3
LIVE EVENTS

05 : 21 : 29 : 55
DAY HRS MIN SEC

September Circuits

LIVE

Sep 16, 2016, 09:00 PM IST - Sep 24, 2016, 09:00 PM IST

INSTRUCTIONS PROBLEMS SUBMISSIONS LEADERBOARD ANALYTICS JUDGE

← Problems / Monica's Birthday Party

Monica's Birthday Party

Max. Marks: 100

Its Monica's 30^{th} birthday today. She has invited n of her F.R.I.E.N.D.S. to her birthday party. She has indexed them from 1 to n. Unfortunately, some of her friends don't quite get along. The amount of disliking between friend i and friend j equals d_{ij} (Note that $d_{ij} = d_{ji}$, and d_{ij} may be 0 if the friends don't dislike each other. Also, $d_{ii} = 0$).

There are two dining tables of capacities c_1 and c_2 respectively. Capacity of a table here means the maximum number of people that can be seated on the table. The cost of a table with k people is defined as the sum of d_{ij} over all the $\frac{k(k-1)}{2}$ **unordered** pairs of friends (i, j) seated on it.

You have to help her divide her friends in two groups to be seated on the two tables, such that the sum of the cost of the two tables is minimized.

Input:
The first line of input contains n, the number of friends invited to the party.
The second line contains two integers, separated by a space, c_1 and c_2.
It is followed by n lines. The i^{th} line contains n integers separated by a space $d_{i1}, d_{i2}, \cdots, d_{in}$

Output:
Print the number of people seated on table 1 in the first line.
In the second line, print the indices of the friends to be seated on table 1, separated by a space in increasing order.

Constraints:

- $2 \leq n \leq 10^3$
- $0 \leq d_{\text{ij}} \leq 10^4$
- $d_{ij} = d_{ji}, d_{ii} = 0$
- $0 \leq c_1, c_2 \leq 10^3$
- $c_1 + c_2 \geq n$

Scoring:
The scoring is relative. The solution with minimum sum of costs of two tables gets 100 points and other

solutions get points relative to it.
If the output format is wrong, or some table has more people than its capacity, you get **WA**.

Test file generation

In **20%** of the test cases, n is chosen randomly between $[2, 1000]$
In **20%** of the test cases, n is chosen randomly between $[400, 1000]$
In **20%** of the test cases, n is chosen randomly between $[700, 1000]$
In **20%** of the test cases, n is chosen randomly between $[900, 1000]$
In **20%** of the test cases, n is chosen to be 1000
d_{ij} is chosen randomly in range $[0, 10^4]$, c_1 is chosen randomly in range $[0, n]$, and c_2 is chosen randomly in range $[n - c_1, n]$.

50% of the test files will be run during the contest, and the rest will be run after the contest is over. The final score will be calculated by only the later half(to be run after the contest is over).

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SAMPLE INPUT

```
3
2 2
0 2 1
2 0 3
1 3 0
```

SAMPLE OUTPUT

```
2
1 3
```

Explanation

Cost of table 1 is $d_{13} = 1$. Cost of table 2 is 0, because there is no pair. So, the total cost is 1. Also, table 1 has $2 \leq c_1$ people, and table 2 has $1 \leq c_2$ people. So, the solution is valid.

Time Limit:	2.0 sec(s) for each input file.
Memory Limit:	256 MB
Source Limit:	1024 KB
Marking Scheme:	Marks are awarded when all the testcases pass.
Allowed Languages:	C, CPP, CLOJURE, CSHARP, D, ERLANG, FSHARP, GO, GROOVY, HASKELL, JAVA, JAVA8, JAVASCRIPT, JAVASCRIPT_NODE, LISP, LISP_SBCL, LUA, OBJECTIVEC, OCAML, OCTAVE, PASCAL, PERL, PHP, PYTHON, PYTHON3, R, RACKET, RUBY, RUST, SCALA, SWIFT, VB

CODE EDITOR

😐 Our compiler wanted to be here!

But the mobile is too cramped for it to load. It says it would be more comfortable on the web.

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LIVE EVENTS

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