Hw 8a

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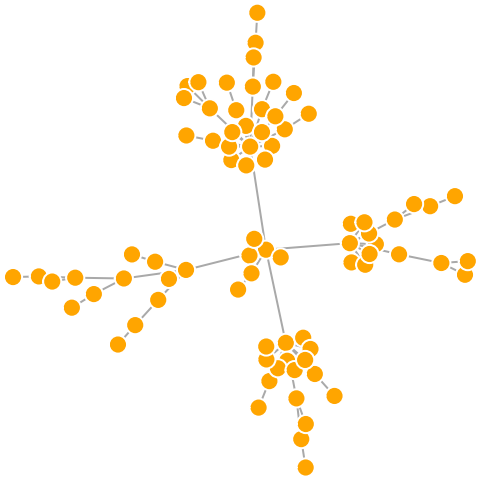
Sources: http://kateto.net/network-visualization

Different Approaches with fake data

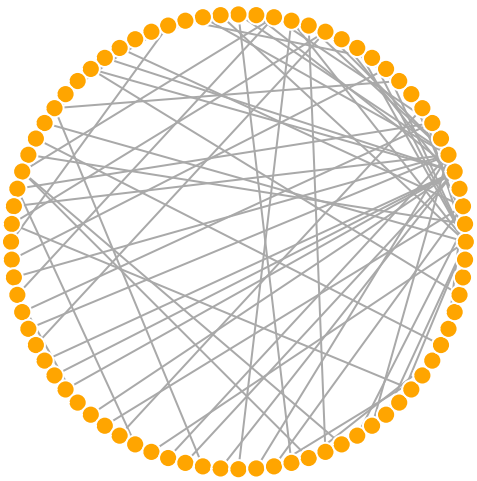
A couple of ways to potentially visualize data: cirlce, and with the Fruchterman-Reingold Algorithm.

I like the FR algo because it offers a nice intuitive understanding of the data.

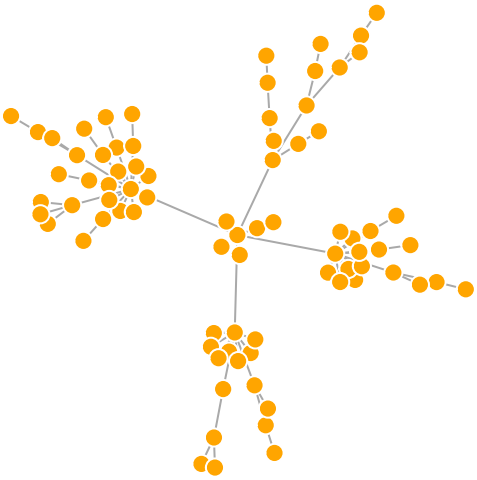
```
#Fake data, trying out different algorithms
net.bg <- sample_pa(80)
V(net.bg)$size <- 8
V(net.bg)$frame.color <- "white"
V(net.bg)$color <- "orange"
V(net.bg)$label <- ""
E(net.bg)$arrow.mode <- 0
plot(net.bg)
```



```
#circle - kinda hard to see
l <- layout_in_circle(net.bg)
plot(net.bg, layout=l)
```



```
#Fruchterman-Reingold: force-directed layout algo
## edges are similar, and cross minimally
### graph as physical system, with electrical repulsion/acting as springs
#non-deterministic
fr <- layout_with_fr(net.bg)
plot(net.bg, layout=fr)
```

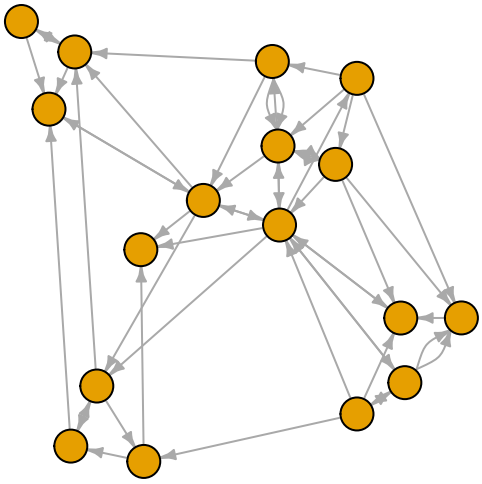


Plot with Newspaper data

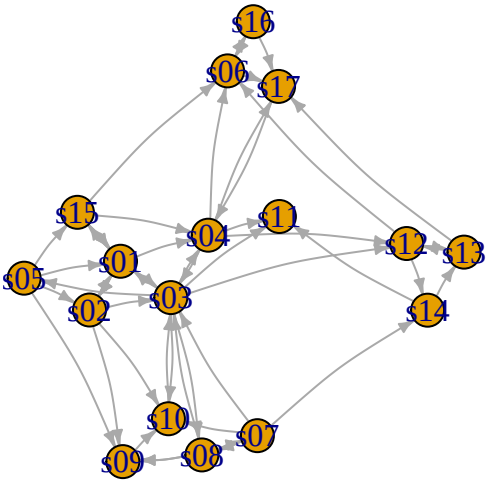
Trying the Newspaper data without any fancy algorithm to sort the information. I just wanted to get a feel for the information. In the dynamic graph, I will try to show how the network evolves over time.

```
#actual data to play around
# Plot with curved edges (edge.curved=.1) and reduce arrow size:
# Note that using curved edges will allow you to see multiple links
# between two nodes (e.g. links going in either direction, or multiplex links)

net <- simplify(net, remove.multiple = F, remove.loops = T)
plot(net, edge.arrow.size=.4,vertex.label=NA)
```



```
plot(net, edge.arrow.size=.4, edge.curved=.1)
```




```
# Set edge color to light gray, the node & border color to orange
# Replace the vertex label with the node names stored in "media"
plot(net, edge.arrow.size=.2, edge.color="orange",
     vertex.color="orange", vertex.frame.color="#ffffff",
     vertex.label=V(net)$media, vertex.label.color="black")
```