

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.

0/15 - Attempted: 1/1 Uses Failed

✓ Test case 1

✓ Test case 2

✓ Test case 3

✓ Test case 4

✓ Test case 5

✓ Test case 6

✓ Test case 7

✓ Test case 8

✓ Test case 9

✓ Test case 10

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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.

Attempted: 1/1

JAVA7

Compiler: Java - 1.7

```
8 public int digitSum(int input1){
9     // Read only region end
10    // Write code here...
11    int n=input1;
12    if(input1<0){
13        input1*-1;
14    }
15    int len=Integer.toString(input1).length();
16    if(len==1){
17        if(n<0)
18            return input1*-1;
19        else
20            return input1;
21    }
22    else{
23        int sum=0;
24        while(input1!=0){
25            int rem=input1%10;
26            sum+=rem;
27            input1/=10;
28        }
29        if(n<0)
30            return digitSum(sum*-1);
31        else
32            return digitSum(sum);
33    }
34 }
35 }
```

☐ Use Custom Input

ⓘ

Compile and Test

Submit Code

1. Program

## Question 1

Revisit Later

## How to Attempt?

## Even Digits' Sum:

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 158 is  $1+5+8 = 14$ .

Rohan's teacher has asked him to write a function (method) that takes as input a positive number and performs digitSum of only the even digits in the given number.

**Example 1:** If the given number is 9625, we must add only the even digits, i.e.  $6+2 = 8$ . Thus, the EvenDigitsSum for the number 9625 is 8.

**Example 2:** If the given number is 2134, the EvenDigitsSum will be  $2+4 = 6$ .

**Assumption:** The input number will be a positive integer number  $\geq 1$  and  $\leq 25000$ .

Attempted: 1/1

## Code Execution Code History

0/8 - Graded Test Cases Failed

✓ Corner 2

✓ Corner 1

✓ Necessary 2

✓ Necessary 1

✓ Basic 4

✓ Basic 3

✓ Basic 2

✓ Basic 1

1. Program

## Question 1

Revisit Later

## How to Attempt?

## Even Digits' Sum:

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 158 is  $1+5+8 = 14$ .

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**Example 2:** If the given number is 2134, the EvenDigitsSum will be  $2+4 = 6$ .

**Assumption:** The input number will be a positive integer number  $\geq 1$  and  $\leq 25000$ .

C Compiler: gcc 5.4.0

```
1 #include<stdio.h>
2 #include<string.h>
3 // Read only region start
4
5 int EvenDigitsSum(int input1)
6 {
7     // Read only region end
8     // Write code here
9     int sum=0;
10    while(input1!=0){
11        int n=input1%10;
12        if(n%2==0)
13            sum+=n;
14        input1/=10;
15    }
16    return sum;
17 }
18 }
```

☐ Use Custom Input

Compile and Test

Submit Code

1. Program

1

Attempted: 1/1

## Question 1

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## How to Attempt?

## Even OR Odd Digits' Sum:

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 158 is  $1+5+8 = 14$ .

Rohan's teacher has asked him to write a function (method) that takes as input a positive number and performs digitSum of either only the even digits or only the odd digits in the given number, based on the option "even" or "odd".

The function will take two input parameters -

- the first parameter will be an integer number representing the number whose digitSum needs to be found
- the second parameter will be a string representing the option, which will be either "even" or "odd"

**Example 1:** If the given number is 9625, and the option is "odd", we must add only the odd digits, i.e.  $9+5 = 14$

**Example 2:** If the given number is 2134, and the option is "even", we must add only the even digits, i.e.  $2+4 = 6$

## Assumptions:

- The input number (input1) will be a positive integer number  $\geq 1$  and  $\leq 25000$ .
- The input string (input2) will always be either "even" or "odd"

## Code Execution Code History

0/8 - Graded Test Cases Failed

✓ Corner 2

✓ Corner 1

✓ Necessary 2

✓ Necessary 1

✓ Basic 4

✓ Basic 3

✓ Basic 2

✓ Basic 1

1. Program

## Question 1

Revisit Later

## How to Attempt?

## Even OR Odd Digits' Sum:

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 158 is  $1+5+8 = 14$ .

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The function will take two input parameters -

- the first parameter will be an integer number representing the number whose digitSum needs to be found
- the second parameter will be a string representing the option, which will be either "even" or "odd"

**Example 1:** If the given number is 9625, and the option is "odd", we must add only the odd digits, i.e.  $9+5 = 14$

**Example 2:** If the given number is 2134, and the option is "even", we must add only the even digits, i.e.  $2+4 = 6$

## Assumptions:

- The input number (input1) will be a positive integer number  $\geq 1$  and  $\leq 25000$ .
- The input string (input2) will always be either "even" or "odd"

Attempted: 1/1

JAVA7

Compiler: Java - 1.7

```
1 import java.io.*;
2 import java.util.*;
3
4 // Read only region start
5 class UserMainCode
6 {
7
8     public int EvenOddDigitsSum(int input1,String input2){
9         // Read only region end
10        // Write code here...
11        int sum=0;
12        if(input2.equals("even"))
13        {
14            while(input1!=0)
15            {
16                int n=input1%10;
17                if(n%2==0)
18                    sum+=n;
19                input1/=10;
20            }
21        }
22        else
23        {
24            while(input1!=0)
25            {
26                int n=input1%10;
27                if(n%2!=0)
28                    sum+=n;
29            }
30        }
31        return sum;
32    }
33 }
```

☐ Use Custom Input

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Compile and Test

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1. Program

## Question 1

Revisit Later

## How to Attempt?

## Weight of a hill pattern

Given,  
the total levels in a hill pattern (input1),  
the weight of the head level (input2), and  
the weight increments of each subsequent level (input3),  
you are expected to find the total weight of the hill pattern.

"Total levels" represents the number of rows in the pattern.

"Head level" represents the first row.

Weight of a level represents the value of each star (asterisk) in that row.

The hill patterns will always be of the below format, starting with 1 star at head level and increasing 1 star at each level till level N.

```
*  
**  
***  
****  
*****  
.....  
...and so on till level N
```

Let us see a couple of examples.

## Example 1 -

Given,  
the total levels in the hill pattern = 5 (i.e. with 5 rows)  
the weight of the head level (first row) = 10  
the weight increments of each subsequent level = 2  
Then, The total weight of the hill pattern will be calculated as =  $10 + (12+12) + (14+14+14)$

JAVA7

Compiler: Java - 1.7

```
1 import java.io.*;  
2 import java.util.*;  
3  
4 // Read only region start  
5 class UserMainCode  
6 {  
7  
8     public int totalHillWeight(int input1,int input2,int input3){  
9         // Read only region end  
10        // Write code here...  
11        int sum=0;  
12        for(int i=0;i<input1;i++)  
13        {  
14            for(int j=0;j<=i;j++)  
15            {  
16                sum+=input2;  
17            }  
18            input2+=input3;  
19        }  
20        return sum;  
21    }  
22 }
```

☐ Use Custom Input

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Compile and Test

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Attempted: 1/1

## Question 1

Revisit Later

## How to Attempt?

## Is Palindrome Number?

Write a function to find whether the given number N is a palindrome.

A palindrome number is one that reads the same backwards as well as forwards. For e.g. 252, 18981, 5005 are examples of palindrome numbers.

The number will be passed to the function as an input parameter of type int.

If the number is a palindrome, the function should return 2, else it should return 1.

**Assumption:** The input number will be a positive integer number  $\geq 1$  and  $\leq 25000$ .

## Code Execution Code History

0/8 - Graded Test Cases Failed

✓ Corner 2

✓ Corner 1

✓ Necessary 2

✓ Necessary 1

✓ Basic 4

✓ Basic 3

✓ Basic 2

✓ Basic 1



1. Program

## Question 1

Revisit Later

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**Assumption:** The input number will be a positive integer number  $\geq 1$  and  $\leq 25000$ .

Attempted: 1/1  
JAVA7 Compiler: Java - 1.7

```
1 import java.io.*;
2 import java.util.*;
3
4 // Read only region start
5 class UserMainCode
6 {
7
8     public int isPalinNum(int input1){
9         // Read only region end
10        // Write code here...
11        String str=Integer.toString(input1);
12        int len=str.length();
13        String str1="";
14        for(int i=len-1;i>=0;i--){
15            str1+=str.charAt(i);
16        }
17        if(str.equals(str1))
18            return 2;
19
20        else
21            return 1;
22    }
23 }
```

☐ Use Custom Input

Compile and Test

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Attempted: 1/1

## Question 1

Revisit Later

## How to Attempt?

## Odd Digits' Sum:

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 158 is  $1+5+8 = 14$ .

Rohan's teacher has asked him to write a function (method) that takes as input a positive number and performs digitSum of only the odd digits in the given number.

**Example 1:** If the given number is 9625, we must add only the odd digits, i.e.  $9+5 = 14$ . Thus, the OddDigitsSum for the number 9625 is 14.

**Example 2:** If the given number is 2134, the OddDigitsSum will be  $1+3 = 4$ .

**Assumption:** The input number will be a positive integer number  $\geq 1$  and  $\leq 25000$ .

## Code Execution Code History

0/8 - Graded Test Cases Failed

✓ Corner 2

✓ Corner 1

✓ Necessary 2

✓ Necessary 1

✓ Basic 4

✓ Basic 3

✓ Basic 2

✓ Basic 1

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**Example 1:** If the given number is 9625, we must add only the odd digits, i.e.  $9+5 = 14$ . Thus, the OddDigitsSum for the number 9625 is 14.

**Example 2:** If the given number is 2134, the OddDigitsSum will be  $1+3 = 4$ .

**Assumption:** The input number will be a positive integer number  $\geq 1$  and  $\leq 25000$ .

C Compiler: gcc 5.4.0

```
1 #include<stdio.h>
2 #include<string.h>
3 // Read only region start
4
5 int OddDigitsSum(int input1)
6 {
7     // Read only region end
8     // Write code here
9     int sum=0;
10    while(input1!=0){
11        int n=input1%10;
12        if(n%2!=0)
13            sum+=n;
14        input1/=10;
15    }
16    return sum;
17 }
18
19 }
```

☐ Use Custom Input

Compile and Test

Submit Code

1. Program

## Question 1

Revisit Later

## How to Attempt?

## Is Palindrome possible?

Write a function to find whether it is possible to get a palindrome number from a given number by re-arranging the positions of its digits. If yes, the function should return 2, else it must return 1.

**Example1:** If the given number is 21251, it is possible to form a palindrome by re-arranging its digits, as 21512 or 12521. So the function must return 2.

**Example2:** If the given number is 2125, it is not possible to form a palindrome by re-arranging its digits. So the function must return 1.

**Note:** All digits of the given number should be retained while deciding whether they can together form a palindrome.

**Assumption:** The input number will be a positive integer number  $\geq 1$  and  $\leq 25000$ .

JAVA7

Compiler: Java - 1.7

```
1 import java.io.*;
2 import java.util.*;
3
4 // Read only region start
5 class UserMainCode
6 {
7
8     public int isPalinNumPossible(int input1){
9         // Read only region end
10        // Write code here...
11        String str=Integer.toString(input1);
12        int count[] = new int[256];
13        Arrays.fill(count, 0); // to initialize all values to zero
14        for (int i = 0; i < str.length(); i++)
15            count[(int)(str.charAt(i))]++;
16        int odd = 0;
17        for (int i = 0; i < 256; i++)
18        {
19            if ((count[i] & 1) == 1)
20                odd++;
21            if (odd > 1)
22                return 1;
23        }
24        return 2;
25    }
26 }
```

☐ Use Custom Input

ⓘ

Compile and Test

Submit Code

1. Program

1

Attempted: 1/1

## Question 1

Revisit Later

## How to Attempt?

## Is Palindrome possible?

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**Example2:** If the given number is 2125, it is not possible to form a palindrome by re-arranging its digits. So the function must return 1.

**Note:** All digits of the given number should be retained while deciding whether they can together form a palindrome.

**Assumption:** The input number will be a positive integer number  $\geq 1$  and  $\leq 25000$ .

## Code Execution Code History

0/8 - Graded Test Cases Failed

✓ Corner 2

✓ Corner 1

✓ Necessary 2

✓ Necessary 1

✓ Basic 4

✓ Basic 3

✓ Basic 2

✓ Basic 1

1. Program

1

Attempted: 1/1

## Question 1

Revisit Later

## How to Attempt?

## pCreate PIN using three given input numbers

"Secure Assets Private Ltd", a small company that deals with lockers has recently started manufacturing digital locks which can be locked and unlocked using PINs (passwords). You have been asked to work on the module that is expected to generate PINs using three input numbers.

**Assumptions:** The three given input numbers will always consist of three digits each i.e. each of them will be in the range  $>= 100$  and  $<= 999$

 $100 \leq \text{input1} \leq 999$  $100 \leq \text{input2} \leq 999$  $100 \leq \text{input3} \leq 999$ 

Below are the rules for generating the PIN -

- The PIN should be made up of 4 digits
- The unit (ones) position of the PIN should be the least of the units position of the three input numbers
- The tens position of the PIN should be the least of the tens position of the three input numbers
- The hundreds position of the PIN should be the least of the hundreds position of the three input numbers
- The thousands position of the PIN should be the maximum of all the digits in the three input numbers

Example 1 -

input1 = 123

input2 = 582

input3 = 175

then, PIN = 8122

Example 2 -

## Code Execution Code History

0/8 - Graded Test Cases Failed

✓ Corner 2

✓ Corner 1

✓ Necessary 2

✓ Necessary 1

✓ Basic 4

✓ Basic 3

✓ Basic 2

✓ Basic 1

1. Program

## Question 1

🔖 Revisit Later

## How to Attempt?

## Weight of a hill pattern

Given,  
the total levels in a hill pattern (input1),  
the weight of the head level (input2), and  
the weight increments of each subsequent level (input3),  
you are expected to find the total weight of the hill pattern.

"Total levels" represents the number of rows in the pattern.

"Head level" represents the first row.

Weight of a level represents the value of each star (asterisk) in that row.

The hill patterns will always be of the below format, starting with 1 star at head level and increasing 1 star at each level till level N.

```
*  
**  
***  
****  
*****  
*****  
...and so on till level N
```

Let us see a couple of examples.

## Example1 -

Given,  
the total levels in the hill pattern = 5 (i.e. with 5 rows)  
the weight of the head level (first row) = 10  
the weight increments of each subsequent level = 2  
Then, The total weight of the hill pattern will be calculated as =  $10 + (12+12) + (14+14+14)$

Attempted: 1/1

## Code Execution Code History

0/8 - Graded Test Cases Failed

✓ Corner 2

✓ Corner 1

✓ Necessary 2

✓ Necessary 1

✓ Basic 4

✓ Basic 3

✓ Basic 2

✓ Basic 1

1. Program

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 $100 \leq \text{input1} \leq 999$  $100 \leq \text{input2} \leq 999$  $100 \leq \text{input3} \leq 999$ 

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Example 1 -

input1 = 123

input2 = 582

input3 = 175

then, PIN = 8122

Example 2 -

Attempted: 1/1

JAVAS

Compiler: Java - 1.8

```
1 import java.io.*;
2 import java.util.*;
3
4 // Read only region start
5 class UserMainCode
6 {
7
8     public int createPIN(int input1,int input2,int input3){
9         // Read only region end
10        // Write code here...
11        int arr[]={input1,input2,input3};
12        int max=0,min;
13        double sum=0.0;
14        double place=1.0;
15        int num;
16        for(int i=0;i<3;i++)
17        {
18            num=arr[i];
19            while(num!=0)
20            {
21                int r=num%10;
22                if(r>max)
23                    max=r;
24                num=num/10;
25            }
26        }
27        for(int i=0;i<3;i++)
28        {
```

☐ Use Custom Input

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Compile and Test

Submit Code