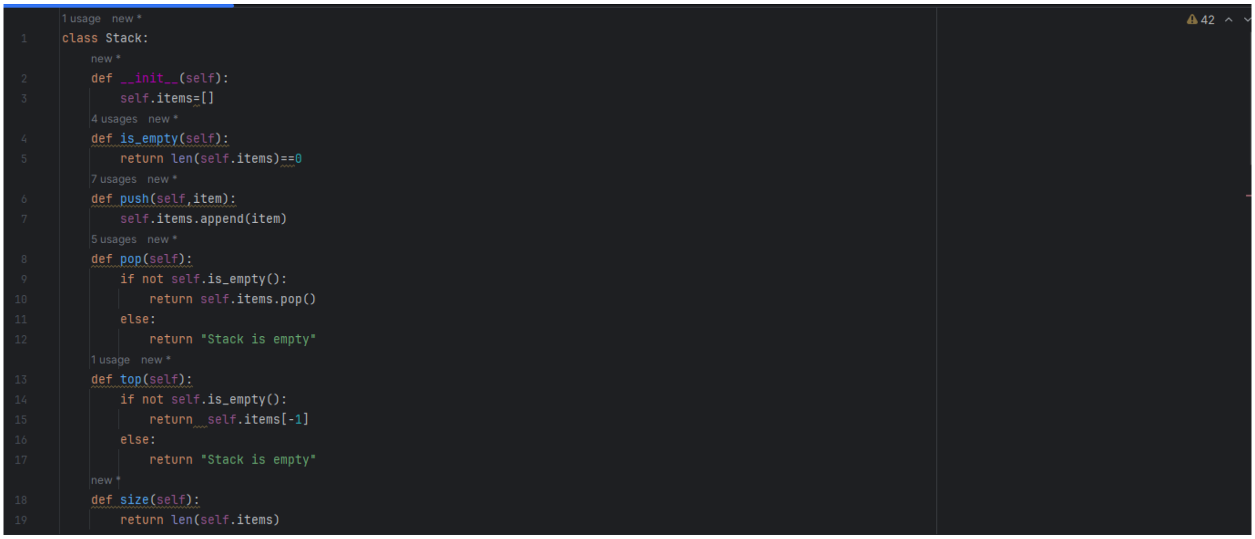
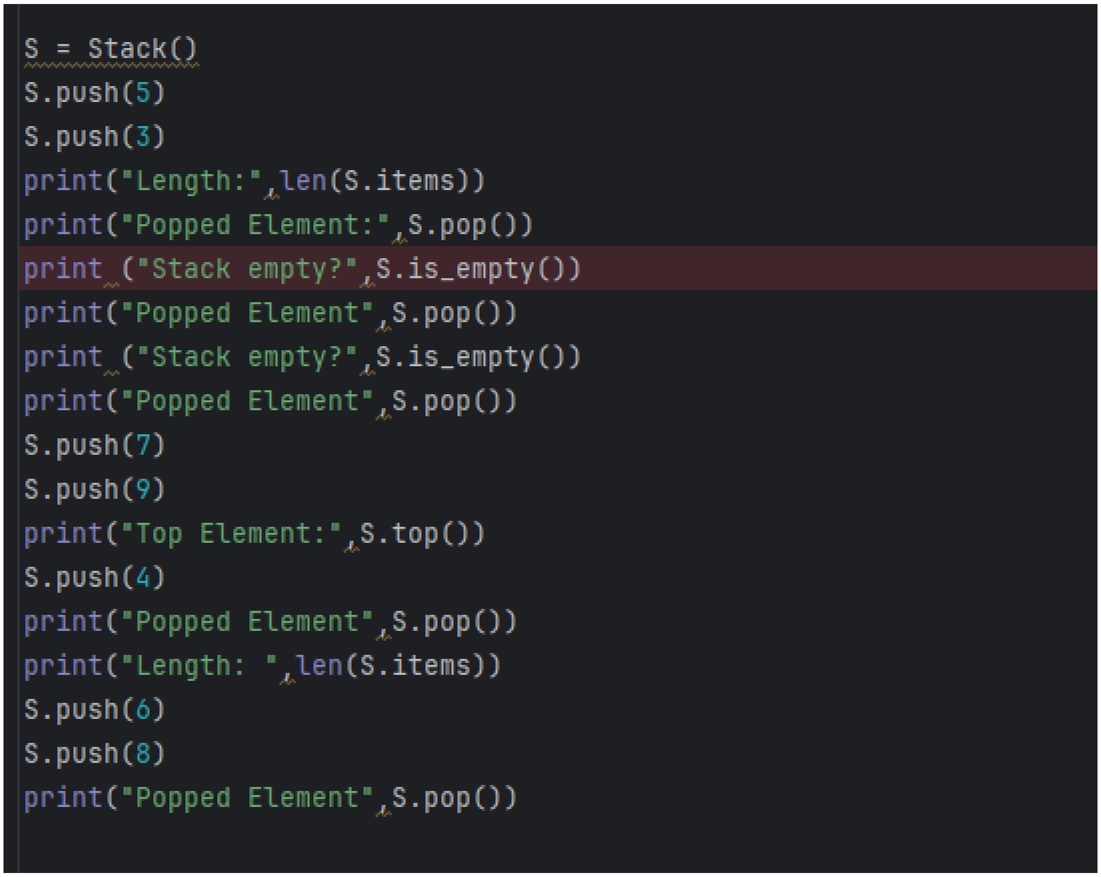
Richmond_Al P. Broqueza 09/27/2024

IDB2 DSALGO1

1.

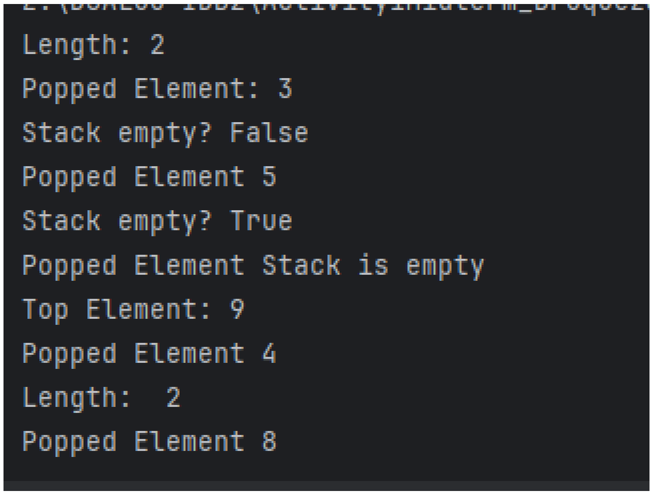


```python
class Stack:
    def __init__(self):
        self.items=[]
    def is_empty(self):
        return len(self.items)==0
    def push(self,item):
        self.items.append(item)
    def pop(self):
        if not self.is_empty():
            return self.items.pop()
        else:
            return "Stack is empty"
    def top(self):
        if not self.is_empty():
            return  self.items[-1]
        else:
            return "Stack is empty"
    def size(self):
        return len(self.items)
```



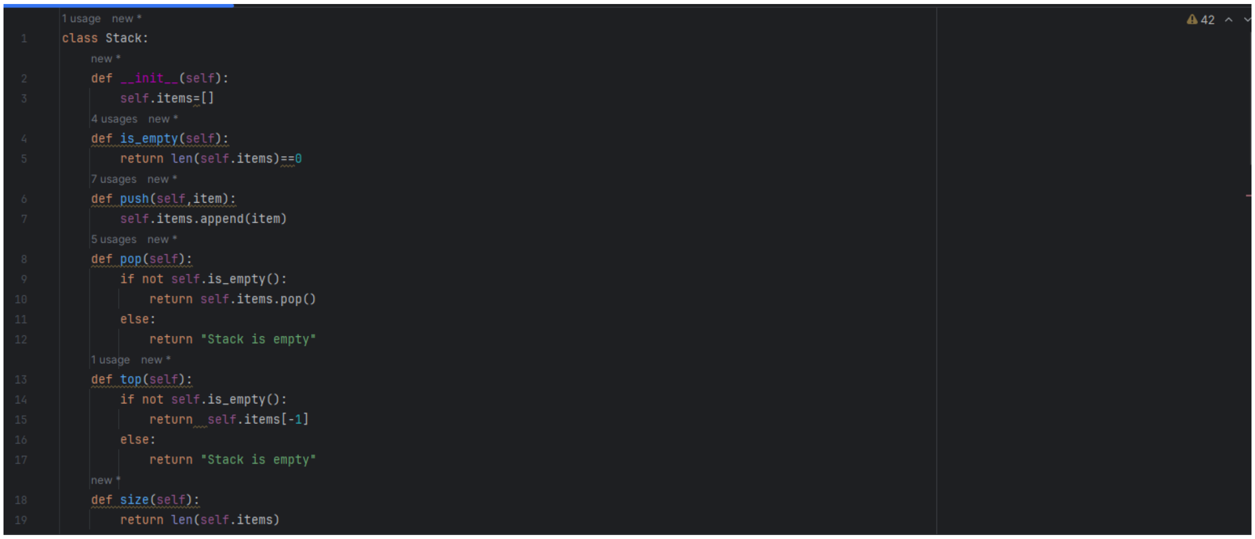
```python
S = Stack()
S.push(5)
S.push(3)
print("Length:",len(S.items))
print("Popped Element:",S.pop())
print ("Stack empty?",S.is_empty())
print("Popped Element",S.pop())
print ("Stack empty?",S.is_empty())
print("Popped Element",S.pop())
S.push(7)
S.push(9)
print("Top Element:",S.top())
S.push(4)
print("Popped Element",S.pop())
print("Length: ",len(S.items))
S.push(6)
S.push(8)
print("Popped Element",S.pop())
```

OUTPUT:



```
Length: 2
Popped Element: 3
Stack empty? False
Popped Element 5
Stack empty? True
Popped Element Stack is empty
Top Element: 9
Popped Element 4
Length:  2
Popped Element 8
```

2.



```python
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        if not self.is_empty():
            return  self.items[-1]
        else:
            return "Stack is empty"
    def size(self):
        return len(self.items)
```
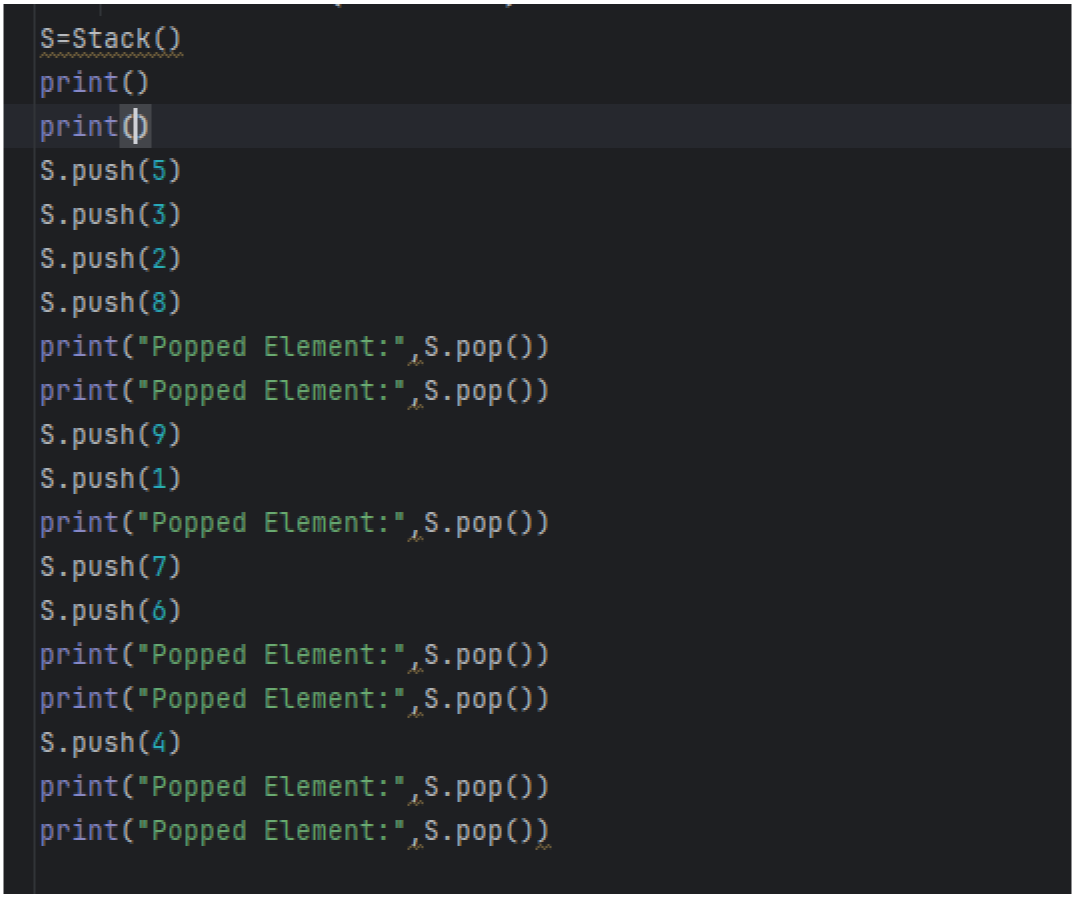
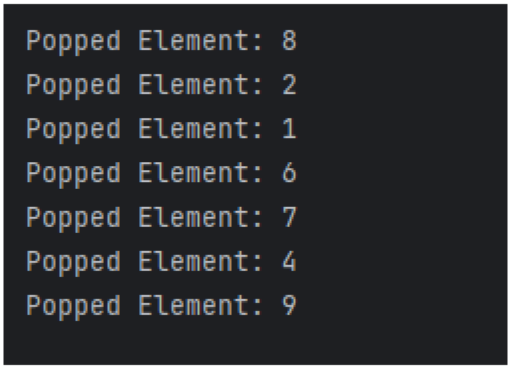



```
S=Stack()
print()
print()
S.push(5)
S.push(3)
S.push(2)
S.push(8)
print("Popped Element:",S.pop())
print("Popped Element:",S.pop())
S.push(9)
S.push(1)
print("Popped Element:",S.pop())
S.push(7)
S.push(6)
print("Popped Element:",S.pop())
print("Popped Element:",S.pop())
S.push(4)
print("Popped Element:",S.pop())
print("Popped Element:",S.pop())
```

OUTPUT:



```
Popped Element: 8
Popped Element: 2
Popped Element: 1
Popped Element: 6
Popped Element: 7
Popped Element: 4
Popped Element: 9
```