

WAP TO IMPLEMENT STACK USING LINKED LIST

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

```
#include <stdlib.h>
```

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

```
void insertAtBeginning(struct Node** head, int value) {  
    struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));  
    newNode->data = value;  
    newNode->next = *head;  
    *head = newNode;  
}
```

```
void deleteAtBeginning(struct Node** head) {  
    if (*head == NULL) {  
        printf("Linked list is already empty.\n");  
        return;  
    }
```

```
    struct Node* temp = *head;  
    *head = (*head)->next;  
    free(temp);  
}
```

```
void displayLinkedList(struct Node* head) {
```

```

struct Node* temp = head;

if (temp == NULL) {
    printf("Linked list is empty.\n");
    return;
}

while (temp != NULL) {
    printf("%d -> ", temp->data);
    temp = temp->next;
}

printf("NULL\n");
}

int main() {
    struct Node* head = NULL;

    // Insertion at the beginning
    insertAtBeginning(&head, 10);
    insertAtBeginning(&head, 20);
    insertAtBeginning(&head, 30);
    insertAtBeginning(&head, 40);
    insertAtBeginning(&head, 50);
    deleteAtBeginning(&head);
    printf("The stack elements are:\n");
    displayLinkedList(head);

```

```
return 0;  
}
```

A screenshot of a Windows command prompt window. The title bar at the top reads "C:\Users\bmsce\Desktop\shashankc\Stack.exe". The command prompt shows the following output:
The stack elements are:
40 -> 30 -> 20 -> 10 -> NULL

Process returned 0 (0x0) execution time : 0.094 s
Press any key to continue.
The background of the command prompt is black with white text.