Mock Test > ushaswinithota11@gmail.com

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Test Name:	**Mock Test**
Taken On:	22 Aug 2025 11:53:43 IST
Time Taken:	8 min 30 sec/ 40 min
Invited by:	Ankush
Invited on:	22 Aug 2025 11:53:32 IST
Skills Score:	
Tags Score:	

100%

195/195

scored in **Mock Test** in 8 min 30 sec on 22 Aug 2025 11:53:43 IST

Tag	Score
Algorithms	195/195
Constructive Algorithms	90/90
Core CS	195/195
Easy	105/105
Greedy Algorithms	90/90
Medium	90/90
Problem Solving	195/195
Search	105/105
Sorting	105/105
problem-solving	195/195

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	Find the Median > **Coding**	2 min 56 sec	105/ 105	✓
Q2	Flipping the Matrix > **Coding**	5 min 14 sec	90/ 90	!

QUESTION 1

✓

Correct Answer

Find the Median > Coding Sorting Search Algorithms Easy problem-solving Core CS Problem Solving

Score 105

QUESTION DESCRIPTION

The median of a list of numbers is essentially its middle element after sorting. The same number of elements occur after it as before. Given a list of numbers with an odd number of elements, find the median?

Example

$arr = [5, 3, 1, 2, 4]$

The sorted array $arr' = [1, 2, 3, 4, 5]$. The middle element and the median is 3.

Function Description

Complete the *findMedian* function in the editor below.

findMedian has the following parameter(s):

- *int arr[n]:* an unsorted array of integers

Returns

- *int:* the median of the array

Input Format

The first line contains the integer n, the size of arr.
The second line contains n space-separated integers $arr[i]$

Constraints

- $1 \leq n \leq 1000001$
- n is odd
- $-10000 \leq arr[i] \leq 10000$

Sample Input 0

```
7
0 1 2 4 6 5 3
```

Sample Output 0

```
3
```

Explanation 0

The sorted $arr = [0, 1, 2, 3, 4, 5, 6]$. It's middle element is at $arr[3] = 3$.

CANDIDATE ANSWER

Language used: **C**

```
/*
 * Complete the 'findMedian' function below.
 *
 * The function is expected to return an INTEGER.
 * The function accepts INTEGER_ARRAY arr as parameter.
 */

int compare(const void *a, const void *b) {
    return (*(int *)a - *(int *)b);
}
int findMedian(int arr_count, int* arr) {
    qsort(arr, arr_count, sizeof(int), compare);
    return arr[arr_count / 2];
}
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	✓ Success	0	0.0088 sec	7.25 KB
Testcase 2	Easy	Hidden case	✓ Success	35	0.0083 sec	7.25 KB
Testcase 3	Easy	Hidden case	✓ Success	35	0.0086 sec	7.25 KB
Testcase 4	Easy	Hidden case	✓ Success	35	0.0247 sec	9.12 KB

No Comments

QUESTION 2

Needs Review

Score 90

Flipping the Matrix › Coding

Algorithms | Medium | Greedy Algorithms | Constructive Algorithms | problem-solving | Core CS | Problem Solving

QUESTION DESCRIPTION

Sean invented a game involving a $2n \times 2n$ matrix where each cell of the matrix contains an integer. He can reverse any of its rows or columns any number of times. The goal of the game is to maximize the sum of the elements in the $n \times n$ submatrix located in the upper-left quadrant of the matrix.

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

$matrix = [[1, 2], [3, 4]]$

```
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

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

Sample Input

```
STDIN           Function
-----           --------
1               q = 1
2               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:

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

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:

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

3. Reverse row 0 ($[112, 42, 114, 119] \rightarrow [119, 114, 42, 112]$), resulting in the matrix:

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

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: **C**

```
#include <alloca.h>
#include <assert.h>
#include <ctype.h>
#include <limits.h>
#include <math.h>
#include <stdbool.h>
#include <stddef.h>
#include <stdint.h>
#include <stdio.h>
#include <stdlib.h>
```

```c
#include <string.h>

char* readline();
char* ltrim(char*);
char* rtrim(char*);
char** split_string(char*);

int parse_int(char*);



/*
 * Complete the 'flippingMatrix' function below.
 *
 * The function is expected to return an INTEGER.
 * The function accepts 2D_INTEGER_ARRAY matrix as parameter.
 */

int flippingMatrix(int matrix_rows, int matrix_columns, int** matrix) {
    int n = matrix_rows / 2;
    int total = 0;

    for(int i = 0; i< n;i++) {
        for(int j= 0;j<n;j++) {
            int a = matrix[i][j];
            int b = matrix[i][matrix_columns- j - 1];
            int c = matrix[matrix_rows - i - 1][j];
            int d = matrix[matrix_rows - i - 1][matrix_columns - j - 1];
            int max = a;
            if(b > max) max = b;
            if(c > max) max = c;
            if(d > max) max = d;
            total += max;
        }
    }
    return total;

}

int main()
{
    FILE* fptr = fopen(getenv("OUTPUT_PATH"), "w");

    int q = parse_int(ltrim(rtrim(readline())));

    for (int q_itr = 0; q_itr < q; q_itr++) {
        int n = parse_int(ltrim(rtrim(readline())));

        int** matrix = malloc((2 * n) * sizeof(int*));

        for (int i = 0; i < 2 * n; i++) {
            *(matrix + i) = malloc((2 * n) * (sizeof(int)));

            char** matrix_item_temp = split_string(rtrim(readline()));

            for (int j = 0; j < 2 * n; j++) {
                int matrix_item = parse_int(*(matrix_item_temp + j));

                *(*(matrix + i) + j) = matrix_item;
            }
        }

        int result = flippingMatrix(2 * n, 2 * n, matrix);
        fprintf(fptr, "%d\n", result);
    }

    fclose(fptr);

    return 0;
}

char* readline() {
    size_t alloc_length = 1024;
    size_t data_length = 0;

    char* data = malloc(alloc_length);

    while (true) {
        char* cursor = data + data_length;
        char* line = fgets(cursor, alloc_length - data_length, stdin);

        if (!line) {
            break;
        }

        data_length += strlen(cursor);

        if (data_length < alloc_length - 1 || data[data_length - 1] == '\n')
{
            break;
        }

        alloc_length <<= 1;

        data = realloc(data, alloc_length);

        if (!data) {
            data = '\0';

            break;
        }
    }

    if (data[data_length - 1] == '\n') {
        data[data_length - 1] = '\0';

        data = realloc(data, data_length);

        if (!data) {
            data = '\0';
        }
    } else {
        data = realloc(data, data_length + 1);

        if (!data) {
            data = '\0';
        } else {
            data[data_length] = '\0';
        }
    }

    return data;
}

char* ltrim(char* str) {
    if (!str) {
        return '\0';
    }

    if (!*str) {
        return str;
    }

    while (*str != '\0' && isspace(*str)) {
        str++;
    }

    return str;
}

char* rtrim(char* str) {
    if (!str) {
        return '\0';
    }

    if (!*str) {
        return str;
    }

    char* end = str + strlen(str) - 1;

    while (end >= str && isspace(*end)) {
        end--;
    }

    *(end + 1) = '\0';

    return str;
}

char** split_string(char* str) {
    char** splits = NULL;
    char* token = strtok(str, " ");

    int spaces = 0;

    while (token) {
        splits = realloc(splits, sizeof(char*) * ++spaces);

        if (!splits) {
            return splits;
        }

        splits[spaces - 1] = token;

        token = strtok(NULL, " ");
    }

    return splits;
}

int parse_int(char* str) {
    char* endptr;
    int value = strtol(str, &endptr, 10);

    if (endptr == str || *endptr != '\0') {
        exit(EXIT_FAILURE);
    }
    return value;
}
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	✓ Success	0	0.0086 sec	7.13 KB
Testcase 2	Easy	Hidden case	✓ Success	15	0.0483 sec	12.3 KB
Testcase 3	Easy	Hidden case	✓ Success	15	0.0371 sec	15.3 KB
Testcase 4	Easy	Hidden case	✓ Success	15	0.0201 sec	10.9 KB
Testcase 5	Easy	Hidden case	✓ Success	15	0.0272 sec	13.1 KB
Testcase 6	Easy	Hidden case	✓ Success	15	0.0444 sec	14.3 KB
Testcase 7	Easy	Hidden case	✓ Success	15	0.0489 sec	14.8 KB
Testcase 8	Easy	Sample case	✓ Success	0	0.0085 sec	7.13 KB

No Comments

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