Do as follows in RStudio with R Script and knit the PDF file of the same as the solution. Attach the R script and knitted PDF file and “Turn In” this assignment.

Work 1: Use “airquality” data of R and locate median of “Temp” variable graphically

Hint:

1. Divide the “Temp” variable into different class intervals using a statistical rule and get number of frequencies in each class interval
2. Get less than frequency data for less than ogive
3. Get more than frequency data for more than ogive
4. Plot less than and more than ogives in a single plot
5. Intersection of less than and more than ogive in the x-axis is the median
6. Check this value with median code of R

Work 2: Use “airquality” data of R and locate mode of “Temp” variable graphically

Hint:

1. Get histogram of “Temp” variable
2. Draw a diagonal line from en edge of the largest bar to the tip of the opposite adjacent bar
3. Draw another diagonal line from other edge of the largest bar to the tip of of the opposite adjacent bar
4. Intersection of the two diagonal lines in the x-axis in the mode
5. Check this value with mode code of R

Work 3: Use “SNA\_School.csv” data and perform social network analysis of first and second variables

Hint:

1. Import and create a data frame “s” with first and second column of the data
2. Save it as network graph data object “net” with directed = T argument
3. Check number of vertices, edges, degree of “net” and interpret the carefully
4. Get histogram of net degree and interpret it carefully
5. Get network diagram of “net” and interpret it carefully
6. Get network diagram of “net” with kamada.kawai layout and interpret it carefully
7. Get hubs using hubs score and interpret it carefully
8. Get authority using authority score and interpret it carefully
9. Get community using the a special network diagram parameter and interpret it carefully