Ben - The Gamer

[Instructions](javascript:void(0);) [Help](javascript:void(0);)

Time:

00:11/04:00:00

* [**Problem Statement**](https://www.techgig.com/codegladiators/question/cGN0aDdCU2dIUjJUTmhBcnFQbU9ZZ2d3MDdad28rWG9SSDU2UTcxdS9RZnQ1NGNqS1lmZDJyT0lULzdCRGxwZg==/1&msg_type=1#domain-problem)
* [Discussions](https://www.techgig.com/codegladiators/question/cGN0aDdCU2dIUjJUTmhBcnFQbU9ZZ2d3MDdad28rWG9SSDU2UTcxdS9RZnQ1NGNqS1lmZDJyT0lULzdCRGxwZg==/1&msg_type=1#domain-comments)
* [My Submissions](https://www.techgig.com/codegladiators/question/cGN0aDdCU2dIUjJUTmhBcnFQbU9ZZ2d3MDdad28rWG9SSDU2UTcxdS9RZnQ1NGNqS1lmZDJyT0lULzdCRGxwZg==/1&msg_type=1#domain-submission)

Ben - The Gamer (100 Marks)

Ben is one of the best gamers in India. He also happens to be an excellent programmer. So, he likes to play games which require use of both gaming skills as well as programming skills. One such game is SpaceWar.  
  
In this game there are N levels and M types of available weapons. The levels are numbered from 0 to N-1 and the weapons are numbered from 0 to M-1 . Ben can clear these levels in any order. In each level, some subset of these M weapons is required to clear this level. If in a particular level, Ben needs to buy x new weapons, he will pay x2 coins for it. Also note that Ben can carry all the weapons he has currently to the next level . Initially, Ben has no weapons. Can you tell the minimum coins required such that Ben can clear all the levels. 

**Input Format**

The first line of input contains 2 space separated integers;  
N - the number of levels in the game and M - the number of types of weapons.  
N lines follows. The ith of these lines contains a binary string of length M. If the jth character of  
this string is 1 , it means we need a weapon of type j to clear the ith level.

**Constraints**

1 <= N <=20  
1<= M <= 20

**Output Format**

Print a single integer which is the answer to the problem.

**Sample TestCase 1**

Input

1 4

0101

Output

4

Explanation

There is only one level in this game. We need 2 types of weapons - 1 and 3. Since, initially Ben  
has no weapons he will have to buy these, which will cost him 22 = 4 coins.

**Sample TestCase 2**

Input

3 3

111

001

010

Output

3

Explanation

There are 3 levels in this game. The 0th level (111) requires all 3 types of weapons. The 1st level (001) requires only weapon of type 2. The 2nd level requires only weapon of type 1. If we clear the levels in the given order(0-1-2), total cost = 32 + 02 + 02 = 9 coins. If we clear the levels in the order 1-2-0, it will cost = 12 + 12 + 12 = 3 coins which is the optimal way.

[Sample Problem with Solution](https://www.techgig.com/platform-faq)





1

2

3

4

5

6

7

/\* Read input from STDIN. Print your

    output to STDOUT\*/

#include<stdio.h>

int main(int argc, char \*a[])

{

//Write code here

}

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