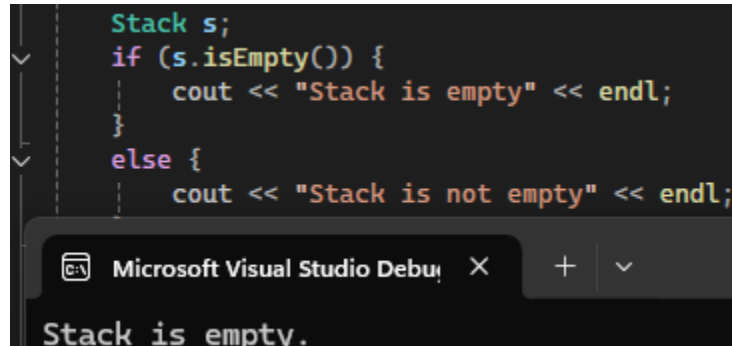


CS 303 Assignment 2 – Stacks

(All code and returns will be built off of the previous results)

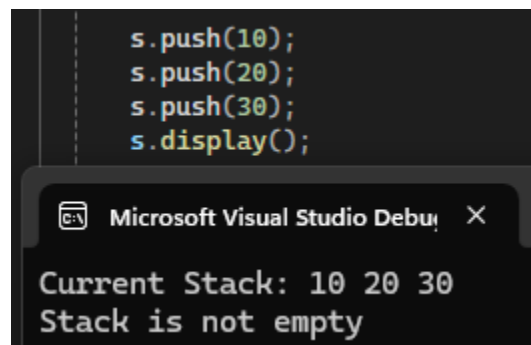
1. Creation of the stack as well as the isEmpty function that will return a Boolean value to help determine if the stack is empty or has items.



```
Stack s;  
if (s.isEmpty()) {  
    cout << "Stack is empty" << endl;  
}  
else {  
    cout << "Stack is not empty" << endl;  
}
```

Microsoft Visual Studio Debug Console: Stack is empty.

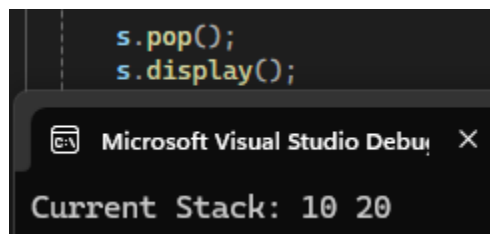
2. Since we are working with vectors, a push_back function would be the best for adding items into the stack.



```
s.push(10);  
s.push(20);  
s.push(30);  
s.display();
```

Microsoft Visual Studio Debug Console: Current Stack: 10 20 30
Stack is not empty

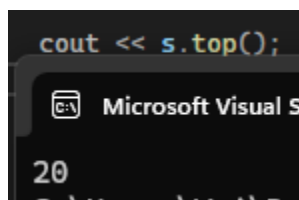
3. As before, since we are working with vectors, pop would be appropriate for quickly removing items from the stack. Though it is limited to removing items from the end of the stack.



```
s.pop();  
s.display();
```

Microsoft Visual Studio Debug Console: Current Stack: 10 20

4. Next is a function that will return the top of the stack when called.

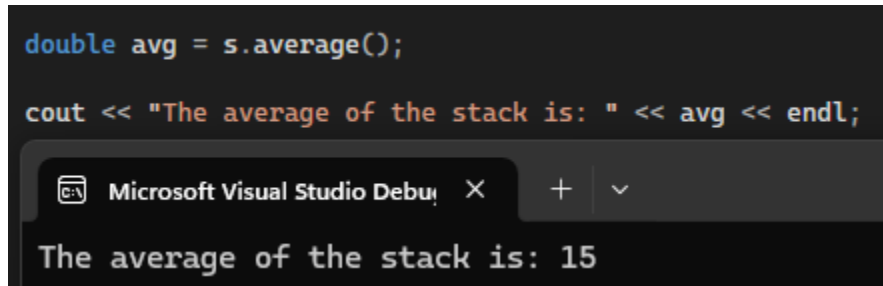


```
cout << s.top();
```

Microsoft Visual Studio Debug Console: 20

5. Finally, the average function was incorporated through the numeric library. It helps quickly solving for the average of the stack and helps the return.

```
double avg = s.average();  
cout << "The average of the stack is: " << avg << endl;
```



The screenshot shows a code editor with two lines of C++ code. The first line is `double avg = s.average();` and the second line is `cout << "The average of the stack is: " << avg << endl;`. Below the code, there is a debugger window titled "Microsoft Visual Studio Debug Console". The console shows the output of the program: "The average of the stack is: 15".