

Afnan-15cs058

20-may-2020

If a
linked
list is:
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

If a linked list is: 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

```
struct Node
{
    int data;
    struct Node* next;
};

pointer to the new head node. /
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)
    {
```

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```
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);
    printf("\nGiven linked list \n"); printList(head); head =
reverse(head, 2);
    printf("\nReversed Linked list \n"); printList(head); return(0);
}
```