DAY 1
Problem 1: Paving Roads (30 points)

In an isolated area of a poor country there exist N towns connected by roads. Every pair of towns is not necessarily connected by a direct road but there is a path connecting them. All these roads are unpaved. The government is interested in paving some of these roads, so that with these paved roads:

* there is a paved path from any of these towns to any other town, and
* this does not hold if any of these (paved) roads is left unpaved

In order to find the most preferable paving, the government wants to obtain the number of all the different possible pavings.

INPUT
Your program should read the input from the file INPUT.TXT, as follows: The first line contains the number of towns N (2 <= N <= 20) and the number of roads R (N-1 <= R <= 190) as two positive integer numbers separated by a space character. The next R lines describe the town connections as pairs of integers K and L, denoting a road connecting the K-th and L-th town (0 <= K, L <= N-1).

OUTPUT
Your program should produce its output into the file OUTPUT.TXT as follows:
There will be only one line of text, containing the number of different possible pavings.

EXAMPLE

INPUT.TXT	OUTPUT.TXT
4 4	3
0 2	
0 1	
0 3	
1 3	

Time Limit per Test: 5 seconds