

C stackoperations.c > push()

```

1  # include <stdio.h>
2  # define N 5
3  int stack[N];
4  int top=-1;
5  int i;
6
7  void push(){
8      int x;
9      printf("Enter data:");
10     scanf("%d",&x);
11     if (top==N-1){
12         printf("Overflow");
13     }
14     else{
15         top++;
16         stack[top]=x;
17         printf("Now the top is:%d \n",top);
18         printf("The elements Stack are:");
19         for(i=top;i>=0&&i<N;i--){
20             printf("%d, ",stack[i]);
21         }
22     }
23 }
24 void pop(){
25     int item;
26     if(top==-1){
27         printf("Underflow");
28     }
29     else{
30         item=stack[top];
31         top--;
32         printf("%d is popped",item);
33         printf("\nThe elements Stack are:");
34         for(i=top;i>=0&&i<N;i--){
35             printf("%d",stack[i]);
36         }
37     }
38 }
39 void peek(){
40     if (top==-1){
41         printf("Underflow");

```

```
Welcome  C stackoperations.c •
C stackoperations.c > push()
24     void pop(){
39     void peek(){
40         if (top== -1){
41             printf("Underflow");
42         }
43         else{
44             printf("%d", stack[top]);
45         }
46     }
47 }
48 void main(){
49     int stack[5];
50     int top=-1;
51     int a;
52     do{
53         printf("\nEnter 1,2,3 to choose push,pop,peek operations respectively");
54         scanf("%d",&a);
55         switch(a){
56             case 1:
57                 push();
58                 break;
59             case 2:
60                 pop();
61                 break;
62             case 3:
63                 peek();
64                 break;
65             default:
66                 printf("Invalid input!!");
67                 break;
68         }
69     }while(a!= -1);
70 }
71
72 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\student\Desktop\1BF24CS250> & 'c:\Users\student\.vscode\extensions\ms-vscode.cpptools-pyw.mik' '--stdout=Microsoft-MIEngine-Out-vqyc4sk1.ub5' '--stderr=Microsoft-MIEngine-Error-zy14uprf\gdb.exe' '--interpreter=mi'
```

```
Enter 1,2,3 to choose push,pop,peek operations respectively2
Underflow
Enter 1,2,3 to choose push,pop,peek operations respectively3
Underflow
Enter 1,2,3 to choose push,pop,peek operations respectively1
Enter data:11
Now the top is:0
The elements Stack are:11,
Enter 1,2,3 to choose push,pop,peek operations respectively1
Enter data:12
Now the top is:1
The elements Stack are:12, 11,
Enter 1,2,3 to choose push,pop,peek operations respectively1
Enter data:13
Now the top is:2
The elements Stack are:13, 12, 11,
Enter 1,2,3 to choose push,pop,peek operations respectively1
Enter data:14
Now the top is:3
The elements Stack are:14, 13, 12, 11,
Enter 1,2,3 to choose push,pop,peek operations respectively2
14 is popped
The elements Stack are:131313
Enter 1,2,3 to choose push,pop,peek operations respectively1
Enter data:14
Now the top is:3
The elements Stack are:14, 13, 12, 11,
Enter 1,2,3 to choose push,pop,peek operations respectively3
14
Enter 1,2,3 to choose push,pop,peek operations respectively1
Enter data:15
Now the top is:4
The elements Stack are:15, 14, 13, 12, 11,
Enter 1,2,3 to choose push,pop,peek operations respectively1
Enter data:16
Overflow
Enter 1,2,3 to choose push,pop,peek operations respectively
```