

```
1  Program for stack using linked
    list
2
3  #include<stdio.h>
4
5  #include<stdlib.h>
6  Struct Node
7  {
8  Int data;
9  Struct Node *next;
10 }*top = NULL;
11 Void push(int);
12 Void pop();
13 Void display();
14 Void search();
15 Void main()
16 {
17 Int choice, value;
18 Printf("\n Stack using Linked List
    \n");
19 Printf(" _____ "
    );
20 While(1){
21 Printf("\n\n *** MENU *** \n\n");
```

```
22  Printf(" ~~~~~~");
23  Printf("\n1. Push\n2. Pop\n3.
      Display\n4. Search\n5. Exit\n"
      );
24  Printf("Enter your choice: ");
25  Scanf("%d",&choice);
26  Switch(choice){
27  Case 1: printf("Enter the value to
      be insert: ");
28  Scanf("%d", &value);
29  Push(value);
30  Break;
31  Case 2: pop(); break;
32  Case 3: display(); break;
33
34  Case 4: search(); break;
35
36  Case 5: exit(0); break;
37  Default: printf("\n Invalid
      selection \n");
38  }
39  }
40  }
```

```
41  Void push(int value)
42  {
43  Struct Node *newNode;
44  newNode = (struct Node*)malloc
           (sizeof(struct Node));
45  newNode->data = value;
46  if(top == NULL)
47  newNode->next = NULL;
48  else
49  newNode->next = top;
50  top = newNode;
51  printf("\nInsertion is Success\n"
           );
52  }
53  Void pop()
54  {
55  If(top == NULL)
56  Printf("\nStack is Empty\n");
57  Else{
58  Struct Node *temp = top;
59  Printf("\nDeleted element: %d \n",
           temp->data);
60  Top = temp->next;
61  Free(temp);
```



```
61  Free(temp);
62  }
63  |
64  }
65
66  Void display()
67
68  {
69  If(top == NULL)
70  Printf("\nStack is Empty\n");
71  Else
72  {
73  Struct Node *temp = top;
74  While(temp->next != NULL)
75  {
76  Printf("%d,",temp->data);
77  Temp = temp -> next;
78  }
79  Printf("%d",temp->data);
80  }
81  }
82  Void search()
83  {
84  Struct Node *ptr;
```

```
85  Int item,i=0,flag;
86  Ptr = top;
87  If(ptr == NULL)
88  {
89  Printf("\nEmpty List\n");
90  }
91  Else
92  {
93  Printf("\nEnter item which to be
        searched:");
94  Scanf("%d",&item);
95  While (ptr!=NULL)
96
97  {
98
99  If(ptr->data == item)
100 {
101  Printf("item found at location %d
        \n ",i+1);
102  Flag=1;
103  }
104  I++;
```

```
105  Ptr = ptr -> next;
106  }
107  If(flag==0)
108  {
109  Printf("Item not found\n");
110  }
111  }
112  }
113
```

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: 10

Insertion is Success

*** MENU ***

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

Enter your choice: 3

10

*** MENU ***

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

Enter your choice:

|