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Test Name:

Mock Test

Taken On:

4 Apr 2023 05:39:21 IST

Time Taken:

22 min 2 sec/ 30 min

Invited by:

Ankush

Invited on: Skills Score:

Tags Score:

4 Apr 2023 05:39:11 IST

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

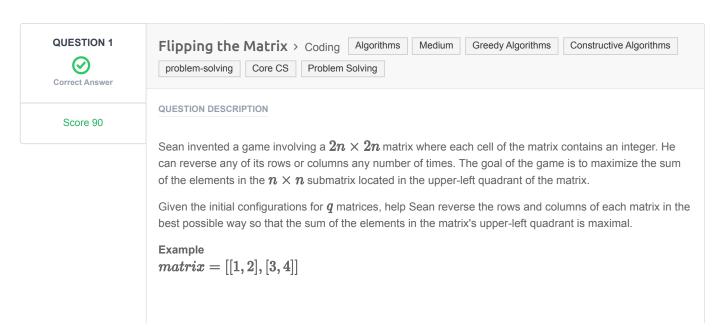
100% 90/90

scored in **Mock Test** in 22 min 2 sec on 4 Apr 2023 05:39:21 IST

Recruiter/Team Comments:

No Comments.





```
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

- $1 \le q \le 16$
- $1 \le n \le 128$
- $0 \leq matrix[i][j] \leq 4096$, 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] ightarrow [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 #include<stdio.h>
 3 int max(int a,int b) {
      if (a>b) return a;
       return b;
6 }
 7 int main(){
      int s[1000][1000],n,q;
      scanf("%d", &q);
      for(int i=1;i \le q;i++)
     scanf("%d",&n);
      for(int i=1;i<=2*n;i++)
      for (int j=1; j \le 2*n; j++)
        scanf("%d",&s[i][j]);
      int ans = 0;
      for(int i=1;i<=n;i++)
           for(int j=1;j<=n;j++)
               int i2 = n + n + 1 - i;
               int j2 = n + n + 1 - j;
               int mx = max(max(s[i][j], s[i][j2]), s[i2][j]), s[i2][j2]);
               ans += mx;
          printf("%d\n", ans);
28 }
```

| TESTCASE | DIFFICULTY | TYPE | STATUS | SCORE | TIME TAKEN | MEMORY USED |
|------------|------------|-------------|---------|-------|------------|-------------|
| Testcase 1 | Easy | Sample case | Success | 0 | 0.0226 sec | 7.45 KB |
| Testcase 2 | Easy | Hidden case | Success | 15 | 0.1022 sec | 8.3 KB |

| | Testcase 3 | Easy | Hidden case | 0 | Success | 15 | 0.0886 sec | 8.28 KB |
|---|------------|------|-------------|----------|---------|----|------------|---------|
| | Testcase 4 | Easy | Hidden case | Ø | Success | 15 | 0.0541 sec | 8.5 KB |
| | Testcase 5 | Easy | Hidden case | Ø | Success | 15 | 0.1103 sec | 8.2 KB |
| | Testcase 6 | Easy | Hidden case | 0 | Success | 15 | 0.0828 sec | 8.37 KB |
| | Testcase 7 | Easy | Hidden case | Ø | Success | 15 | 0.0981 sec | 8.48 KB |
| | Testcase 8 | Easy | Sample case | Ø | Success | 0 | 0.0459 sec | 7.37 KB |
| N | o Comments | | | | | | | |

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