

```

1 #include <stdio.h>
2 #include <stdlib.h>
3
4 struct node {
5     int data;
6     struct node* next;
7 };
8
9 struct node* createLinkedListFromUser(int n) {
10     struct node* start = NULL;
11     struct node* temp = NULL;
12     struct node* ptr = NULL;
13
14     for (int i = 0; i < n; i++) {
15         int value;
16         printf("Enter value for node %d: ", i + 1);
17         scanf("%d", &value);
18
19         ptr = (struct node*)malloc(sizeof(struct node));
20         ptr->data = value;
21         ptr->next = NULL;
22
23         if (start == NULL) {
24             start = ptr;
25         } else {
26             temp->next = ptr;
27         }
28         temp = ptr;
29     }
30
31     return start;
32 }
33
34 void displayLinkedList(struct node* start) {
35     struct node* temp = start;
36     while (temp != NULL) {
37         printf("%d ", temp->data);
38         temp = temp->next;
39     }
40     printf("\n");
41 }
42
43 struct node* reverseLinkedList(struct node* start) {
44     struct node* prev = NULL;
45     struct node* current = start;
46     struct node* next = NULL;
47
48     while (current != NULL) {
49         next = current->next;
50         current->next = prev;
51         prev = current;
52         current = next;
53     }
54     start = prev;
55     return start;
56 }
57
58 int main() {
59     int n;
60     printf("Enter the number of nodes: ");
61     scanf("%d", &n);
62
63     struct node* start = createLinkedListFromUser(n);
64
65     printf("Original Linked List:\n");
66     displayLinkedList(start);
67
68     start = reverseLinkedList(start);
69
70     printf("Reversed Linked List:\n");
71     displayLinkedList(start);
72
73     return 0;
74 }

```

```
KIIT0001@Utkarsh MINGW64 /d/Learning C 3rd Sem/assignments/assignment_aug16
●$ ./l1ist
Enter the number of nodes: 3
Enter value for node 1: 10
Enter value for node 2: 20
Enter value for node 3: 30
Original Linked List:
10 20 30
Reversed Linked List:
30 20 10
```