

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

```
struct Node
{
    int data;
    struct Node *next;
}*top = NULL;
```

```
void push(int);
void pop();
void display();
void search();
```

```
void main()
{
    int choice, value;
    printf("\n:: Stack using Linked List ::\n");
    while(1){
        printf("\n***** MENU *****\n");
        printf("1. Push\n2. Pop\n3. Display\n4. Search\n5. Exit\n");
        printf("Enter your choice: ");
        scanf("%d",&choice);
        switch(choice){
            case 1: printf("Enter the value to be insert: ");
                    scanf("%d", &value);
                    push(value);
                    break;
            case 2: pop(); break;
            case 3: display(); break;
            case 4: search(); break;
```

```

    case 5: exit(0); break;
    default: printf("\nWrong selection!!! Please try again!!!\n");
    }
}
void push(int value)
{
    struct Node *newNode;
    newNode = (struct Node*)malloc(sizeof(struct Node));
    newNode->data = value;
    if(top == NULL)
        newNode->next = NULL;
    else
        newNode->next = top;
    top = newNode;
    printf("\nInsertion is Success!!!\n");
}
void pop()
{
    if(top == NULL)
        printf("\nStack is Empty!!!\n");
    else{
        struct Node *temp = top;
        printf("\nDeleted element: %d", temp->data);
        top = temp->next;
        free(temp);
    }
}
void display()
{
    if(top == NULL)

```

```

    printf("\nStack is Empty!!!\n");
else{
    struct Node *temp = top;
    while(temp->next != NULL){
        printf("%d--->",temp->data);
        temp = temp -> next;
    }
    printf("%d--->NULL",temp->data);
}
}
void search()
{
    struct Node *ptr;
    int item,i=0,flag;
    ptr = top;
    if(ptr == NULL)
    {
        printf("\nEmpty List\n");
    }
    else
    {
        printf("\nEnter item which you want to search:");
        scanf("%d",&item);
        while (ptr!=NULL)
        {
            if(ptr->data == item)
            {
                printf("item found at location %d ",i+1);
                flag=1;
            }
            else

```

```
{
    flag=0;
}
i++;
ptr = ptr -> next;
}
if(flag==0)
{
    printf("Item not found\n");
}
}
```

Output

:: Stack using Linked List ::

***** MENU *****

1. Push
2. Pop
3. Display
4. Search
5. Exit

Enter your choice: 1

Enter the value to be insert: 2

Insertion is Success!!!

***** MENU *****

1. Push
2. Pop
3. Display
4. Search
5. Exit

Enter your choice: 1

Enter the value to be insert: 34

Insertion is Success!!!

***** MENU *****

1. Push
2. Pop
3. Display
4. Search
5. Exit

Enter your choice: 1

Enter the value to be insert: 45

Insertion is Success!!!

***** MENU *****

1. Push
2. Pop
3. Display
4. Search
5. Exit

Enter your choice: 1

Enter the value to be insert: 57

Insertion is Success!!!

***** MENU *****

1. Push
2. Pop
3. Display
4. Search
5. Exit

Enter your choice: 3

57---->45---->34---->2---->NULL

```
***** MENU *****
1. Push
2. Pop
3. Display
4. Search
5. Exit
Enter your choice: 2
```

```
Deleted element: 57
***** MENU *****
1. Push
2. Pop
3. Display
4. Search
5. Exit
Enter your choice: 3
45---->34---->2---->NULL
```

```
***** MENU *****
1. Push
2. Pop
3. Display
4. Search
5. Exit
Enter your choice: 4
```

```
Enter item which you want to search:2
item found at location 3
```