

//by Faizullah--> 1- Write a function that adds all odd numbers to the beginning of the list and all even numbers to the end of the list until -1 is entered from the keyboard.

```
#include <stdio.h>
#include <stdlib.h>

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

struct Node* push(struct Node* head, int data) {
    struct Node* new_node = (struct Node*)malloc(sizeof(struct Node));
    new_node->data = data;
    new_node->next = head;
    return new_node;
}

int main() {
    struct Node* head = NULL;
    int input;

    while (1) {
        printf("Enter a number (-1 to stop): ");
        scanf("%d", &input);

        if (input == -1) {
            break;
        }

        if (input % 2 == 1) {
            head = push(head, input);
        } else {
            struct Node* new_node = (struct Node*)malloc(sizeof(struct Node));
            new_node->data = input;
            new_node->next = NULL;

            if (head == NULL) {
                head = new_node;
            } else {
                struct Node* current = head;
                while (current->next != NULL) {
                    current = current->next;
                }
                current->next = new_node;
            }
        }
    }

    printf("Resulting list: ");
    struct Node* current = head;
    while (current != NULL) {
        printf("%d ", current->data);
        current = current->next;
    }
    printf("\n");

    // allocated memory
    while (head != NULL) {
        struct Node* temp = head;
        head = head->next;
        free(temp);
    }

    return 0;
}
```