

15-th Bulgarian National Olympiad in Informatics

May 15 and 16, 1999

Final round

Problem 2. Servicing stations

A company offers personal computers for sale in N towns ($3 \leq N \leq 35$). The towns are denoted by 1, 2, ..., N . There are direct routes connecting M pairs from among these towns. The company decides to build servicing stations in several towns, so that for any town X , there would be a station located either in X or in some immediately neighbouring town of X .

Write a program BAS.EXE for finding out the minimum number of stations, which the company has to build, so that the above condition holds.

The **input** data are read from text file BAS.INP. In the first row of this file, there are written number N of towns and number M of pairs of towns directly connected each other. The integers N and M are separated by a space. Every one of the next M rows contains a pair of connected towns, one pair per row. The pair consists of two integers for town's numbers, separated by a space.

The **output** must be written into a text file BAS.OUT with a single row containing the obtained minimum.

An example:

Input:

```
8 12
1 2
1 6
1 8
2 3
2 6
3 4
3 5
4 5
4 7
5 6
6 7
6 8
```

Output:

```
2
```

Source is taken from the site [iNFORMATiKA](#):

(<http://www2.math.bas.bg/inf/resource/sources/olymp/99round4/tasks.zip>)

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