

## C. The Child and Toy

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

On Children's Day, the child got a toy from Delayyy as a present. However, the child is so naughty that he can't wait to destroy the toy.

The toy consists of  $n$  parts and  $m$  ropes. Each rope links two parts, but every pair of parts is linked by at most one rope. To split the toy, the child must remove all its parts. The child can remove a single part at a time, and each remove consume an energy. Let's define an energy value of part  $i$  as  $v_i$ . The child spend  $v_{f_1} + v_{f_2} + \dots + v_{f_k}$  energy for removing part  $i$  where  $f_1, f_2, \dots, f_k$  are the parts that are directly connected to the  $i$ -th and haven't been removed.

Help the child to find out, what is the minimum total energy he should spend to remove all  $n$  parts.

### Input

The first line contains two integers  $n$  and  $m$  ( $1 \leq n \leq 1000$ ;  $0 \leq m \leq 2000$ ). The second line contains  $n$  integers:  $v_1, v_2, \dots, v_n$  ( $0 \leq v_i \leq 10^5$ ). Then followed  $m$  lines, each line contains two integers  $x_i$  and  $y_i$ , representing a rope from part  $x_i$  to part  $y_i$  ( $1 \leq x_i, y_i \leq n$ ;  $x_i \neq y_i$ ).

Consider all the parts are numbered from 1 to  $n$ .

### Output

Output the minimum total energy the child should spend to remove all  $n$  parts of the toy.

### Examples

input
4 3 10 20 30 40 1 4 1 2 2 3
output
40
input
4 4 100 100 100 100 1 2 2 3 2 4 3 4
output
400
input
7 10 40 10 20 10 20 80 40 1 5 4 7 4 5 5 2 5 7 6 4 1 6 1 3 4 3

### Codeforces Round #250 (Div. 2)

Finished

#### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

#### → Problem tags

graphs greedy sortings

No tag edit access

#### → Contest materials

- Announcement



14
output
160

### Note

One of the optimal sequence of actions in the first sample is:

- First, remove part 3, cost of the action is 20.
- Then, remove part 2, cost of the action is 10.
- Next, remove part 4, cost of the action is 10.
- At last, remove part 1, cost of the action is 0.

So the total energy the child paid is  $20 + 10 + 10 + 0 = 40$ , which is the minimum.

In the second sample, the child will spend 400 no matter in what order he will remove the parts.