

# Programming assignment 11

## Connected component

### Input (Standard input)

In the first line, the number of vertices  $N$  ( $1 \leq N \leq 1,000$ ) is given.

From the next line, the adjacency list of graph  $G$  is represented as the two integers  $x, y$ .  
This means the edge from vertex  $x$  to vertex  $y$  exists.

### Output (Standard output)

In the first line, print the number of connected components.

In the next  $N$  lines, print the component number of each vertex.

### [Example]

Input	Output
6	2
1 2	1
1 4	1
2 5	2
3 6	1
	1
	2

### Description

1. File name must be Connected\_component.cpp
2. Make a comment of your student ID, name and class in the first line of the source code.  
ex) 2014601028\_Honggildong\_A
3. Please keep the source code that you have submitted for some unexpected accident.