

## Assignment 2 Social Network Basic Concepts

**Q1.** Given a twitter data set which consist of two files:

**EdgesTwitter.csv:** A random selection of Twitter users and their “followings” relations. The “Edges” file contains a list of identifiers couples showing who follows who.

**NodesTwitter.csv:** This “Nodes” file contains the identifiers of each nodes such as their label, a sex attribute and a random value that will be useful to play with visualization tools hereafter.

Follow the following steps to explore and visualize this data on Gephi.

### Step1:: Create new project in Gephi

Run the application on your computer and create a “new project” in the start menu. In the Data Laboratory, click on “Import Spreadsheet” to open the import window and import your “nodes” file.

### Step2:: Import the data into Gephi

**Import Node Data:** Specify that the separation between your data is expressed by a semicolon and at the time of import in Gephi mention that import data is related to nodes.

**Import edge Data:** Import “edges” file and follow the same procedure as for the nodes. Specify the semicolon and import in Gephi as edges. Uncheck “create missing nodes”.

### Step3:: Visualization of data in Gephi

Now use ranking and Layout panel in overview to explore visualization options in Gephi.

**Q2.** Answer the following questions about this graph.

- How many nodes are in the network?
- How many edges are in the network?
- Is this graph directed or undirected?
- Create an adjacency list for this graph.
- Create an adjacency matrix for this graph.
- What is the length of the shortest path from node A to node F?

