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Full Name: Charan R Email: charanravi.online@gmail.com Test Name: **Mock Test** Taken On: 9 Apr 2023 19:06:08 IST 33 min 38 sec/ 40 min Time Taken: Linkedin: https://www.linkedin.com/in/charan-r-64217b21a Invited by: Ankush Invited on: 9 Apr 2023 18:23:36 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 105/195 105/105 Search

105/105

problem-solving 105/195

Sorting

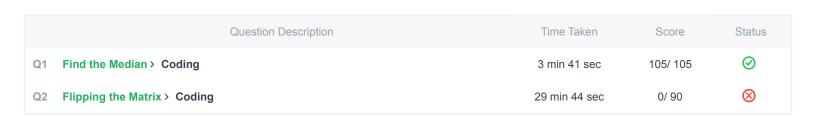
53.8% 105/195

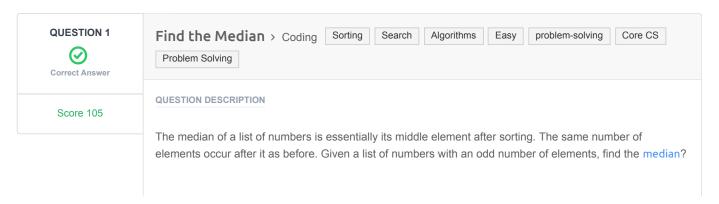
scored in **Mock Test** in 33 min 38 sec on 9 Apr 2023 19:06:08

IST

Recruiter/Team Comments:

No Comments.





$\begin{aligned} & \text{Example} \\ & arr = [5,3,1,2,4] \end{aligned}$

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 $m{n}$ space-separated integers $m{arr}[m{i}]$

Constraints

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

Sample Input 0

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

Sample Output 0

3

Explanation 0

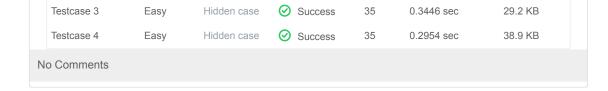
The sorted arr = [0, 1, 2, 3, 4, 5, 6]. It's middle element is at arr[3] = 3.

CANDIDATE ANSWER

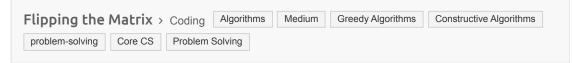
Language used: Python 3

```
1
2 #
3 # Complete the 'findMedian' function below.
4 #
5 # The function is expected to return an INTEGER.
6 # The function accepts INTEGER_ARRAY arr as parameter.
7 #
8 import numpy
9 def findMedian(arr):
10 # Write your code here
11 median = int(numpy.median(arr))
12
13 return(median)
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.4025 sec	28 KB
Testcase 2	Easy	Hidden case	Success	35	0.4013 sec	28.9 KB







QUESTION DESCRIPTION Score 0

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 $oldsymbol{q}$, 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

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

Sample Input

Sample Output

414

Explanation

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

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

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] \rightarrow [114, 101, 56, 83]), resulting in the matrix:

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

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

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

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

CANDIDATE ANSWER

Language used: Python 3

```
#
3  # Complete the 'flippingMatrix' function below.
4  #
5  # The function is expected to return an INTEGER.
6  # The function accepts 2D_INTEGER_ARRAY matrix as parameter.
7  #
8  import numpy
9
10  def flippingMatrix(matrix):
11  # Write your code here
12  flipped_matrix = numpy.flip(matrix)
13  return flipped_matrix
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	⊗ Wrong Answer	0	0.4201 sec	28.7 KB
Testcase 2	Easy	Hidden case	Wrong Answer	0	0.9001 sec	31.2 KB
Testcase 3	Easy	Hidden case	⊗ Wrong Answer	0	0.9013 sec	31 KB
Testcase 4	Easy	Hidden case	⊗ Wrong Answer	0	0.86 sec	31.2 KB
Testcase 5	Easy	Hidden case	⊗ Wrong Answer	0	1.8875 sec	30.8 KB
Testcase 6	Easy	Hidden case	⊗ Wrong Answer	0	0.764 sec	30.4 KB
Testcase 7	Easy	Hidden case	Wrong Answer	0	0.7631 sec	30.7 KB
Testcase 8	Easy	Sample case	Wrong Answer	0	0.6649 sec	28.5 KB

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