)) + 1;
```

```
//Return new root
```

```
return y;
```

```
}
```