Mock Test › andruandru3002@gmail.com

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Test Name:	**Mock Test**
Taken On:	10 Mar 2025 12:36:01 IST
Time Taken:	35 min 15 sec/ 40 min
Invited by:	Ankush
Invited on:	10 Mar 2025 12:35:02 IST
Skills Score:	
Tags Score:	Algorithms 105/195
	Constructive Algorithms 0/90
	Core CS 105/195
	Easy 105/105
	Greedy Algorithms 0/90
	Medium 0/90
	Problem Solving 105/195
	Search 105/105
	Sorting 105/105
	problem-solving 105/195

53.8%

105/195

scored in **Mock Test** in 35 min 15 sec on 10 Mar 2025 12:36:01 IST

Recruiter/Team Comments:

No Comments.

Plagiarism flagged

We have marked questions with suspected plagiarism below. Please review it in detail here -

	Question Description	Time Taken	Score	Status
Q1	Find the Median › **Coding**	3 min 7 sec	105/ 105	✓
Q2	Flipping the Matrix › **Coding**	28 min 53 sec	0/ 90	!

QUESTION 1

✓

Correct Answer

Score 105

Find the Median › Coding

Sorting | Search | Algorithms | Easy | problem-solving | Core CS | Problem Solving

QUESTION DESCRIPTION

The median of a list of numbers is essentially its middle element after sorting. The same number of elements occur after it as before. Given a list of numbers with an odd number of elements, find the median?

Example
$arr = [5, 3, 1, 2, 4]$

The sorted array $arr' = [1, 2, 3, 4, 5]$. The middle element and the median is 3.

Function Description

Complete the *findMedian* function in the editor below.

findMedian has the following parameter(s):

- *int arr[n]:* an unsorted array of integers

Returns

- *int:* the median of the array

Input Format

The first line contains the integer n, the size of arr.
The second line contains n space-separated integers $arr[i]$

Constraints

- $1 \leq n \leq 1000001$
- n is odd
- $-10000 \leq arr[i] \leq 10000$

Sample Input 0

```
7
0 1 2 4 6 5 3
```

Sample Output 0

```
3
```

Explanation 0

The sorted $arr = [0, 1, 2, 3, 4, 5, 6]$. It's middle element is at $arr[3] = 3$.

CANDIDATE ANSWER

Language used: **Python 3**

```
#!/bin/python3

import math
import os
import random
import re
import sys



#
# Complete the 'findMedian' function below.
#
# The function is expected to return an INTEGER.
# The function accepts INTEGER_ARRAY arr as parameter.
#

```

```python
def findMedian(arr):
    # Write your code here
    arr.sort()
    m=len(arr)//2
    return arr[m]

n = int(input().strip())

arr = list(map(int, input().rstrip().split()))

result = findMedian(arr)

print(result)

```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	✓ Success	0	0.0207 sec	10.8 KB
Testcase 2	Easy	Hidden case	✓ Success	35	0.0298 sec	11.3 KB
Testcase 3	Easy	Hidden case	✓ Success	35	0.031 sec	11.6 KB
Testcase 4	Easy	Hidden case	✓ Success	35	0.0668 sec	19.9 KB

No Comments

QUESTION 2

Needs Review

Score 0

Flipping the Matrix › Coding

Algorithms | Medium | Greedy Algorithms | Constructive Algorithms | problem-solving | Core CS | Problem Solving

QUESTION DESCRIPTION

Sean invented a game involving a $2n \times 2n$ matrix where each cell of the matrix contains an integer. He can reverse any of its rows or columns any number of times. The goal of the game is to maximize the sum of the elements in the $n \times n$ submatrix located in the upper-left quadrant of the matrix.

Given the initial configurations for q matrices, help Sean reverse the rows and columns of each matrix in the best possible way so that the sum of the elements in the matrix's upper-left quadrant is maximal.

Example

$matrix = [[1,2],[3,4]]$

```
1 2
3 4
```

It is 2×2 and we want to maximize the top left quadrant, a 1×1 matrix. Reverse row 1:

```
1 2
4 3
```

And now reverse column 0:

```
4 2
1 3
```

The maximal sum is 4.

Function Description

Complete the *flippingMatrix* function in the editor below.

flippingMatrix has the following parameters:
- *int matrix[2n][2n]:* a 2-dimensional array of integers

Returns
- *int:* the maximum sum possible.

Input Format

The first line contains an integer q, the number of queries.

The next q sets of lines are in the following format:

- The first line of each query contains an integer, n.
- Each of the next $2n$ lines contains $2n$ space-separated integers $matrix[i][j]$ in row i of the matrix.

Constraints

- $1 \le q \le 16$
- $1 \le n \le 128$
- $0 \le matrix[i][j] \le 4096$, where $0 \le i, j < 2n$.

Sample Input

```
STDIN           Function
-----           --------
1               q = 1
2               n = 2
112 42 83 119   matrix = [[112, 42, 83, 119], [56, 125, 56, 49], \
56 125 56 49              [15, 78, 101, 43], [62, 98, 114, 108]]
15 78 101 43
62 98 114 108
```

Sample Output

```
414
```

Explanation

Start out with the following $2n \times 2n$ matrix:

$$matrix = \begin{bmatrix} 112 & 42 & 83 & 119 \\ 56 & 125 & 56 & 49 \\ 15 & 78 & 101 & 43 \\ 62 & 98 & 114 & 108 \end{bmatrix}$$

Perform the following operations to maximize the sum of the $n \times n$ submatrix in the upper-left quadrant:

2. Reverse column 2 ($[83, 56, 101, 114] \to [114, 101, 56, 83]$), resulting in the matrix:

$$matrix = \begin{bmatrix} 112 & 42 & 114 & 119 \\ 56 & 125 & 101 & 49 \\ 15 & 78 & 56 & 43 \\ 62 & 98 & 83 & 108 \end{bmatrix}$$

3. Reverse row 0 ($[112, 42, 114, 119] \to [119, 114, 42, 112]$), resulting in the matrix:

$$matrix = \begin{bmatrix} 119 & 114 & 42 & 112 \\ 56 & 125 & 101 & 49 \\ 15 & 78 & 56 & 43 \\ 62 & 98 & 83 & 108 \end{bmatrix}$$

The sum of values in the $n \times n$ submatrix in the upper-left quadrant is $119 + 114 + 56 + 125 = 414$
.

CANDIDATE ANSWER

Language used: **Python 3**

```
#!/bin/python3

import math
import os
import random
import re
import sys



#
# Complete the 'flippingMatrix' function below.
#
# The function is expected to return an INTEGER.
# The function accepts 2D_INTEGER_ARRAY matrix as parameter.
#

def flippingMatrix(matrix):
    # Write your code here
    n=len(matrix)//2
    m=0
    for i in range(n):
        for  j in range(n):
            m+=max(matrix[i][j],matrix[i][2*n-1-j],matrix[2*n-1-i][j],matrix[2*n-1-i][2*n-1-j])
    return m



q = int(input().strip())

for q_itr in range(q):
    n = int(input().strip())

    matrix = []

    for _ in range(2 * n):
        matrix.append(list(map(int, input().rstrip().split())))

    result = flippingMatrix(matrix)


print(result)
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	✓ Success	0	0.0247 sec	10.8 KB
Testcase 2	Easy	Hidden case	✗ Wrong Answer	0	0.1124 sec	13.3 KB
Testcase 3	Easy	Hidden case	✗ Wrong Answer	0	0.1794 sec	13.4 KB
Testcase 4	Easy	Hidden case	✗ Wrong Answer	0	0.0902 sec	13.1 KB
Testcase 5	Easy	Hidden case	✗ Wrong Answer	0	0.1271 sec	13.3 KB
Testcase 6	Easy	Hidden case	✗ Wrong Answer	0	0.1447 sec	13.6 KB
Testcase 7	Easy	Hidden case	✗ Wrong Answer	0	0.1531 sec	13.4 KB
Testcase 8	Easy	Sample case	✓ Success	0	0.0226 sec	10.9 KB

Testcase 8	Easy	Sample case	✓ Success	0	0.0226 sec	10.9 KB

No Comments

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