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Test Name:

Mock Test

Taken On:

3 Jun 2025 22:02:08 IST

Time Taken:

23 min 27 sec/ 24 min

Invited by:

Ankush

Invited on:

3 Jun 2025 22:01:59 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% 90/90

scored in Mock Test in 23 min 27 sec on 3 Jun 2025 22:02:08 IST

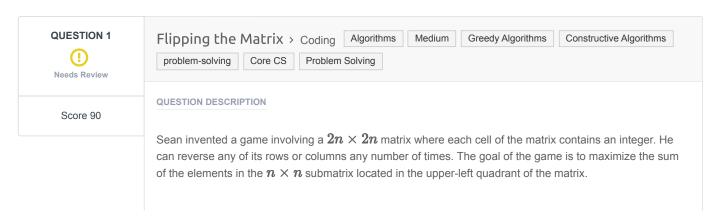
Recruiter/Team Comments:

No Comments.

Plagiarism flagged

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

Question Description Time Taken Score Status Flipping the Matrix > Coding 23 min 17 sec 90/90



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 = \left[ [1,2], [3,4] \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 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

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

Sample Input

```
Function

q = 1

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:

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

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

```
2 #
3 # Complete the 'flippingMatrix' function below.
5 # The function is expected to return an INTEGER.
6 # The function accepts 2D INTEGER ARRAY matrix as parameter.
7 #
8
9 def flippingMatrix(matrix):
     total = 0
     n = len(matrix) // 2
     print(n)
     for i in range(n):
         for j in range(n):
             total += 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 total
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.0251 sec	10.8 KB
Testcase 2	Easy	Hidden case	Success	15	0.1215 sec	13.3 KB
Testcase 3	Easy	Hidden case	Success	15	0.2091 sec	13.3 KB
Testcase 4	Easy	Hidden case	Success	15	0.0925 sec	13 KB

	Testcase 5	Easy	Hidden case	0	Success	15	0.1275 sec	13.4 KB
	Testcase 6	Easy	Hidden case	0	Success	15	0.1577 sec	13.4 KB
	Testcase 7	Easy	Hidden case	0	Success	15	0.1611 sec	13.4 KB
	Testcase 8	Easy	Sample case	Ø	Success	0	0.023 sec	10.8 KB
N	o Comments							

PDF generated at: 3 Jun 2025 16:57:17 UTC