

```

1  #include <stdio.h>
2  #include <process.h>
3  #include <conio.h>
4  #define stack_size 5
5  int top=-1;
6  int s[10];
7  int item;
8  void push() {
9      if(top==stack_size-1) {
10         printf("Stack overflow\n");
11         return;
12     }
13     top=top+1;
14     s[top]=item;
15 }
16 int pop() {
17     if(top== -1)
18         return -1;
19     return s[top--];
20 }
21 void display() {
22     int i;
23     if(top== -1) {
24         printf("Stack is empty\n");
25         return;
26     }
27     printf("Contents of the stack:\n");
28     for(i=top; i>=0; i--)
29         printf("%d\n", s[i]);
30 }
31 int main() {
32     int item_deleted;
33     int ch;
34     for(;;) {
35         printf("\n1.Push\n2.Pop\n3.Display\n4.Exit");
36         printf("\nEnter choice:");
37         scanf("%d",&ch);
38         switch(ch) {
39             case 1:
40                 printf("\nEnter item to be inserted:");
41                 scanf("%d",&item);
42                 push();
43                 break;
44             case 2:
45                 item_deleted=pop();
46                 if(item_deleted== -1)
47                     printf("\nStack is empty\n");
48                 else
49                     printf("item deleted is %d\n", item_deleted);
50                 break;
51             case 3:
52                 display();
53                 break;
54             default:
55                 exit(0);
56         }
57     }
58     return 0;

```

C:\Windows\SYSTEM32\cmd.exe

```
1.Push
2.Pop
3.Display
4.Exit
Enter choice:1

Enter item to be inserted:5
1.Push
2.Pop
3.Display
4.Exit
Enter choice:1

Enter item to be inserted:6
1.Push
2.Pop
3.Display
4.Exit
Enter choice:1

Enter item to be inserted:7
1.Push
2.Pop
3.Display
4.Exit
Enter choice:1

Enter item to be inserted:8
1.Push
2.Pop
3.Display
4.Exit
Enter choice:1

Enter item to be inserted:9
1.Push
2.Pop
3.Display
4.Exit
Enter choice:1

Enter item to be inserted:10
Stack overflow
1.Push
2.Pop
3.Display
4.Exit
Enter choice:3
Contents of the stack:
9
8
7
6
```

```
0
5
1.Push
2.Pop
3.Display
4.Exit
Enter choice:2
item deleted is 9
1.Push
2.Pop
3.Display
4.Exit
Enter choice:2
item deleted is 8
1.Push
2.Pop
3.Display
4.Exit
Enter choice:2
item deleted is 7
1.Push
2.Pop
3.Display
4.Exit
Enter choice:2
item deleted is 6
1.Push
2.Pop
3.Display
4.Exit
Enter choice:2
item deleted is 5
1.Push
2.Pop
3.Display
4.Exit
Enter choice:2
Stack Underflow
1.Push
2.Pop
3.Display
4.Exit
Enter choice:3
Stack is empty
1.Push
2.Pop
3.Display
4.Exit
Enter choice:
```