

Max Binary Sum

Bob created a matrix of bulbs with N rows and M columns. He has wired the matrix such a way that he can choose any row or an column and flip the state of all bulbs in that row/column. That means if a bulb is on it turns off and of a bulb is off, it turns on.

Bob also like to do some weired things. So he considered this as a matrix of 0s and 1s. if a bulb is on, it it a 1 and bulb is off it is a 0. Now he needs you to maximize the sum of binary numbers representing in rows (the first column is assorciated with the most significant bit of the number) of the matrix by flipping th states of selected rows/columns as mentioned above.

Input Format

The first line contains two integers, N and M.

Each of the following N lines contains an array of M integers, each integer is 1 or 0 representing the original states of bulbs.

Constraints

- $1 \leq N, M \leq 50$

Output Format

Output a single number representing the maximum sum you can get.

Sample Input 0

```
3 3
1 0 0
1 0 0
0 1 1
```

Sample Output 0

```
21
```

Explanation 0

Flip the first column:

```
0 0 0
0 0 0
1 1 1
```

Flip the first and second row:

```
1 1 1
1 1 1
1 1 1
```

We get a sum of $(7 + 7 + 7) = 21$