```cpp
1  // Reference: https://www.geeksforgeeks.org/stack-data-structure-
     introduction-program/
2  // Edited By: Akhtar Jamil
3  // Stack: Array Implementation of Stack
4
5  #include <iostream>
6  using namespace std;
7
8  #define MAX 1000 // Macro definitions allows to declar constant values
9
10 class Stack {
11     int top;
12
13 public:
14     int a[MAX]; // Maximum size of Stack
15
16     Stack()
17     {
18         top = -1;
19     }
20     void push(int x);
21     int pop();
22     int peek();
23     bool isEmpty();
24 };
25
26 void Stack::push(int x)
27 {
28     if (top >= (MAX - 1)) {
29         cout << "Stack Overflow" << endl;
30     }
31     else {
32         a[++top] = x;
33         cout << x << " pushed into stack\n" << endl;
34     }
35 }
36
37 int Stack::pop()
38 {
39     if (top < 0) {
40         cout << "Stack Underflow" << endl;
41         return 0;
42     }
43     else {
44         int x = a[top--];
45         return x;
46     }
47 }
48 int Stack::peek()
49 {
50     if (top < 0) {
51         cout << "Stack is Empty"<<endl;
52         return 0;
```

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53          }
54      else {
55              return a[top];
56      }
57  }
58
59  bool Stack::isEmpty()
60  {
61      return (top < 0);
62  }
63
64  // Driver program to test above functions
65  int main()
66  {
67      class Stack s;
68      s.pop();
69      s.push(10);
70      s.push(20);
71      s.push(30);
72      cout << s.peek()<<endl;
73      cout << s.pop() << " Popped from stack\n";
74
75      getchar();
76  }
```