Problem 2

Given an undirected simple graph, find the minumum number of edges that needs to be added to make the graph Eulerian (parallel edges are allowed in the resultant graph). Print the list of vertices which will be modifed in the sorted order. If the graph is already Eulerian, print -1.

Assume the input graph is simple, and it is connected. If the graph is on n vertices, the vertex set is from {0,..,n-1}.

The input graph is given in adjacency list format. The first line of the input specifies n,the number of vertices. The second line onwards, in each line, till we see the character '#', it denotes the neighbors of the first vertex (i.e. 0). Assume that the neighbors of vertices are given in sorted format according to the vertex index. After the first '#', fromthe next line onwards till another '#' is seen, it denotes the neighbors of the second vertex(i.e. 1), and so on.

Sample Input:

```
4       #Number of vertices
1
3
#
0
#
3
#
0
2
#
```

Sample Output

```
1
2
```