## InfyTQ SET 003

Solved Challenges 4/5



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## **Submatrices - Sum of Digits**

#### ID:10569 **Solved By 212 Users**

### InfyTQ

The program must accept an integer matrix of size RxC as the input. The program must print all possible 2x2 submatrices where each integer should follow the below rule.

- Each integer of the submatrix should be divisible by the sum of its digits.

**Note:** At least one such submatrix is always present in the given matrix.

## **Boundary Condition(s):**

#### **Input Format:**

The first line contains R and C separated by a space.

The next R lines each contain C integers separated by a space.

#### **Output Format:**

The lines containing the 2x2 submatrices as per the given condition.

### **Example Input/Output 1:**

Input:

44

18 19 72 42

92 84 60 63

12 50 93 35

24 54 94 37

Output:

72 42

60 63

12 50

24 54

#### Explanation:

The 2x2 submatrices where each integer of the submatrix is divisible by the sum of its digits are highlighted below.

18 19 **72 42** 

92 84 60 63

**12 50** 93 35

**24 54** 94 37

#### **Example Input/Output 2:**

Input:

43

40 42 2

30 24

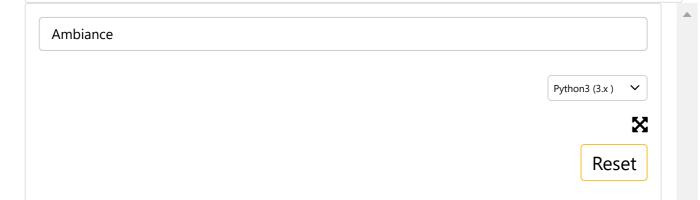
30 24

180 190

24 27

190 40

## **Max Execution Time Limit: 500 millisecs**



```
R,C = map(int,input().strip().split())
 1
 2
 3
   matrix=[]
 4
   for row in range(R):
 5
        matrix.append(list(map(int,input().strip().split())))
 6
 7
 8
    def divisibility check(sub matrix):
 9
        count=0
10
        for row in range(2):
11
            for col in range(2):
12
                num = sub matrix[row][col]
13
                n = num
14
                add = 0
15
                while(n>0):
16
                     add+=(n\%10)
17
                     n//=10
18
                 if(num%add==0):
19
                     count+=1
20
        if(count==4):
21
            return 1
22
        else:
23
            return 0
24
25
   sub matrix = []
26
    ans=[]
27
    for row in range(R-1):
28
        for col in range(C-1):
29
            sub matrix = []
30
            for r in range(row,row+2):
31
                 li=[]
32
                 for c in range(col,col+2):
33
                     li.append(matrix[r][c])
                 sub matrix.append(li)
34
            # print(|sub matrix)
35
36
37
            if(divisibility_check(sub_matrix)==1):
38
                 ans.append(sub_matrix)
39
40
41
   for sub in ans:
42
        for r in range(2):
43
            for c in range(2):
                 print(sub[r][c], end=" ")
44
45
            print()
46
47
48
49
50
```

Code did not pass the execution

TestCase ID: 58123

## Input:

44

18 19 72 42

92 84 60 63

12 50 93 35

24 54 94 37

# **Expected Output:**

72 42

60 63

12 50

24 54

### **Your Program Output:**

[[18, 19], [92, 84]]

[[19, 72], [84, 60]]

[[72, 42], [60, 63]]

[[92, 84], [12, 50]]

[[84, 60], [50, 93]]

[[60, 63], [93, 35]]

[[12, 50], [24, 54]]

[[50, 93], [54, 94]]

[[93, 35], [94, 37]]

72 42

60 63

12 50

24 54

Save

Run

Run with a custom test case (Input/Output)