Write a C program to Reverse the linked list in groups of given list:

Test Case 1:  
If a linked listis: 1 → 2 → 3 → 4 → 5 → 6 → 7 → 8  
The value of size k is 2  
Then the linked list looks like: 2 → 1 → 4 → 3 → 6 → 5 → 8 → 7

Test Case 2:  
If a linked listis: 1 → 2 → 3 → 4 → 5 → 6 → 7 → 8  
The value of size k is 3  
Then the linked list looks like: 3 → 2 → 1 → 6 → 5 → 4 → 8 → 7

#include<stdio.h>

#include<stdlib.h>

struct Node

{

int data;

struct Node\* next;

};

struct Node \*reverse (struct Node \*head, int k)

{

struct Node\* current = head;

struct Node\* next = NULL;

struct Node\* prev = NULL;

int count = 0;

while (current != NULL && count < k)

{

next = current->next;

current->next = prev;

prev = current;

current = next;

count++;

}

if (next != NULL)

head->next = reverse(next, k);

return prev;

}

void push(struct Node\*\* head\_ref, int new\_data)

{

struct Node\* new\_node = (struct Node\*) malloc(sizeof(struct Node));

new\_node->data = new\_data;

new\_node->next = (\*head\_ref);

(\*head\_ref) = new\_node;

}

void printList(struct Node \*node)

{

while (node != NULL)

{

printf("%d ", node->data);

node = node->next;

}

}

int main(void)

{

struct Node\* head = NULL;

push(&head, 8);

push(&head, 7);

push(&head, 6);

push(&head, 5);

push(&head, 4);

push(&head, 3);

push(&head, 2);

push(&head, 1);

int k;

printf("\nGiven linked list \n");

printList(head);

printf("\nk=");

scanf("%d",&k);

head = reverse(head, k);

printf("\nReversed Linked list \n");

printList(head);

return(0);

}



