


Weak Vertices

Problem ID: weakvertices
CPU Time limit: 1 second
Memory limit: 1024 MB

Engineers like to use triangles. It probably has something to do with how a triangle can provide a lot of structural strength. We can describe the physical structure of some designs using an undirected graph. We'll say vertex i is part of a triangle if i has two different neighbors j and k such that j and k are neighbors of each other. For this problem, find *weak vertices* in graphs – those vertices that is not part of any triangle.

Author: David Sturgill
Source: Baylor Competitive Programming Learning course
License: 

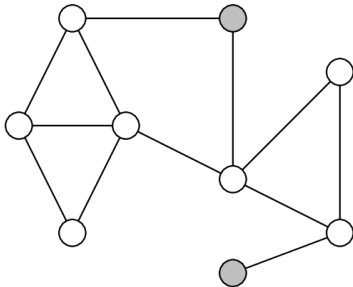


Figure 1: An illustration of the weak vertices (which are shaded) from the sample input graph.

Input

Input consists of up to 100 graphs. Each starts with an integer, $1 \leq n \leq 20$, giving the number of vertices in the graph. Next come n lines with n integers on each line, which describe an $n \times n$ adjacency matrix for the graph. Vertices are numbered from 0 to $n - 1$. If the adjacency matrix contains a one at row r , column c (where $0 \leq r, c \leq n - 1$), it means that there is an edge from vertex r to vertex c . Since the graph is undirected, the adjacency matrix is symmetric. The end of input is marked by a value of -1 for n .

Output

For each graph, produce a line listing the weak vertices ordered from least to greatest.

Sample Input 1

```
9
0 1 1 1 0 0 0 0 0
1 0 0 0 0 0 1 0 0
1 0 0 1 0 1 0 0 0
1 0 1 0 0 1 1 0 0
0 0 0 0 0 0 1 1 0
0 0 1 1 0 0 0 0 0
0 1 0 1 1 0 0 1 0
0 0 0 0 1 0 1 0 1
0 0 0 0 0 0 0 1 0
1
0
-1
```

Sample Output 1

```
1 8
0
```