Assignment 2

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Description: I decide to use R for plot and divide in several phases

1. **Preparation**

install.packages("igraph") install.packages("network") install.packages("sna") install.packages("ndtv")

2. **Read Data**
   DATASET 1: edgelist

The first data set we are going to work with consists of two files, “Media-Example-NODES.csv” and “Media-Example-EDGES.csv” (download here: http://www.kateto.net)

nodes <- read.csv("Dataset1-Media-Example-NODES.csv", header=T, as.is=T) links <- read.csv("Dataset1-Media-Example-EDGES.csv", header=T, as.is=T)

3. **Ploting Histo**

   DATASET 2: matrix

nodes2 <- read.csv("Dataset2-Media-User-Example-NODES.csv", header=T, as.is=T) links2 <- read.csv("Dataset2-Media-User-Example-EDGES.csv", header=T, row.names=1)

Examine the data:

head(nodes2) head(links2)

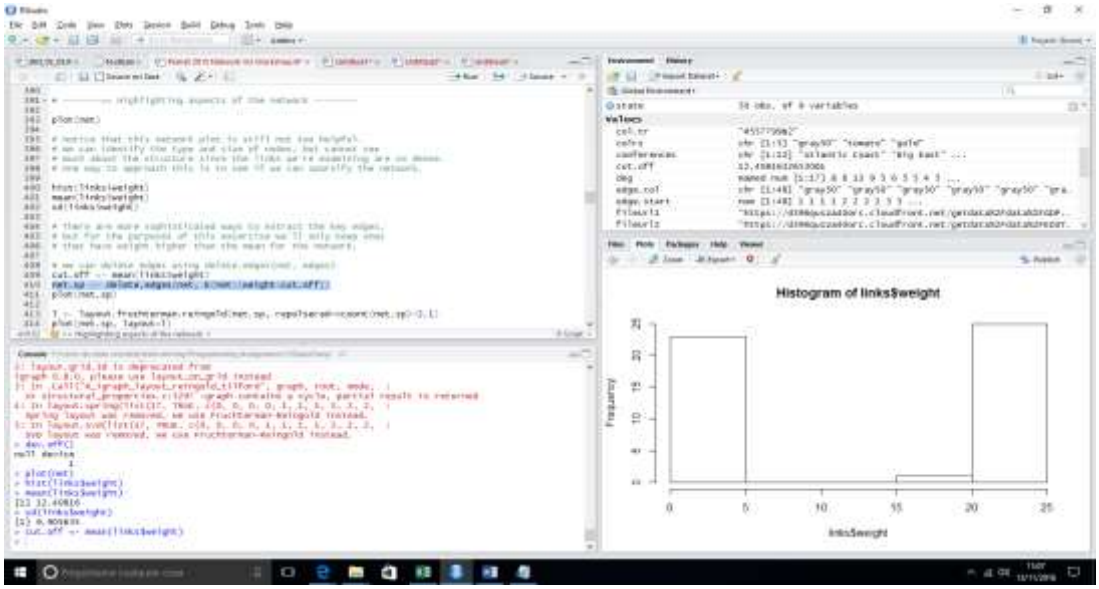
We can see that links2 is an adjacency matrix for a two-mode network:

links2 <- as.matrix(links2) dim(links2) dim(nodes2)

hist(links$weight)

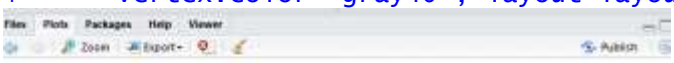
mean(links$weight)

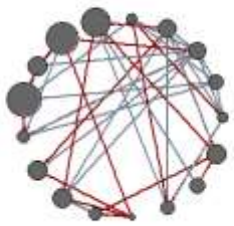
sd(links$weight)



4. Ploting Networks

```
plot(net.sp, layout=l)
> E(net)$width <- 2
> plot(net, edge.color=c("dark red", "slategrey")[(E(net)$type=="hyper
link")+1],
+      vertex.color="gray40", layout=layout.circle)
```





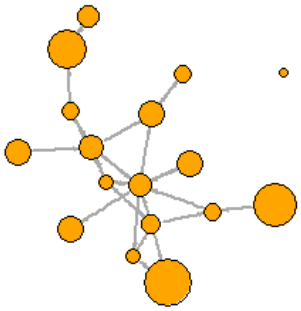
Plot the two links separately:

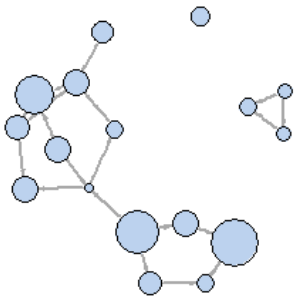
par(mfrow=c(1,2))

plot(net.h, vertex.color="orange", main="Tie: Hyperlink")

plot(net.m, vertex.color="lightsteelblue2", main="Tie: Mention")

Tie: Hyperlink **Tie: Mention**





```
plot(net2, vertex.shape="none", vertex.label=nodes2$media, vertex.labe
l.color=V(net2)$color, vertex.label.font=2, vertex.label.cex=.6, edge.
color="gray70", edge.width=2)
```

Sometimes, especially with semantic networks, we may be interested in plotting only the labels of the nodes:

plot(net, vertex.shape="none", vertex.label=V(net)$media, vertex.label.font=2, vertex.label.color="gray40", vertex.label.cex=.7, edge.color="gray85")

```
img.1 <- readPNG("./images/news.png")
> img.2 <- readPNG("./images/user.png")
 V(net2)$raster <- list(img.1, img.2)[V(net2)$type+1]
 >
 > plot(net2, vertex.shape="raster", vertex.label=NA,
 +      vertex.size=16, vertex.size2=16, edge.width=2)
 img.3 <- readPNG("./images/cat.png")

 > rasterImage(img.3,  xleft=-1.7, xright=0, ybottom=-1.2, ytop=0)
```

Answering Questions:

1. What is the data set that you chose? Why?

My data are at Media-Example-NODES.csv: http://www.kateto.net; I chose it because of the versatility of the samples, because it gaves me fexibility to plot different kind of graphs, to show data for analysis.

2. Did you use a subset of the data? If so, what was it?

I have used all the data in my analysis.

3. Are there any particular aspects of your visualization to which you would like to bring attention?

   In did I think that in spite of the fact that there are several sources of data; they should be chosen in best way in order to avoid one

4. What do you think the data and your visualization show?

The best way to analyze data is to plot it.

Conclusions:

a. In my opinion plotting is the best way to summarize the principals aspect for analyzing data
b. It is possible to define a strategic to give treatment to data and get the information needed.