**Social Network Analysis**

**Tutorial 1(week 1)**

**Odd- 2020**

**Analysing and Visualizing Social Network (Gephi)**

1. In this assignment, we will use the Gephi tool to analyze and visualize real-world networks.

Gephi is a complete stand-alone application (available at: <http://gephi.github.io/>) that you can download and install on your computer.

You can download the beta version directly from the following link: <https://github.com/gephi/gephi/releases/download/v0.8.2/gephi-0.8.2-beta.setup.exe>.

Some Data sets are available in Data Set folder in .gml format ( Graph Modelling Language)

1. Fetch a dataset from SNAP, kaggle, UCI repository etc. Each one should choose a unique dataset and experiment all the tutorial questions on them to understand the social network concepts practically.

Write the details about the dataset you have chosen. Details like

* 1. Network related description: Directed/Undirected, weighted/unweighted, Multigraphs,
  2. signed network, etc.
  3. description of Nodes and edges.
  4. Number of nodes.
  5. Number of edges, self loops if present

**3**. Given a twitter data set which consists of two files (help folder):

**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 node 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.