Hw 1 recursion tracing

Tuesday, August 23, 2022 9:44 AM

node
val
next

Node* llrec(node* in1, Node* in2

if(in1==null||ptr){
return in2;

elseif(in2==null||ptr){
return in1

else{
in1->next=llrec(in2, in1->next
return in1

-so, it is like switching back and forth

See below for clean work

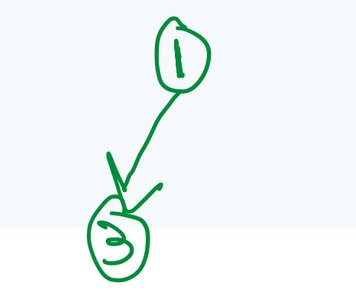
```
struct Node {
    int val;
    Node*  next;
};

Node* llrec(Node* in1, Node* in2)
{
    if(in1 == nullptr) {
        return in2;
    }
    else if(in2 == nullptr) {
        return in1;
    }
    else {
        in1->next = llrec(in2, in1->next);
        return in1;
    }
}
```

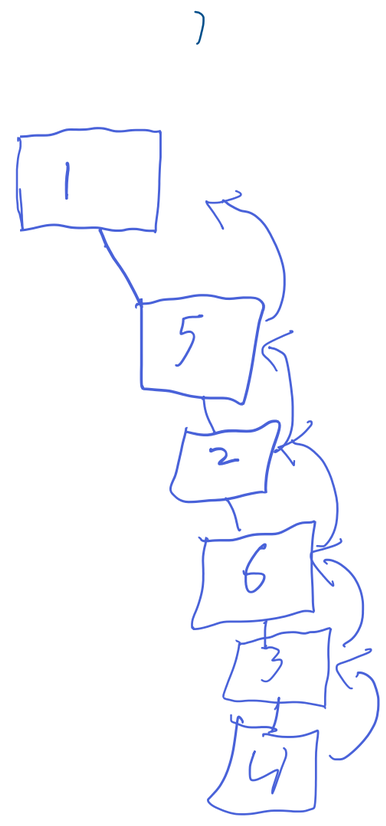
struct Node { creates node structure
int val; data member
Node* next; data member

1,2,3,4 5,6

1st in1=1
int=3
2nd int=3
in2=null

i) ii) iii)

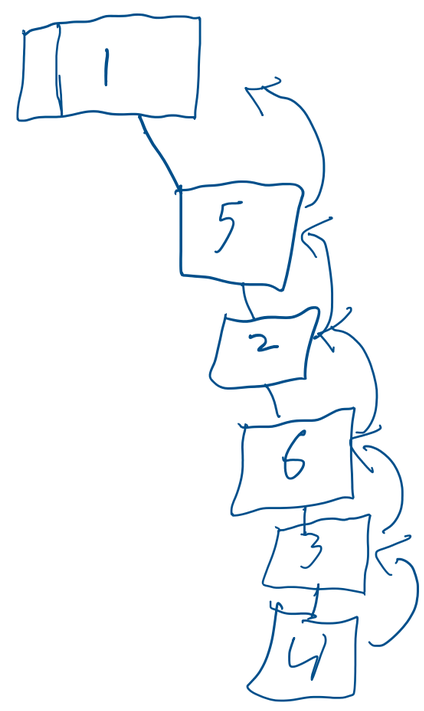




a) in1 = 1,2,3,4 in2 = 5,6

iteration	what happens	
1	iii is executed, in2 and in1 are switched	1
2	iii is executed, switched	5
3	iii is executed, switched	2
4	iii is executed, switched	6
5	ii is executed, no switch	3
6	i is executed, no switch	4

Box diagram



linked list 1, 5, 2, 6, 3, 4 is returned

b)

iteration	what happens
1	i is executed, in2 is returned

linked list = 2 is returned