

stack_04_PopPushNShow.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3  #define SIZE 4
4
5  int top = -1;
6  int arr[SIZE];
7
8  void push();
9  void pop();
10 void show();
11
12 int main()
13 {
14     int choice;
15     while (1)
16     {
17         printf("\nPerform Operatons on Stack");
18         printf("\n1.Push the Element");
19         printf("\n2.Pop the Element");
20         printf("\n3.Show the Stack");
21
22         printf("\nEnter a Choice: ");
23         scanf("%d", &choice);
24
25         switch (choice)
26         {
27             case 1:
28                 push();
29                 break;
30
31             case 2:
32                 pop();
33                 break;
34
35             case 3:
36                 show();
37                 break;
38
39             case 4:
40                 exit(0);
41                 break;
42
43             default:
44                 printf("Invalid Statement!");
45         }
46     }
47 }
48
49 void push()
50 {
51     int x;
```

```

52     if (top == SIZE - 1)
53     {
54         printf("\nOverflow!");
55     }
56     else
57     {
58         printf("\nEnter number to be Added: ");
59         scanf("%d", &x);
60         top = top + 1;
61         arr[top] = x;
62         printf("Number has been Added\n");
63     }
64 }
65
66 void pop()
67 {
68     if (top == -1)
69     {
70         printf("\nUnderflow!");
71     }
72     else
73     {
74         printf("\nPopped Element: %d", arr[top]);
75         top = top - 1;
76     }
77 }
78
79 void show()
80 {
81     if (top == -1)
82     {
83         printf("\nEmpty Stack!!");
84     }
85     else
86     {
87         printf("\nElements Present: ");
88         for (int i = top; i >= 0; --i)
89         {
90             printf("%d ", arr[i]);
91         }
92     }
93 }

```