

```

#include<stdio.h>

#include <stdlib.h>

struct Node {

    int data;

    struct Node* next;

};

struct Node* createNode(int data) {

    struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));

    newNode->data = data;

    newNode->next = NULL;

    return newNode;

}

void insertEnd(struct Node** head, int data) {

    struct Node* newNode = createNode(data);

    if (*head == NULL) {

        *head = newNode;

        return;

    }

    struct Node* temp = *head;

    while (temp->next != NULL) {

        temp = temp->next;

    }

    temp->next = newNode;

}

void display(struct Node* head) {

    while (head) {

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

        head = head->next;

    }

    printf("NULL\n");

}

```

```

void sortList(struct Node* head) {
    struct Node *i, *j;
    int temp;
    for (i = head; i != NULL; i = i->next) {
        for (j = i->next; j != NULL; j = j->next) {
            if (i->data > j->data) {
                temp = i->data;
                i->data = j->data;
                j->data = temp;
            }
        }
    }
}

void reverseList(struct Node** head) {
    struct Node *prev = NULL, *current = *head, *next = NULL;
    while (current != NULL) {
        next = current->next;
        current->next = prev;
        prev = current;
        current = next;
    }
    *head = prev;
}

void concatenate(struct Node** head1, struct Node* head2) {
    if (*head1 == NULL) {
        *head1 = head2;
        return;
    }
    struct Node* temp = *head1;
    while (temp->next != NULL)
        temp = temp->next;

```

```

temp->next = head2;
}
int main() {
    struct Node* list1 = NULL;
    struct Node* list2 = NULL;
    insertEnd(&list1, 40);
    insertEnd(&list1, 10);
    insertEnd(&list1, 50);
    insertEnd(&list1, 70);
    printf("List 1: ");
    display(list1);
    insertEnd(&list2, 7);
    insertEnd(&list2, 3);
    insertEnd(&list2, 9);
    printf("List 2: ");
    display(list2);
    sortList(list1);
    printf("\nList 1 after sorting: ");
    display(list1);
    reverseList(&list1);
    printf("\nList 1 after reversal: ");
    display(list1);
    concatenate(&list1, list2);
    printf("\nAfter concatenation (List1 + List2): ");
    display(list1);
    return 0;
}

```

List 1: 40 -> 10 -> 50 -> 70 -> NULL

List 2: 7 -> 3 -> 9 -> NULL

List 1 after sorting: 10 -> 40 -> 50 -> 70 -> NULL

List 1 after reversal: 70 -> 50 -> 40 -> 10 -> NULL

After concatenation (List1 + List2): 70 -> 50 -> 40 -> 10 -> 7 -> 3 -> 9 -> NULL

Process returned 0 (0x0) execution time : 0.010 s

Press any key to continue.