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Test Name: **Mock Test**

17 May 2022 08:03:04 IST Taken On:

Time Taken:

Invited by:

Invited on:

Skills Score:

Tags Score:



90/90 90/90

Problem Solving

problem-solving

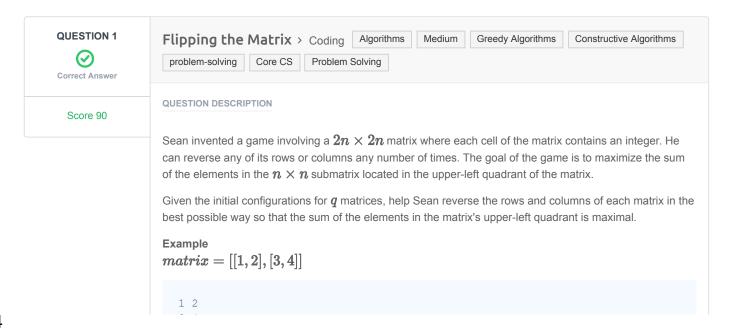
100% 90/90

scored in Mock Test in 5 min 28 sec on 17 May 2022 08:03:04 IST

Recruiter/Team Comments:

No Comments.





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 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 $n \times n$ submatrix in the upper-left quadrant is 119+114+56+125=414 .

CANDIDATE ANSWER

Language used: Java 8

```
1 class Result {
       * Complete the 'flippingMatrix' function below.
 4
        * The function is expected to return an INTEGER.
        * The function accepts 2D INTEGER ARRAY matrix as parameter.
8
       public static int flippingMatrix(List<List<Integer>> matrix) {
           int k = matrix.size() / 2;
           int result = 0;
           for (int row = 0; row < k; row++) {
14
               for (int col = 0; col < k; col++) {
                   int max = Integer.MIN VALUE;
                   int last = matrix.size() - 1;
                   max = Math.max(max, matrix.get(row).get(col));
                   max = Math.max(max, matrix.get(row).get(last-col));
                   max = Math.max(max,matrix.get(last - row).get(col));
                   max = Math.max(max, matrix.get(last - row).get(last - col));
                   System.out.println(max);
                   result += max;
               }
          }
           return result;
       }
30 }
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.1568 sec	30.1 KB
Testcase 2	Easy	Hidden case	Success	15	1.3608 sec	54.8 KB

Testcase 3	Easy	Hidden case	Success	15	1.8887 sec	55 KB	
Testcase 4	Easy	Hidden case	Success	15	1.2223 sec	53.1 KB	
Testcase 5	Easy	Hidden case	Success	15	1.5745 sec	54.9 KB	
Testcase 6	Easy	Hidden case	Success	15	1.6772 sec	55.4 KB	
Testcase 7	Easy	Hidden case	Success	15	1.8922 sec	57 KB	
Testcase 8	Easy	Sample case	Success	0	0.1439 sec	30 KB	
No Comments							

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