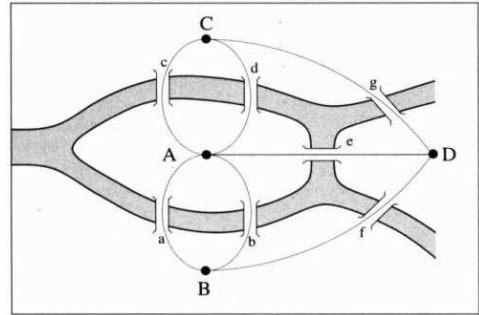# Problem D- Fixing the Bridges of Königsberg

In the classic problem the Seven Bridges of Königsberg, the map of town is composed of 4 islands connected by 7 bridges. The goal is to pick a starting location, cross each bridge exactly once and return to the starting location.

The map shown at right is impossible to solve, but by adding two extra bridges (in the right locations, of course), the problem has a solution. Your problem is similar: given a map of some islands and the bridges that connect them, determine the minimum number of extra bridges required in order to lead to a solution.

Input Specification:

Input is a sequence of test cases, each beginning with the positive integer $n \leq 100$, the number of islands. This is followed by the integer $M \geq 0$. M lines follow of the form $s\ t\ k$, which means that there are $0 < k \leq 50$ bridges connecting islands s and t, $1 \leq s < t \leq n$. If a pair of island numbers is omitted from the input, then there are no bridges connecting them. Furthermore, no pair of island numbers appears in the input twice.

Input ends when $n = 1$. This is not a test case and should not be processed.

Output Specification:

Output the smallest number of bridges required to yield a solution.

Sample Input:

```
4 5
1 2 2
1 3 2
1 4 1
2 4 1
3 4 1
1
```

Sample Output:

```
2
```