

In ancient times, many territories were under the control of a powerful king called Basm. Basm is well-known in history because of his strange works and as a result, there are many history-lovers who wish to know more about him. Koorosh is one of them and he has worked hard to find a way to know more about Basms works.

Recently, he managed to invent a Time MachineTM and traveled to the past to Basm time in order to be able to see and study his weird works thoroughly. Unfortunately, he has been caught by royal guard soldiers of Basm and is now in his prison. Basm ordered him to solve a problem if he wants to stay alive. King Basm wants to change the structure of roads of his newly captured territory, KuPellaKes in such a way that each city has an even number of neighboring cities. Now, he wants to know the minimum number of roads that should be destroyed in order to satisfy this condition. Note that each city must have at least one neighbor city after the road destruction process. Also, It should be noted that in the given territory at most two cities of KuPellaKes have an odd number of neighboring cities and there is at most one road between two cities. Also, there is no road from a city to itself.

Input

Input consists of several test-cases. Each test-case starts with a line containing three numbers $1 \leq n \leq 1000$, m indicating the number of cities and roads in KuPellaKes respectively. Next m lines, each containing two numbers $1 \leq i, j \leq n$ indicating that there is a road between the i th and the j th city. Note that all the roads are bidirectional. Input will be terminated with a line containing three zeros.

Output

For each test-case, your program should output the minimum number of roads that should be destroyed. In the case that this task is impossible the phrase 'Poor Koorosh' should be printed.

Sample Input

```
4 5
1 2
2 3
3 4
4 1
1 3
0 0
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Sample Output

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1
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