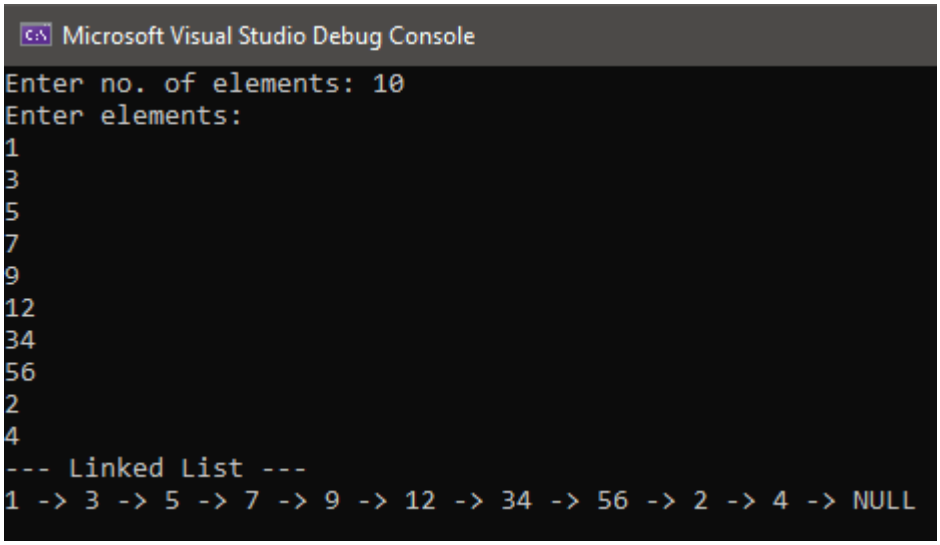
TASK NO. 04

Pointers, Arrays and Linked Lists

```cpp
#include<stdio.h>
#include <iostream>

using namespace std;

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

struct Node* newNode(int data)
{
    Node* node = new Node;
    node->data = data;
    node->next = NULL;
    return node;
}

void insertNewNode(Node** head, int data)
{
    Node* node = newNode(data);
    Node* ptr;
    if (*head == NULL)
    {
        *head = node;
    }
    else
    {
        ptr = *head;
        while (ptr->next != NULL)
        {
            ptr = ptr->next;
        }
        ptr->next = node;
    }
}
```

```cpp
void printLinkedList(Node* head)
{
    while (head != NULL)
    {
        cout << head->data << " -> ";
        head = head->next;
    }
    cout << "NULL" << endl;
}

Node* createLinkedList(int arr[], int n)
{
    Node* head = NULL;
    for (int i = 0; i < n; i++)
    {
        insertNewNode(&head, arr[i]);
    }
    return head;
}

int main()
{
    int n;
    int arr[10];
    cout << "Enter no. of elements: ";
    cin >> n;
    cout << "Enter elements: " << endl;
    for (int i = 0; i < n; i++)
    {
        cin >> arr[i];
    }
    Node* head = createLinkedList(arr, n);
    cout << "--- Linked List ---" << endl;
    printLinkedList(head);
    return 0;
}
```

RESULTS


Microsoft Visual Studio Debug Console
Enter no. of elements: 10
Enter elements:
1
3
5
7
9
12
34
56
2
4
--- Linked List ---
1 -> 3 -> 5 -> 7 -> 9 -> 12 -> 34 -> 56 -> 2 -> 4 -> NULL