

Size of Binary Tree

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

struct node
{
    int data;
    struct node *left;
    struct node *right;
};

struct node *newNode(int data)
{
    struct node *temp = (struct node *)malloc(sizeof(struct node));
    temp->data = data;
    temp->left = temp->right = NULL;
    return temp;
}

int sizeOfTree(struct node *root)
{
    return root ? (1+sizeOfTree(root->left)+sizeOfTree(root->right)): 0;
}

int main()
{
    struct node *root=NULL;
    root = newNode(10);
    root->left = newNode(20);
    root->right = newNode(30);
    root->left->left = newNode(40);
    root->right->left = newNode(50);
    printf("%d\n", sizeOfTree(root));
    return 0;
}
```

Time complexity: $O(n)$

Space complexity: $O(n)$