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Test Name:

Mock Test

Ankush

Taken On:

17 Nov 2021 09:28:52 IST

Time Taken: Invited by: 17 min 17 sec/ 24 min

Invited on:

17 Nov 2021 09:22:19 IST

Skills Score:

Tags Score:

Algorithms 90/90

Constructive Algorithms 90/90

Core CS 90/90

Greedy Algorithms 90/90

Medium 90/90

Problem Solving 90/90

problem-solving 90/90

100%

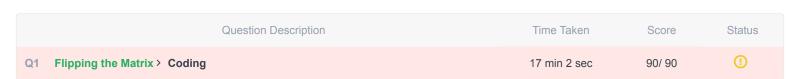
scored in **Mock Test** in 17 min 17 sec on 17 Nov 2021 09:28:52 IST

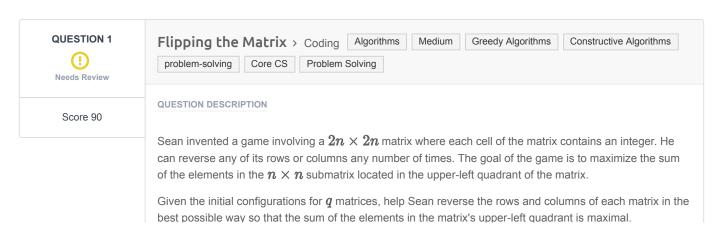
Recruiter/Team Comments:

No Comments.

Plagiarism flagged

We have marked questions with suspected plagiarism below. Please review.





Example

```
matrix = \left[ \left[ 1, 2 \right], \left[ 3, 4 \right] \right]
```

```
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 \boldsymbol{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 imes 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: C#

```
1 class Result
   {
4
        * Complete the 'flippingMatrix' function below.
        * The function is expected to return an INTEGER.
8
        * The function accepts 2D INTEGER ARRAY matrix as parameter.
        */
       public static int flippingMatrix(List<List<int>> matrix)
           int sum = 0;
           int size = matrix.Count;
14
           for(int i=0;i<size/2;i++) {</pre>
               for(int j=0;j<matrix.Count/2;j++){</pre>
                    sum+=Math.Max(matrix[i][j],
                       Math.Max(matrix[i][size-1-j],
                        Math.Max(matrix[size-1-i][j],
                        matrix[size-1-i][size-1-j])));
           }
           return sum;
       }
27 }
```

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Testcase 2	Easy	Hidden case	Success	15	0.2236 sec	23.8 KB
Testcase 3	Easy	Hidden case	Success	15	0.311 sec	24.3 KB
Testcase 4	Easy	Hidden case	Success	15	0.1882 sec	23.8 KB
Testcase 5	Easy	Hidden case	Success	15	0.2626 sec	23.8 KB
Testcase 6	Easy	Hidden case	Success	15	0.2645 sec	24 KB
Testcase 7	Easy	Hidden case	Success	15	0.2826 sec	23.7 KB
Testcase 8	Easy	Sample case	Success	0	0.0732 sec	19.3 KB
No Comments						

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