#include <stdio.h>

#include <stdlib.h>

//-------------------------------------------------------------------------

struct Node

{

    int digit;

    struct Node\* next;

};

//-------------------------------------------------------------------------

struct Node\* createNode(int digit)

{

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

    newNode->digit = digit;

    newNode->next = NULL;

    return newNode;

}

//-------------------------------------------------------------------------

struct Node\* insertAtHead(struct Node\* head, int digit)

{

    struct Node\* newNode = createNode(digit);

    newNode->next = head;

    return newNode;

}

//-------------------------------------------------------------------------

struct Node\* addLinkedLists(struct Node\* l1, struct Node\* l2)

{

    struct Node\* result = NULL;

    int carry = 0;

    while (l1 != NULL || l2 != NULL)

    {

        int sum = carry;

        if (l1 != NULL)

        {

            sum += l1->digit;

            l1 = l1->next;

        }

        if (l2 != NULL)

        {

            sum += l2->digit;

            l2 = l2->next;

        }

        carry = sum / 10;

        result = insertAtHead(result, sum % 10);

    }

    if (carry > 0)

    {

        result = insertAtHead(result, carry);

    }

    return result;

}

//-------------------------------------------------------------------------

void printLinkedList(struct Node\* head)

{

    while (head != NULL)

    {

        printf("%d", head->digit);

        head = head->next;

    }

    printf("\n");

}

//-------------------------------------------------------------------------

struct Node\* reverseLinkedList(struct Node\* head)

{

    struct Node\* prev = NULL;

    struct Node\* current = head;

    struct Node\* next = NULL;

    while (current != NULL)

    {

        next = current->next;

        current->next = prev;

        prev = current;

        current = next;

    }

    return prev;

}

//-------------------------------------------------------------------------

struct Node\* appendDigit(struct Node\* head, int digit)

{

    struct Node\* newNode = createNode(digit);

    if (head == NULL)

    {

        return newNode;

    }

    struct Node\* temp = head;

    while (temp->next != NULL)

    {

        temp = temp->next;

    }

    temp->next = newNode;

    return head;

}

//-------------------------------------------------------------------------

int main()

{

    struct Node\* num1 = NULL;

    struct Node\* num2 = NULL;

    struct Node\* result = NULL;

    num1 = appendDigit(num1, 7);

    num1 = appendDigit(num1, 6);

    num1 = appendDigit(num1, 4);

    num1 = appendDigit(num1, 3);

    num1 = appendDigit(num1, 4);

    num1 = appendDigit(num1, 5);

    num2 = appendDigit(num2, 5);

    num2 = appendDigit(num2, 1);

    num2 = appendDigit(num2, 3);

    num2 = appendDigit(num2, 8);

    num2 = appendDigit(num2, 4);

    result = addLinkedLists(num1, num2);

    printf("Number 1: ");

    printLinkedList(reverseLinkedList(num1));

    printf("Number 2: ");

    printLinkedList(reverseLinkedList(num2));

    printf("Result: ");

    printLinkedList(result);

    return 0;

}

Output:

