## 1) (10 pts) DSN (Binary Trees)

Write a function named *find\_below()* that takes a pointer to the root of a binary tree (*root*) and an integer value (*val*) and returns the greatest value in the tree that is strictly less than *val*. If no such value exists, simply return *val* itself. Note that the tree passed to your function will **not** necessarily be a binary **search** tree; it's just a regular binary tree.

For example:

```
find_below(root, 196) would return 22

find_below(root, 1) would return 1

find_below(root, 4) would return 1

find_below(root, 22) would return 18

find_below(root, 20) would return 18

find_below(root, 8) would return 7

find_below(root, -23) would return -23
```

You must write your solution in a **single** function. You cannot write any helper functions.

The function signature and node struct are given below.

```
typedef struct node
{
   int data;
   struct node *left;
   struct node *right;
} node;
int find_below(node *root, int val)
{
```