

Quiz 5 Version C

Due No due date **Points** 8 **Questions** 3
Available after Nov 14 at 3:30pm **Time Limit** None
Allowed Attempts Unlimited

Instructions

Quiz for Lecture 5: Recursion

7 points required to pass

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	1 minute	0 out of 8

Score for this attempt: **0** out of 8

Submitted Nov 14 at 4:01pm

This attempt took 1 minute.

Question 1

0 / 3 pts

Suppose we have this structure definition, for a node in a singly linked list of **char**:

```
struct cl_node { char data; cl_node *next; };
```

Write **a recursive implementation** of this function, that makes a copy of its argument list of **char**. If the argument list of **char** is empty, the function should return **nullptr**.

```
cl_node *mk_clist_copy(const cl_node *p)
```

```
{  
  
    // this is the part you have to write as your answer  
  
}
```

Your Answer:

```
if (p == nullptr)  
    return nullptr;  
  
return new cl_node{ p->data, mk_clist_copy(p->next) };
```

Question 2

0 / 3 pts

Suppose we have this structure definition, for a node in a singly linked list of **char**:

```
struct cl_node {  char data;  cl_node *next;  };
```

Write **a recursive implementation** of this function, that displays the **char** values in the argument list to **cout in reverse order**. For example, if the argument list contains 'a', 'b', 'c', the function should display **cba** to **cout**. If the argument list is empty, the function should do nothing.

```
void clist_display_reverse(const cl_node *p)
```

```
{  
  
    // this is the part you have to write as your answer  
  
}
```

Your Answer:

```
if (p == nullptr)
    return;
clist_display_reverse(p->next);
cout << p->data;
```

Question 3**0 / 2 pts**

Write **a recursive implementation** of this function, that displays to **cout** the count from **1** up to and including the argument **N**, with a space character after each value. For example, **count_up_to(5)** should display:

1 2 3 4 5

If **N** is less than or equal to **0**, the function should do nothing.

void count_up_to(int N)

{

// this is the part you have to write as your answer

}

Your Answer:

```
if (N <= 0)
    return;
count_up_to(N - 1);
cout << N << ' ';
```

Quiz Score: **0** out of 8