United International **University**

Department of **C**omputer **S**cience and **E**ngineering

CSE 2216/CSI 218 (E): Data Structure Laboratory/Data Structure and Algorithms I Laboratory

Trimester: Spring 2023

Final (Implementation), Total Marks: **15**, Total Time: **1 Hour**

Problem Statement: Mr. Atif tries to create a particular type of graph every day. He named the particular type of graph **Gráfico completamente conectado**. A **Gráfico completamente conectado** is a graph where every vertices is reachable from each vertex. That means if you start traversing the graph from any vertex, you can reach all the vertices of the graph.

As Mr. Atif is too lazy to check whether the graph he makes every day is a **Gráfico completamente conectado**, he wants you to write a program for him so that he can easily check whether the graph is his desired graph or not.

Input: The first line of the input contains two integers, the number of vertexes (V) and the number of edges (E). The next E line contains information about the edges. Each of the next E lines contains, a pair of vertices (f, t) that represents that there is a direct edge from f to t.

Please note that Mr. Atif always builds directed graphs as he doesn't like undirected graphs.

Output: Print **Gráfico completamente conectado**, if the graph maintains the condition that mentioned above, otherwise, print **Gráfico no completamente conectado**.

Input	Output
5 7 0 1 1 2 2 0 2 4 3 0 3 1 4 3	**Gráfico completamente conectado**
5 6 1 2 2 0 2 4 3 0 3 1 4 3	**Gráfico no completamente conectado**

Explanation of sample input output: In the first test case, you can reach every vertex if you start traversing from any vertex, that's why it is a **Gráfico completamente conectado**. On the other

hand, in the second test case, you can reach all the vertices if you start traversing from any vertex except vertex 0. That is why it is a **Gráfico no completamente conectado.**