CS1713 Introduction to Computer Programming II
Exercise #12: Binary Tree

Part I: Show the trace for the code below using the specified tree.
```c
int g(NodeT *p)
{
    int iL, iR;
    if (p == NULL)
        return 0;
    iL = g(p->pLeft);
    iR = g(p->pRight);
    if (iL > iR)
        return iL + 1;
    else
        return iR + 1;
}
```

2. What does that code for #1 do?

Part II: Consider the following typedefs:
```c
typedef struct
{
    int iID; // Student ID
    double dGPA; // Grade Point Average
    char szClassif[3]; // FR, SO, JR, SR, GR
} Student;
```
```c
typedef struct NodeT
{
    Student student;
    struct NodeT *pLeft;
    struct NodeT *pRight;
} NodeT;
```

3. Show recursive code for the function `countLowSeniors` which is passed a pointer to a binary tree with nodes defined as `NodeT` and returns a count of students who have a GPA less than 2.5 and a classification of "SR".

Example data:
4. Trace the code for #3 with the above tree.