

## Problem 4

Given an undirected graph, find how many more edges have to be added to make it Eulerian. If the given graph cannot be made Eulerian, by adding edges, then print **-1**. Otherwise output the number of edges to be added. Assume the graph is a simple graph and it is connected. If the graph is on  $n$  vertices, the vertex set is from  $\{0, \dots, n-1\}$ .

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 '#', from the 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

#

/\*

*An adjacency matrix (0-1 matrix) where, 1 corresponds to presence of an edge, and 0 - absence of the edge)*

\*/

### Sample Output-

1