

```
#include <stdio.h>

#include <stdlib.h>

//Represent a node of the singly linked list
struct node{
    int data;
    struct node *next;
};

//Represent the head and tail of the singly linked list
struct node *head, *tail = NULL;

//addNode() will add a new node to the list
void addNode(int data) {
    //Create a new node
    struct node *newNode = (struct node*)malloc(sizeof(struct node));
    newNode->data = data;
    newNode->next = NULL;

    //Checks if the list is empty
    if(head == NULL) {
        //If list is empty, both head and tail will point to new node
        head = newNode;
        tail = newNode;
    }
    else {
        //newNode will be added after tail such that tail's next will point to newNode
        tail->next = newNode;

        //newNode will become new tail of the list
        tail = newNode;
    }
}
```

```
}  
}
```

//sortList() will sort nodes of the list in ascending order

```
void sortList() {
```

```
    //Node current will point to head
```

```
    struct node *current = head, *index = NULL;
```

```
    int temp;
```

```
    if(head == NULL) {
```

```
        return;
```

```
    }
```

```
    else {
```

```
        while(current != NULL) {
```

```
            //Node index will point to node next to current
```

```
            index = current->next;
```

```
            while(index != NULL) {
```

//If current node's data is greater than index's node data, swap the data
between them

```
                if(current->data > index->data) {
```

```
                    temp = current->data;
```

```
                    current->data = index->data;
```

```
                    index->data = temp;
```

```
                }
```

```
                index = index->next;
```

```
            }
```

```
            current = current->next;
```

```
        }
```

```
    }  
}
```

//display() will display all the nodes present in the list

```
void display() {  
    //Node current will point to head  
    struct node *current = head;  
    if(head == NULL) {  
        printf("List is empty \n");  
        return;  
    }  
    while(current != NULL) {  
        //Prints each node by incrementing pointer  
        printf("%d ", current->data);  
        current = current->next;  
    }  
    printf("\n");  
}
```

```
int main()  
{  
    //Adds data to the list  
    addNode(9);  
    addNode(7);  
    addNode(2);  
    addNode(5);  
    addNode(4);  
  
    //Displaying original list
```

```
printf("Original list: \n");  
display();  
  
//Sorting list  
sortList();  
  
//Displaying sorted list  
printf("Sorted list: \n");  
display();  
  
return 0;  
}
```