

Start here X [Linked\_lists.sort\_reverse\_concatenated.c]

```
1 // Author: RD 18M2419188
2 #include <stdio.h>
3 #include <stdlib.h>
4
5 struct Node {
6     int data;
7     struct Node *next;
8 };
9
10 struct Node* createNode(int data) {
11     struct Node *newNode = (struct Node*)malloc(sizeof(struct Node));
12     newNode->data = data;
13     newNode->next = NULL;
14     return newNode;
15 }
16
17 void insertEnd(struct Node **head, int data) {
18     struct Node *newNode = createNode(data);
19     if (*head == NULL) {
20         *head = newNode;
21     } else {
22         struct Node *temp = *head;
23         while (temp->next != NULL)
24             temp = temp->next;
25         temp->next = newNode;
26     }
27 }
28
29 void display(struct Node *head) {
30     if (head == NULL) {
31         printf("List is empty\n");
32     } else {
33         struct Node *temp = head;
34         while (temp != NULL) {
35             printf("%d ", temp->data);
36             temp = temp->next;
37         }
38         printf("\n");
39     }
40 }
41
```

Logs & others

Editorfile Project Projectfile

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C:\Users\RD\Documents\GitHub\AC5189\Linked\_lists.sort\_reverse\_concatenated.c C/C++ Windows (CR-LF) WINDOWS-1252 Line 12, Col 26, Pos 260 Insert Read/Write default 24°C Mostly sunny 11:52:50 AM IN 17-11-2025

```
Start here X Linked_lists_sort_reverse_concatenat.c X
40
41 void sortList(struct Node *head) {
42     if (head == NULL) return;
43     struct Node *current = head, *index = NULL;
44     int temp;
45
46     while (current != NULL) {
47         index = current->next;
48         while (index != NULL) {
49             if (current->data > index->data) {
50                 temp = current->data;
51                 current->data = index->data;
52                 index->data = temp;
53             }
54             index = index->next;
55         }
56         current = current->next;
57     }
58 }
59
60 struct Node* reverseList(struct Node *head) {
61     struct Node *prev = NULL, *current = head, *next = NULL;
62
63     while (current != NULL) {
64         next = current->next;
65         current->next = prev;
66         prev = current;
67         current = next;
68     }
69     return prev;
70 }
71
72 struct Node* concatenate(struct Node *head1, struct Node *head2) {
73     if (head1 == NULL) return head2;
74     struct Node *temp = head1;
75     while (temp->next != NULL)
76         temp = temp->next;
77     temp->next = head2;
78     return head1;
79 }
80
```

Logs & others

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Editorfile Project Projectfile

Activate Windows  
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ICS185\Linked\_lists\_sort\_reverse\_concatenat.c C/C++ Windows (CR+LF) WINDOWS-1252 Line 22, Col 18, Pos 504 Insert Read/Write default NIFTY +0.08% ENG 11:43:40 AM (N 17-11-2025)

```

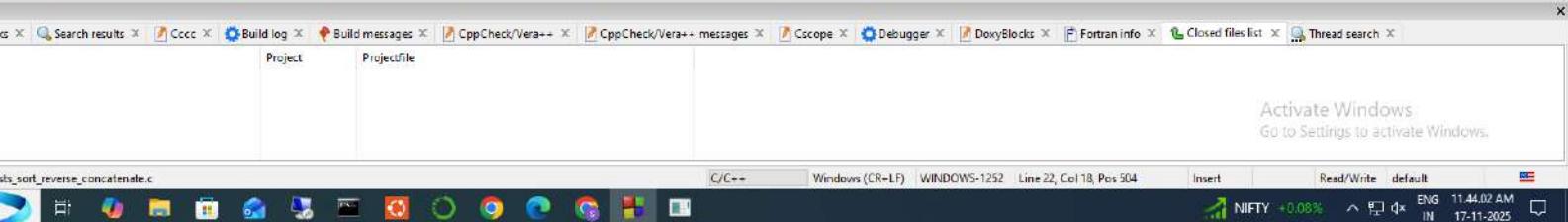
    temp = temp->next;
    temp->next = head2;
    return head1;
}

int main() {
    struct Node *list1 = NULL, *list2 = NULL;
    int choice, value, list_choice;

    while (1) {
        printf("\nMenu:\n");
        printf("1. Insert into List 1\n");
        printf("2. Insert into List 2\n");
        printf("3. Display Lists\n");
        printf("4. Sort List\n");
        printf("5. Reverse List\n");
        printf("6. Concatenate Lists\n");
        printf("7. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                printf("Enter value to insert in List 1: ");
                scanf("%d", &value);
                insertEnd(list1, value);
                break;
            case 2:
                printf("Enter value to insert in List 2: ");
                scanf("%d", &value);
                insertEnd(list2, value);
                break;
            case 3:
                printf("List 1: ");
                display(list1);
                printf("List 2: ");
                display(list2);
                break;
            case 4:
                printf("Sort which list (1 or 2)? ");
                scanf("%d", &list_choice);

```



```

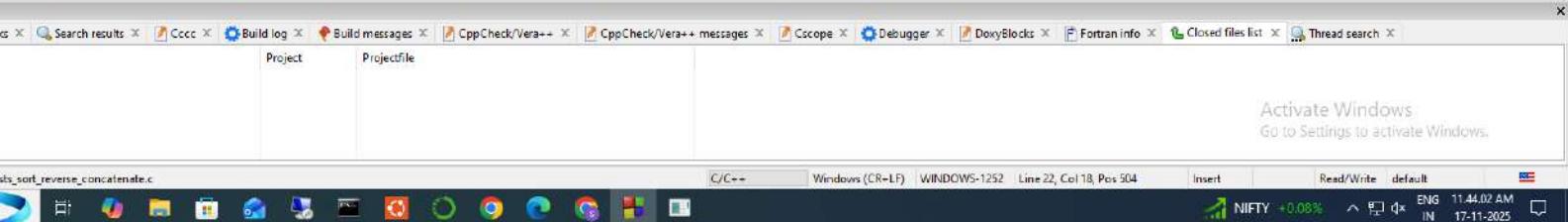
    temp = temp->next;
    temp->next = head2;
    return head1;
}

int main() {
    struct Node *list1 = NULL, *list2 = NULL;
    int choice, value, list_choice;

    while (1) {
        printf("\nMenu:\n");
        printf("1. Insert into List 1\n");
        printf("2. Insert into List 2\n");
        printf("3. Display Lists\n");
        printf("4. Sort List\n");
        printf("5. Reverse List\n");
        printf("6. Concatenate Lists\n");
        printf("7. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                printf("Enter value to insert in List 1: ");
                scanf("%d", &value);
                insertEnd(list1, value);
                break;
            case 2:
                printf("Enter value to insert in List 2: ");
                scanf("%d", &value);
                insertEnd(list2, value);
                break;
            case 3:
                printf("List 1: ");
                display(list1);
                printf("List 2: ");
                display(list2);
                break;
            case 4:
                printf("Sort which list (1 or 2)? ");
                scanf("%d", &list_choice);

```



```
Stacktrace X | Linked_lists_reverse_concatenate.c X
104         printf("Enter value to insert in List 2: ");
105         scanf("%d", &value);
106         insertEnd(&list2, value);
107         break;
108     case 3:
109         printf("List 1: ");
110         display(list1);
111         printf("List 2: ");
112         display(list2);
113         break;
114     case 4:
115         printf("Sort which list (1 or 2)? ");
116         scanf("%d", &list_choice);
117         if (list_choice == 1)
118             sortList(list1);
119         else
120             sortList(list2);
121         break;
122     case 5:
123         printf("Reverse which list (1 or 2)? ");
124         scanf("%d", &list_choice);
125         if (list_choice == 1)
126             list1 = reverseList(list1);
127         else
128             list2 = reverseList(list2);
129         break;
130     case 6:
131         list1 = concatenate(list1, list2);
132         list1 = NULL;
133         printf("Lists concatenated. List 1 now contains both lists.\n");
134         break;
135     case 7:
136         exit(0);
137     default:
138         printf("Invalid choice. Try again.\n");
139     }
140 }
141
142 return 0;
143 }
```

Logs & others

Code-Blocks X | Search results X | Ccc X | Build log X | Build messages X | CppCheck/Vera++ X | CppCheck/Vera++ messages X | Escope X | Debugger X | Doxygen X | Fortran.info X | Closed files list X | Thread search X

Editorfile Project Projfile

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C/C++ Windows (CR+LF) WINDOWS-1252 Line 128, Col 48, Pos 3571 Insert Read/Write default

SENSEX +0.74% 11:45:24 AM IN 17-11-2025

```
Menu:  
1. Insert into List 1  
2. Insert into List 2  
3. Display Lists  
4. Sort List  
5. Reverse List  
6. Concatenate Lists  
7. Exit  
Enter your choice: 1  
Enter value to insert in List 1: 23  
  
Menu:  
1. Insert into List 1  
2. Insert into List 2  
3. Display Lists  
4. Sort List  
5. Reverse List  
6. Concatenate Lists  
7. Exit  
Enter your choice: 2  
Enter value to insert in List 2: 65  
  
Menu:  
1. Insert into List 1  
2. Insert into List 2  
3. Display Lists  
4. Sort List  
5. Reverse List  
6. Concatenate Lists  
7. Exit  
Enter your choice: 3  
List 1: 23  
List 2: 65  
  
Menu:  
1. Insert into List 1  
2. Insert into List 2  
3. Display Lists  
4. Sort List  
5. Reverse List  
6. Concatenate Lists  
7. Exit  
Enter your choice: 1  
Enter value to insert in List 1: 55  
  
Menu:  
1. Insert into List 1  
2. Insert into List 2  
3. Display Lists  
4. Sort List  
5. Reverse List  
6. Concatenate Lists  
7. Exit  
Enter your choice: 2  
Enter value to insert in List 2: 78
```

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```
3. Display Lists
4. Sort List
5. Reverse List
6. Concatenate Lists
7. Exit
Enter your choice: 2
Enter value to insert in List 2: 78
Menu:
1. Insert into List 1
2. Insert into List 2
3. Display Lists
4. Sort List
5. Reverse List
6. Concatenate Lists
7. Exit
Enter your choice: 3
List 1: 23 55
List 2: 65 78
Menu:
1. Insert into List 1
2. Insert into List 2
3. Display Lists
4. Sort List
5. Reverse List
6. Concatenate Lists
7. Exit
Enter your choice: 5
Reverse which list (1 or 2)? 1
Menu:
1. Insert into List 1
2. Insert into List 2
3. Display Lists
4. Sort List
5. Reverse List
6. Concatenate Lists
7. Exit
Enter your choice: 3
List 1: 23 55
List 2: 78 65
Menu:
1. Insert into List 1
2. Insert into List 2
3. Display Lists
4. Sort List
5. Reverse List
6. Concatenate Lists
7. Exit
Enter your choice: 6
Lists concatenated. List 1 now contains both lists.
Menu:
1. Insert into List 1
2. Insert into List 2
3. Display Lists
4. Sort List
5. Reverse List
6. Concatenate Lists
7. Exit
Enter your choice: 1
```

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```
C:\Users\Admin\Desktop\Nidhi\IBM24CS185\Linked_lists_sort_reverse_concatenate.exe
```

```
4. Sort List  
5. Reverse List  
6. Concatenate Lists  
7. Exit  
Enter your choice: 3  
List 1: 23 55  
List 2: 78 05
```

```
Menu:
```

```
1. Insert into List 1
```

```
2. Insert into List 2
```

```
3. Display Lists
```

```
4. Sort List
```

```
5. Reverse List
```

```
6. Concatenate Lists
```

```
7. Exit
```

```
Enter your choice: 6
```

```
Lists concatenated. List 1 now contains both lists.
```

```
Menu:
```

```
1. Insert into List 1
```

```
2. Insert into List 2
```

```
3. Display Lists
```

```
4. Sort List
```

```
5. Reverse List
```

```
6. Concatenate Lists
```

```
7. Exit
```

```
Enter your choice: 1
```

```
Enter value to insert in List 1: 23
```

```
Menu:
```

```
1. Insert into List 1
```

```
2. Insert into List 2
```

```
3. Display Lists
```

```
4. Sort List
```

```
5. Reverse List
```

```
6. Concatenate Lists
```

```
7. Exit
```

```
Enter your choice: 3
```

```
List 1: 23 55 78 05 23
```

```
List 2: list is empty
```

```
Menu:
```

```
1. Insert into List 1
```

```
2. Insert into List 2
```

```
3. Display Lists
```

```
4. Sort List
```

```
5. Reverse List
```

```
6. Concatenate Lists
```

```
7. Exit
```

```
Enter your choice:
```

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24°C Mostly sunny 11:56:23 AM ENG IN 17-11-2025