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scored in **Mock Test** in 17 min 25 sec on 18 Aug 2025 21:20:01 IST

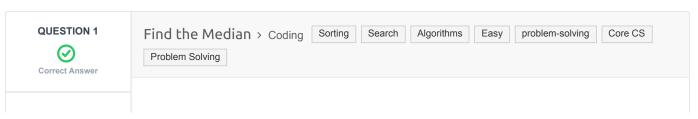
Recruiter/Team Comments:

No Comments.

Plagiarism flagged

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





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

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

Sample Input 0

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

Sample Output 0

3

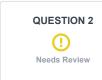
Explanation 0

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

CANDIDATE ANSWER

Language used: C







Score 90

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 ${f 4}$.

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

Constraints

- $1 \le q \le 16$
- $1 \leq n \leq 128$
- $0 \leq matrix[i][j] \leq 4096$, 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 $n \times n$ submatrix in the upper-left quadrant is 119+114+56+125=414 .

CANDIDATE ANSWER

Language used: C

```
1
2 /*
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.
```

```
9 int flippingMatrix(int matrix_rows, int matrix_columns, int** matrix) {
     int n= matrix rows /2;
     int sum = 0;
     for (int i = 0; i < n; i++) {
         for (int j = 0; j < n; j++) {
              int a =matrix[i][j];
             int b= matrix[i][matrix_columns -j-1];
             int c=matrix[matrix_rows-i-1][j];
              int d =matrix[matrix_rows-i-1][matrix_columns-j-1];
              int max_val=a;
             if (b>max val)max val=b;
             if(c>max_val)max_val=c;
              if(d>max_val)max_val=d;
              sum +=max_val;
          }
      }
      return sum;
27 }
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.0094 sec	7.25 KB
Testcase 2	Easy	Hidden case	Success	15	0.0269 sec	12.3 KB
Testcase 3	Easy	Hidden case	Success	15	0.0431 sec	15.3 KB
Testcase 4	Easy	Hidden case	Success	15	0.0212 sec	11 KB
Testcase 5	Easy	Hidden case	Success	15	0.0343 sec	13.3 KB
Testcase 6	Easy	Hidden case	Success	15	0.084 sec	14.3 KB
Testcase 7	Easy	Hidden case	Success	15	0.0405 sec	14.5 KB
Testcase 8	Easy	Sample case	Success	0	0.0081 sec	7.25 KB

No Comments

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