Problem: P3

Description

The BACP is to design a balanced academic curriculum by assigning periods to courses in a way that the academic load of each period is balanced. There are N courses 1, 2, ..., N that must be assigned to M periods 1, 2, ..., M. Each course i has credit ci and has some courses as prerequisites. The load of a period is defined to be the sum of credits of courses assigned to that period.
The prerequisites information is represented by a matrix ANxN in which Ai,j = 1 indicates that course i must be assigned to a period before the period to which the course j is assigned.
Compute the solution satisfying constraints:

- Satisfy the prerequisites constraints: if Ai,j = 1, then course i must be
  assigned to a period before the period to which the course j is assigned
- The maximum load for all periods is minimal

Input

- Line 1 contains N and M (2 ≤ N ≤16, 2 ≤ M ≤ 5)
- Line 2 contains c1, c2, ..., cN
- Line i+2 (i = 1,..., N) contains the ith line of the matrix A

Output

- Unique line contains that maximum load for all periods of the solution
  found

Example

Input

6 2

4 4 4 4 2 4

0 0 0 0 0 0

0 0 0 0 0 0

0 0 0 0 0 0

0 0 1 0 0 0

0 0 1 0 0 0

1 0 0 0 0 0

Output

12

Source code

C++ 17

```
//C++
#include <bits/stdc++.h>

int main()
{

}
```

SUBMIT CODE

Or

C++ 17 | Select file

SUBMIT

Refresh

Bài nộp

Tìm kiếm

ID	Bài tập	Trạng thái	Mes
f89c8a	BACP	Accept	
0bceb9	BACP	Partial	
b9cc6a	BACP	Partial	

5 hàng | 1-3 của 3