Java Coding Assignments

Contents

[Basic Questions 1](#_Toc164783319)

[Question 2: 1](#_Toc164783320)

[Intermediate Questions: 2](#_Toc164783321)

[Question 2: 2](#_Toc164783322)

[Advance Questions: 5](#_Toc164783323)

[Question 2: 5](#_Toc164783324)

# Basic Questions

## Question 2:

In this challenge, we test your knowledge of using if-else conditional statements to automate decision-making processes. An if-else statement has the following logical flow:

Task  
Given an integer, , perform the following conditional actions:

* If is odd, print Weird
* If is even and in the inclusive range of to , print Not Weird
* If is even and in the inclusive range of to , print Weird
* If is even and greater than , print Not Weird

Complete the stub code provided in your editor to print whether or not is weird.

Input Format

A single line containing a positive integer, .

Constraints

Output Format

Print Weird if the number is weird; otherwise, print Not Weird.

Sample Input 0

3

Sample Output 0

Weird

Sample Input 1

24

Sample Output 1

Not Weird

Explanation

Sample Case 0:   
 is odd and odd numbers are weird, so we print Weird.

Sample Case 1:   
 and is even, so it isn't weird. Thus, we print Not Weird.

Explanation

Sample Case 0:   
 is odd and odd numbers are weird, so we print Weird.

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 and is even, so it isn't weird. Thus, we print Not Weird.

# Intermediate Questions:

## Question 2:

Problem statement

You have been given an array/list ‘arr’ of length ‘N’, which contains single digit elements at every index. Your task is to return the sum of all elements of the array. But the final sum should also be a single digit.

To keep the output single digit - you need to keep adding the digits of the output number till a single digit is left.

**For example:**

For the given array [5, 8, 4, 9]

The sum of the elements of the array will be

5 + 8 + 4 + 9 = 26.

Since 26 is not a single-digit number, we will again take the sum of the digits of 26.

2 + 6 = 8.

Now 8 is a single-digit number. So we will stop here and return 8.

**Detailed explanation** ( Input/output format, Notes, Images )

**Constraints:**

1 <= T <= 100

1 <= N <= 10^3

0 <= arr[i] <= 9

It is guaranteed that the sum of ‘N’ over all test cases doesn’t exceed 10^5.

Time Limit: 1 sec.

**Sample Input 1:**

2

5

8 7 0 1 2

4

4 2 1 1

**Sample Output 1:**

9

8

**Explanation For Sample Output 1:**

Test Case 1:

For the given array [8, 7, 0, 1, 2]

The sum of the elements of the array will be

8 + 7 + 0 + 1 + 2 = 18.

Since 18 is not a single-digit number, we will again take the sum of the digits of 18.

1 + 8 = 9.

Now 9 is a single-digit number. So we will stop here and return 9.

Test Case 2:

For the given array [4, 2, 1, 1]

The sum of the elements of the array will be

4 + 2+ 1 + 1 = 8.

Since 8 is a single-digit number, we will just return 8.

**Sample Input 2:**

2

4

3 1 2 1

9

1 9 4 6 2 8 2 0 1

**Sample Output 2:**

7

6

# Advance Questions:

## Question 2:

We define the following:

* A subarray of an -element array is an array composed from a contiguous block of the original array's elements. For example, if , then the subarrays are , , , , , and . Something like would not be a subarray as it's not a contiguous subsection of the original array.
* The sum of an array is the total sum of its elements.
  + An array's sum is negative if the total sum of its elements is negative.
  + An array's sum is positive if the total sum of its elements is positive.

Given an array of integers, find and print its number of negative subarrays on a new line.

Input Format

The first line contains a single integer, , denoting the length of array .  
The second line contains space-separated integers describing each respective element, , in array .

Constraints

* 1<=n<=100
* -104<=ai <=104

Output Format

Print the number of subarrays having negative sums.

Sample Input

5

1 -2 4 -5 1

Sample Output

9

Explanation

There are nine negative subarrays of :

1. [1:1]==> -2
2. [3:3]==>-5
3. [0:1]==> 1+ -2 = -1
4. [2:3]==> 4+-5=-1
5. [4:5]==> -5+1=-1

Thus, we print on a new line 9 possibilities .