

1. Program

## Question 1

Revisit Later

## How to Attempt?

**digitSum:** The labels on a trader's boxes display a large number (integer). The trader wants to label the boxes with a single digit ranging from 1 to 9. He decides to perform digit sum on this large number, continuously till he gets a single digit number.

**NOTE:** In mathematics, the "digit sum" of a given integer is the sum of all its digits, (e.g.: the digit sum of 84001 is calculated as  $8+4+0+0+1 = 13$ , the digit sum of 13 is  $1+3 = 4$ ).

Write a function (method) that takes as input a large number and returns a single digit by performing continuous digitSum on this number, and on the resulting numbers, till the resulting number is a single digit number in the range 1 to 9.

**Example 1:** If the large number whose single-digit digitSum is to be found is 976592, the process is as below –  
 $9+7+6+5+9+2 = 38$

 $3+8 = 11$  $1+1 = 2$ 

Thus, the single-digit digitSum for the number 976592 is 2.

**Example 2:** If the large number whose single-digit digitSum is to be found is 123456, the process is as below –  
 $1+2+3+4+5+6 = 21$

 $2+1 = 3$ 

Thus, the single-digit digitSum for the number 123456 is 3.

For negative numbers, the result should also be in negative.

**Example 3:** If the large number whose single-digit digitSum is to be found is -123456, the answer would be -3.

JAVA8

Compiler: Java - 1.8

```
2 import java.util.*;
3
4 // Read only region start
5 class UserMainCode
6 {
7
8     public int digitSum(int input1){
9         // Read only region end
10        // Write code here...
11        int neg=Input1;
12        if(input1<0)
13        {
14            | input1*=-1;
15        }
16        int len=Integer.toString(input1).length();
17        if(len==1)
18        {
19            if(neg<0)
20                return input1*-1;
21            else
22                return input1;
23        }
24        else
25        {
26            int sum=0;
27            while(input1!=0)
28            {
29                | int rem=input1%10;
30                | sum+=rem;
31                | input1/=10;
32            }
33            if(neg<0)
34                return digitSum(sum*-1);
35            else
36                return digitSum(sum);
37        }
38    }
39 }
```

☐ Use Custom Input

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Compile and Test

Submit Code

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Test case 3

Test case 4

Test case 5

Test case 6

Test case 7

Test case 8

Test case 9

Test case 10

Test case 11

Test case 12

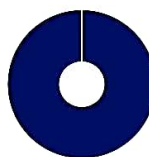
Test case 13

Test case 14

Test case 15

Finish Test

Remaining Time: 01:00:46



#### Your Test Summary

1 Total Questions

- Attempted: 1/1
- Marked for Revisit: 0/1
- Unattempted: 0/1

#### Section Summary

#	SECTION NAME	STATUS
1.	Program Untimed Section	1 Total: 1 Questions

Yes, End Test!

No, Back to Test