**#include <stdio.h>**

**#include <stdlib.h>**

**struct Node**

**{**

**int data;**

**struct Node\* next;**

**};**

**struct Node\* head=NULL;**

**struct Node\* head2=NULL;**

**void sort(struct Node\* head)**

**{**

**struct Node\* i;**

**struct Node\* j;**

**int temp;**

**printf("The linked list before sorting is:\n");**

**display(head);**

**for(i=head; (\*i).next!=NULL; i=(\*i).next)**

**{**

**for(j=(\*i).next; (\*j).next!=NULL; j=(\*j).next)**

**{**

**if((\*j).data<(\*i).data)**

**{**

**temp=(\*i).data;**

**(\*i).data=(\*j).data;**

**(\*j).data=temp;**

**}**

**}**

**}**

**printf("\nThe linked list after sorting is:\n");**

**display(head);**

**}**

**void reverse(struct Node\* head)**

**{**

**struct Node\* previous\_Node=NULL;**

**struct Node\* current\_Node=head;**

**struct Node\* next\_Node;**

**printf("The linked list before reversing is:\n");**

**display(head);**

**while(current\_Node!=NULL)**

**{**

**next\_Node=(\*current\_Node).next;**

**if(next\_Node==NULL)**

**{**

**head=current\_Node;**

**}**

**(\*current\_Node).next=previous\_Node;**

**previous\_Node=current\_Node;**

**current\_Node=next\_Node;**

**}**

**printf("\nThe linked list after reversing is:\n");**

**display(head);**

**}**

**void concatenate(struct Node\* head1, struct Node\* head2)**

**{**

**printf("The linked list 1 is:\n");**

**display(head);**

**printf("\nThe linked list 2 is:\n");**

**display(head2);**

**struct Node\* last;**

**for(last=head; (\*last).next!=NULL; last=(\*last).next);**

**(\*last).next=head2;**

**printf("\nThe linked list 1 after concatenation is:\n");**

**display(head);**

**}**

**void display(struct Node\* head)**

**{**

**struct Node\* temp;**

**for(temp=head; temp!=NULL; temp=(\*temp).next)**

**{**

**printf("%d ", (\*temp).data);**

**}**

**}**

**void main()**

**{**

**struct Node\* New\_Node;**

**int position;**

**int data;**

**int choice;**

**while(1)**

**{**

**head=NULL;**

**head2=NULL;**

**printf("List 1\n");**

**for(position=1; position<=5; position++)**

**{**

**printf("Enter the data that you wish to enter for position %d. ", 6-position);**

**scanf("%d",&data);**

**struct Node\* New\_Node=malloc(sizeof(struct Node));**

**(\*New\_Node).data=data;**

**(\*New\_Node).next=head;**

**head=New\_Node;**

**}**

**printf("Enter 1 to sort the linked list, 2 to reverse the linked list, 3 to concatenate it with another linked list and 4 to exit. ");**

**scanf("%d", &choice);**

**if(choice==1)**

**sort(head);**

**else if(choice==2)**

**reverse(head);**

**else if(choice==3)**

**{**

**printf("List 2\n");**

**for(position=1; position<=5; position++)**

**{**

**printf("Enter the data that you wish to enter for position %d. ", 6-position);**

**scanf("%d",&data);**

**struct Node\* New\_Node=malloc(sizeof(struct Node));**

**(\*New\_Node).data=data;**

**(\*New\_Node).next=head2;**

**head2=New\_Node;**

**}**

**concatenate(head, head2);**

**}**

**else if(choice==4)**

**break;**

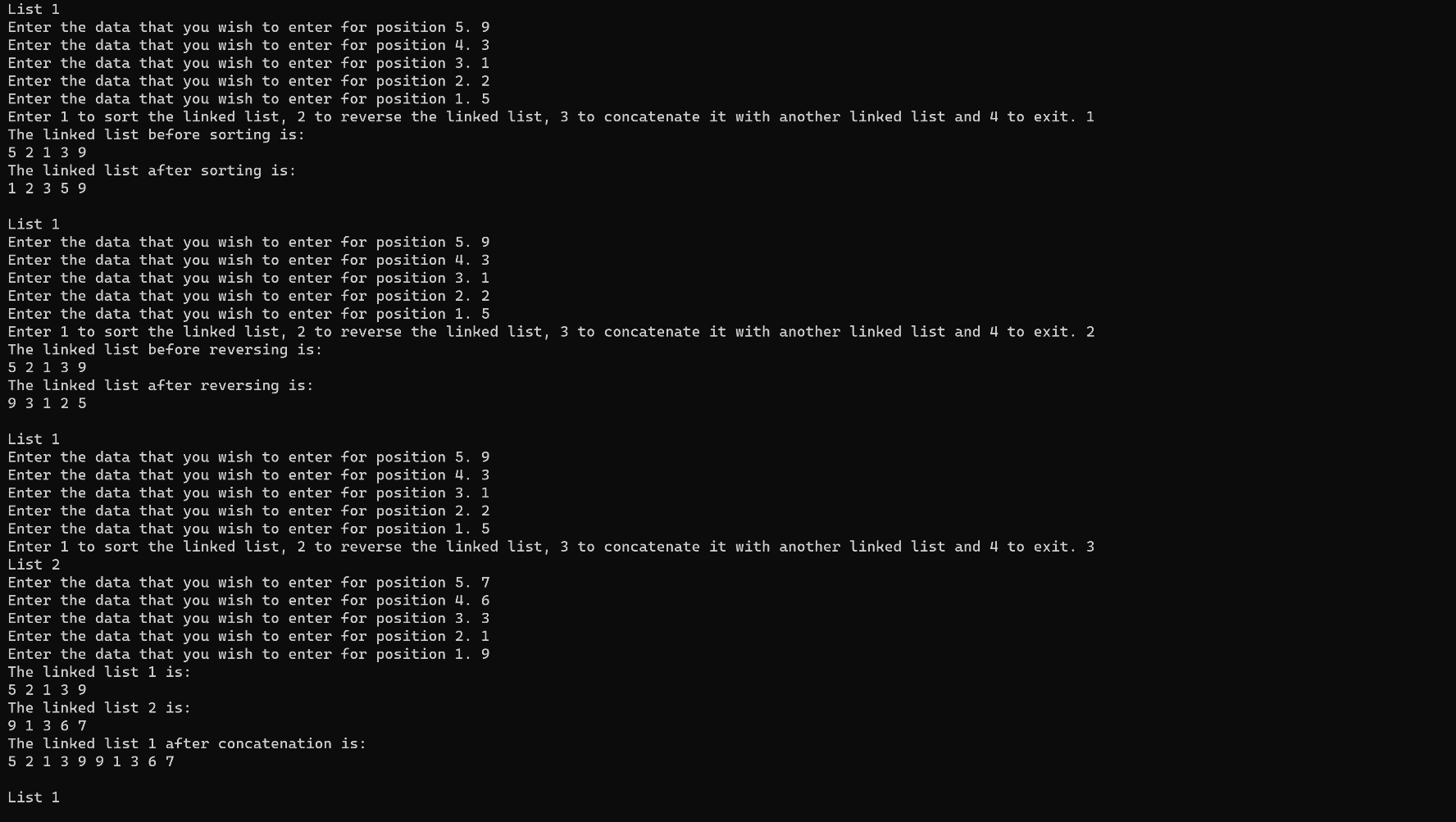
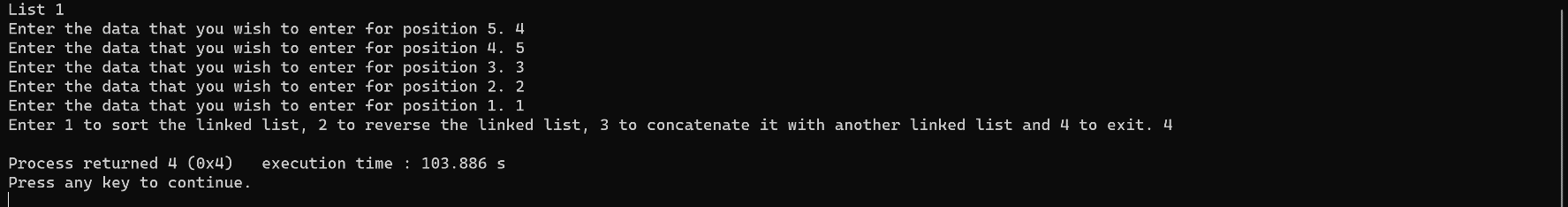
**else**

**printf("Invalid input character.");**

**printf("\n\n");**

**}**

**}**

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