

```
1  #include <stdio.h>
2
3  int MAXSIZE = 8;
4  int stack[8];
5  int top = -1;
6
7  int isempty() {
8      if(top == -1)
9          return 1;
10     else
11         return 0;
12 }
13
14
15 int isfull() {
16     if(top == MAXSIZE)
17         return 1;
18     else
19         return 0;
20 }
21
22
23 int peek() {
24     return stack[top];
25 }
26
27 int pop() {
28     int data;
29
30     if(!isempty()) {
31         data = stack[top];
32         top = top - 1;
33         return data;
34     } else {
35         printf("Could not retrieve data, Stack is empty.\n");
36     }
37 }
38
39 int push(int data) {
```

```
31     data = stack[top];
32     top = top - 1;
33     return data;
34 } else {
35     printf("Could not retrieve data, stack is empty.\n");
36 }
37 }
38
39 int push(int data) {
40
41     if(!isfull()) {
42         top = top + 1;
43         stack[top] = data;
44     } else {
45         printf("Could not insert data, stack is full.\n");
46     }
47 }
48
49 int main() {
50
51     push(3);
52     push(5);
53     push(9);
54     push(1);
55     push(12);
56     push(15);
57
58     printf("Element at top of the stack: %d\n", peek());
59     printf("Elements: \n");
60     while(!isempty()) {
61         int data = pop();
62         printf("%d\n", data);
63     }
64
65     printf("Stack full: %s\n", isfull()? "true": "false");
66     printf("Stack empty: %s\n", isempty()? "true": "false");
67
68     return 0;
69 }
70
```

C:\Users\Dell\Documents\stack operation.exe

Element at top of the stack: 15

Elements:

15

12

1

9

5

3

Stack full: false

Stack empty: true

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Process exited after 0.01509 seconds with return value 0

Press any key to continue . . .

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Cloudy



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27-09-2022

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