# Quest09

Subject | 1 Solution | Additional Resources (0)

## Quest09

Remember to git add && git commit && git push each exercise!

We will execute your function with our test(s), please DO NOT PROVIDE ANY TEST(S) in your file

For each exercise, you will have to create a folder and in this folder, you will have additional files that contain your work. Folder names are provided at the beginning of each exercise under `submit directory` and specific file names for each exercise are also provided at the beginning of each exercise under `submit file(s)`.

## Introduction

### Control Center

roup formation - (July 2, 2022 9:58am)

Progress - (July 2, 2022 9:58am)

ubmitted - (July 9, 2022 4:27pm)

est Review - July 9, 2022 4:27pm

| Quest09 | Reverse Linked List |
| --- | --- |
| Submit directory | ex00 |
| Submit file | reverse-linked-list.c |

## Description

Reverse a singly linked list.

**Example:**

```
Input: 1->2->3->4->5->NULL
Output: 5->4->3->2->1->NULL
```

## Function prototype (c)

```c
/*
**
** QWASAR.IO -- reverse_linked_list
**
** @param {listnode*} param_1
**
** @return {listnode*}
**
*/
#ifndef STRUCT_LISTNODE
#define STRUCT_LISTNODE
typedef struct s_listnode
{
    int val;
    struct s_listnode* next;
} listnode;
#endif


listnode* reverse_linked_list(listnode*
param_1)
{

}
```

Finished - July 9, 2022 4:27pm

Go To DoCode

Access:

READ WRITE

Go To Gitea

Keep Working On This Soluti

## Also working on the project



suxrobov_s lima-cid_s nurullay_s

Type
Project

Group Size
1 Participant

Review system
Test Review (Gandalf)

Difficulty
Initiation

| Quest09 | Remove Nth Node From End Of List |
| --- | --- |
| Submit directory | ex01 |
| Submit file | remove-nth-node-from-end-of-list.c |

## Description

Given a linked list, remove the *n*-th node from the end of list and return its head.

**Example:**

```
Given linked list:
1->2->3->4->5, and _n_ = 2.
After removing the second node from the
end, the linked list becomes 1->2->3->5.
```

**Note:**

```
Given _n_ will always be valid.
```

## Function prototype (c)

Average duration: 1 Week

### Project's Metadata

Project

id: 140

name: quest09

visible: True

```c
/*
**
** QWASAR.IO --
remove_nth_node_from_end_of_list
**
** @param {listnode*} param_1
** @param {int} param_2
**
** @return {listnode*}
**
*/
#ifndef STRUCT_LISTNODE
#define STRUCT_LISTNODE
typedef struct s_listnode
{
    int val;
    struct s_listnode* next;
} listnode;
#endif


listnode*
remove_nth_node_from_end_of_list(listnode*
 param_1, int param_2)
{

}
```

| Quest09 | Remove Duplicates From Sorted List |
| --- | --- |
| Submit directory | ex02 |
| Submit file | remove-duplicates-from-sorted-list.c |

**Description**

Given a sorted linked list, delete all duplicates such that each element appear only *once*.

**Example 00:**

```
Input: 1->1->2
Output: 1->2
```

**Example 01:**

```
Input: 1->1->2->3->3
Output: 1->2->3
```

### Function prototype (c)

```c
/*
**
** QWASAR.IO --
remove_duplicates_from_sorted_list
**
** @param {listnode*} param_1
**
** @return {listnode*}
**
*/
#ifndef STRUCT_LISTNODE
#define STRUCT_LISTNODE
typedef struct s_listnode
{
    int val;
    struct s_listnode* next;
} listnode;
#endif


listnode*
remove_duplicates_from_sorted_list(listnode
 param_1)
{

}
```

| Quest09 | Merge K Sorted Lists |
| --- | --- |
| Submit directory | ex03 |
| Submit file | merge-k-sorted-lists.c |

## Description

Merge *k* sorted linked lists and return it as one sorted list. Analyze and describe its complexity.

**Example:**

```
Input: [1->4->5, 1->3->4, 2->6]
Output: 1->1->2->3->4->4->5->6
```

## Function prototype (c)

```
/*
**
** QWASAR.IO -- merge_k_sorted_lists
**
** @param {listnode_array*} param_1
**
** @return {listnode*}
**
*/
#ifndef STRUCT_LISTNODE
#define STRUCT_LISTNODE
typedef struct s_listnode
{
    int val;
    struct s_listnode* next;
} listnode;
#endif

#ifndef STRUCT_LISTNODE_ARRAY
#define STRUCT_LISTNODE_ARRAY
typedef struct s_listnode_array
{
    int size;
    listnode **array;
} listnode_array;
#endif


listnode*
merge_k_sorted_lists(listnode_array*
param_1)
{

}
```