

PUSH and POP in STACK

Write a C++ program to implement the POP and PUSH operation in Stack.

```
1. #include <iostream>
2. #define MAX 5 // Maximum size of stack
3.
4. using namespace std;
5.
6. int top = -1;
7. int arr[MAX];
8.
9. void push(int value)
10. {
11.     if (top == MAX - 1)
12.     {
13.         cout << "Stack Overflow! Cannot push " << value << "\n";
14.         return;
15.     }
16.     top = top + 1;
17.     arr[top] = value;
18.     cout << value << " pushed into stack\n";
19. }
20.
21. void pop()
22. {
23.     if (top == -1)
24.     {
25.         cout << "Stack Underflow! Cannot pop\n";
26.         return;
27.     }
28.     cout << arr[top];
29.     top = top - 1;
30.     cout << " popped from stack\n";
31. }
32. }
33. int main()
34. {
35.     int item;
36.     cout << "Enter the element to push into stack";
37.     cin >> item;
38.     push(item);
39.
40.     push(10);
41.     push(20);
42.     push(30);
43.     push(40);
44.
45.     cout << "Top element in stack is " << arr[top] << "\n";
46.     push(60); // This should show overflow
47.
48.     pop();
49.     pop();
50.     pop();
51.     pop();
52.     pop();
53.     pop(); // This should show underflow
54.     return 0;
55. }
```