

Solution Review: Compute Sum of First n Natural Numbers

This lesson will explain how to compute the sum of the first n numbers using recursion.

WE'LL COVER THE FOLLOWING ^

- Solution: Use Recursion

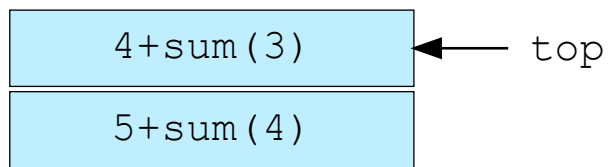
Solution: Use Recursion

The sum is calculated by adding the sum of previous numbers down to 1.

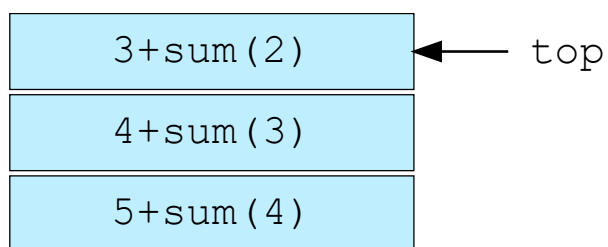
```
f(1) = 1 # base case  
f(n) = f(n-1) + n # recursive case
```

The recursion stops when n is less than or equal to 1. The following illustration explains how to calculate the sum of the first **n** natural numbers using recursion.

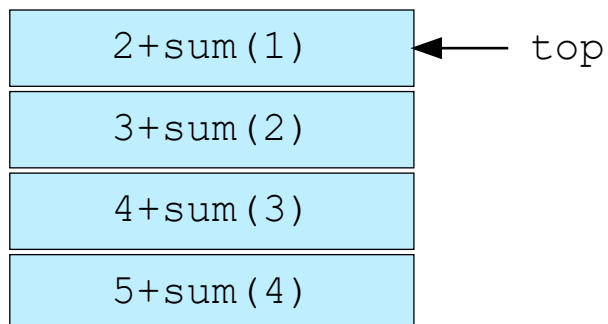
5+sum(4) ← top



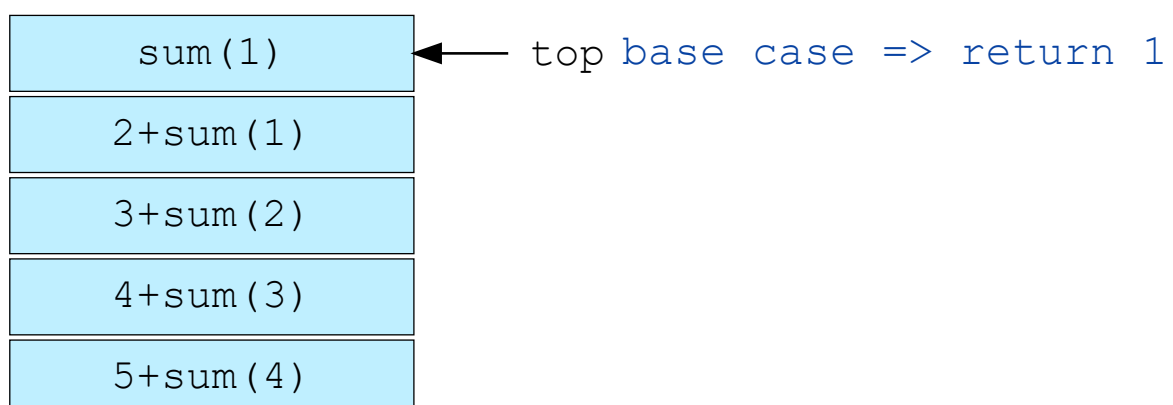
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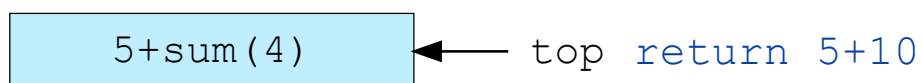
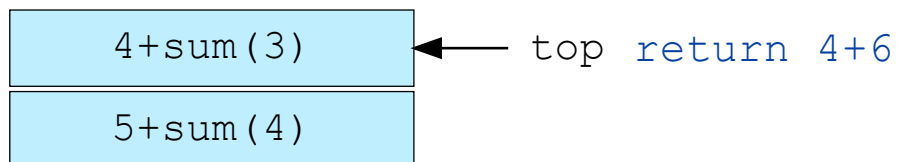
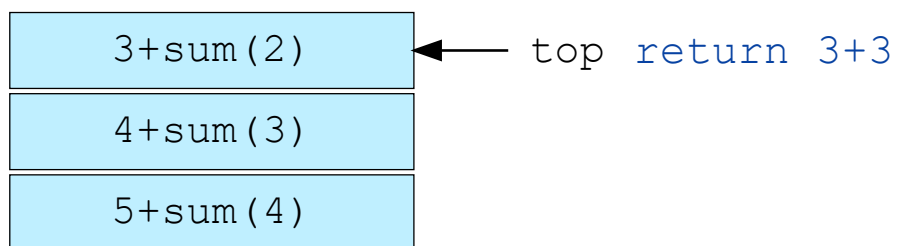
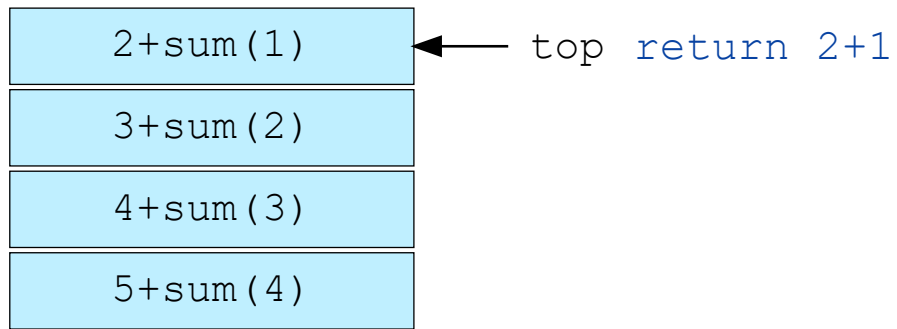


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sum(5) = 15

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The following python code demonstrates how to compute the sum of first n numbers using recursion.

```
def sum_N_Numbers (n):  
    if n <= 1:  
        return n  
    else:  
        return n + sum_N_Numbers (n - 1)  
  
print(sum_N_Numbers(5))
```



Now that you have the insight of modules, functions, and recursion, let's move on to the quiz.