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Test Name:

Mock Test

Taken On:

15 Sep 2023 21:42:11 IST

Time Taken:

4 min 50 sec/ 24 min

Invited by:

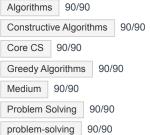
Ankush

Invited on:

15 Sep 2023 21:42:00 IST

Skills Score:

Tags Score:





scored in **Mock Test** in 4 min 50 sec on 15 Sep 2023 21:42:11 IST

Recruiter/Team Comments:

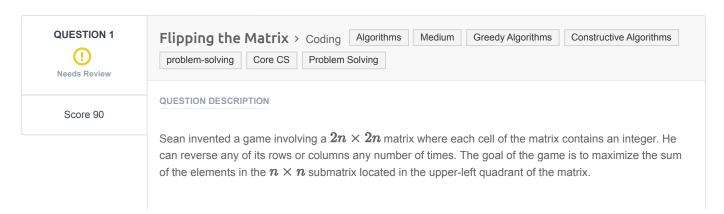
No Comments.

Plagiarism flagged

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

Question Description Time Taken Score Status

Q1 Flipping the Matrix > Coding 4 min 41 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

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: Python 3

```
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.
7 #
9 def flippingMatrix(matrix):
      Sum = 0
      n=len(matrix)
     for i in range(0, n // 2):
          for j in range (0, n // 2):
              r1, r2 = i, n - i - 1
              c1, c2 = j, n - j - 1
              # We can replace current cell [i, j]
              # with 4 cells without changing/affecting
              # other elements.
              Sum += max(max(matrix[r1][c1], matrix[r1][c2]),
                         max(matrix[r2][c1], matrix[r2][c2]))
      return Sum
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.0847 sec	10.9 KB
Testcase 2	Easy	Hidden case	Success	15	0.1454 sec	13 KB
Testcase 3	Easy	Hidden case	Success	15	0.1763 sec	13 KB

	Testcase 4	Easy	Hidden case	0	Success	15	0.1326 sec	12.8 KB	
	Testcase 5	Easy	Hidden case	0	Success	15	0.171 sec	13.1 KB	
	Testcase 6	Easy	Hidden case	0	Success	15	0.1717 sec	13 KB	
	Testcase 7	Easy	Hidden case	0	Success	15	0.2067 sec	13.1 KB	
	Testcase 8	Easy	Sample case	②	Success	0	0.0785 sec	10.7 KB	
No	o Comments								

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