

Activity No. <n>

<Seatwork 4.1 : Stacks

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Course Code: CPE010

Course Title: Data Structures and Algorithms

Section: CPE21S4

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Program: Computer Engineering

Date Performed: 8/12/25

Date Submitted: 8/12/25

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6. Output:

The screenshot shows the Dev-C++ IDE interface. The code editor displays a C++ program named 'Seatwork4.1_Stacks_Alcantara_Jason.cpp'. The terminal window shows the execution of the program, which prints the elements of a stack from top to bottom. The stack starts with size 5 and ends with size 0. The stack operations are as follows:

```
1 #include <iostream>
2 #include <stack>
3 using namespace std;
4
5 void showstack(stack<int> s)
6 {
7     while (!s.empty())
8     {
9         std::cout << '\t' << s.top();
10        s.pop();
11    }
12    cout << '\n';
13}
14
15 int main ()
16 {
17     stack<int> s;
18     s.push (10);
19     s.push (30);
20     s.push (20);
21     s.push (40);
22     s.push (5);
23     s.push (1);
24
25     std::cout << "The stack is : ";
26
27     std::cout << "\ns.size () : " << s.size();
28     std::cout << "\ns.top() : " << s.top();
29
30     std::cout << "\ns.pop() : ";
31     s.pop();
32
33     return 0;
34 }
```

The terminal output is:

```
The stack is :
s.size () : 5
s.top() : 1
s.pop() :

Process exited after 0.01438 seconds with return value 0
Press any key to continue . . .
```

7. Supplementary Activity

8. Conclusion:

The program shows us the basic operations of the stack using c++. The `showstack` functions takes the copy and stack to print each elements from top to bottom.

9. Assessment Rubric