Please do your homework using an R script. Homework is NOT collected in this class. However, on the day it is due, you may be asked to share your screen and run some of your code when we discuss this homework in class. This will count towards your participation grade.

1. Download g.RData from Moodle and load it into R. This will create the graph g.  
   1. Show the summary of the graph, then plot it.
   2. Display all its attributes, graph, vertex, and edge.
   3. Create a new vector that converts the gender vertex attribute so that 1 indicates female (F) and 2 male (M). You may call this vector gen.
   4. Change the graph so that the vertices for females are pink and circular, and for males lightblue and square.
   5. Display the group name on the edges.
   6. Change the edge colors so that family has color 1, friends color 2, and work color 3.
   7. Let the size of the vertices be determined by their degree.
   8. Plot the graph again, using the Fruchterman-Reingold layout, setting the palette to rainbow(3), and use the name of the graph as the title.
   9. Create a legend for the gender (do not spend too long on this question; it was meant to be asked AFTER we discussed the Lazega visualization which we did not get to yet).