Assignment 9 - Analyze Social Network Data

For this assignment, you will write a program to analyze a social network dataset and print results to the terminal window in both written/tabular and graphical form; and write a brief report describing your analysis and results.

The dataset Pew_Survey.csv consists of a first row containing column names followed by 1372 data lines. The data come from an Internet Core Trends survey conducted by the Pew Research Center in January/February 2019. The column and data field information are included in the document: Pew_Survey_data.pdf on the Canvas site.

There are many possibilities for analyzing this data, both for business or inter-personal studies. For this assignment, you will design and write a program to analyze the data, and interpret the results. You must include both written/tabular results and also plots or other visualizations of your results. There is a sample plot program included in this module on the Canvas site, but there are many other interesting ways to present data visually.

Besides the program, include a report that contains the following ***labeled*** sections:
PURPOSE: What are you trying to show with your chosen analysis? Why are you interested in showing this? Why is this important?
INPUT:
OUTPUT:
WHAT THE PROGRAM DOES: How did you conduct the analysis?
RESULTS: Describe and discuss the results of your analysis.
ANY ADDITIONAL INFORMATION.

The report should be submitted in .pdf or Word format, in a document ***labeled with your last name***, eg: Dugas_HW9_Report.pdf.

Zip your report, code, .csv file, and a **screen shot of any output** into a zip (compressed) file that is labeled (both inner and zip folders) with your last name, eg: Dugas_HW3.zip, and submit in Canvas. ***Do not submit the Pew_Survey.csv dataset with your assignment***. *Screen shots may be included in your report, but also must be included separately in the zip file.*

PROGRAMMING GUIDELINES:

Do all processing using one program only.

Programs will be screened for plagiarism. If you "borrow" code, be sure to document the details of the source; otherwise it will be considered plagiarism and result in a zero grade for the assignment. Borrowed code will not count toward your grade, only original code will be considered.

Programming can be done in a variety of languages. Programs should employ good programming practices. An example is the use of descriptive variable and function names.

Input: Do not prompt for a file name; hard-code the ***Pew_Survey.csv*** name into your program.

Output: All output must have titles and legends that make it clear what is being shown.

Annotation and Comments: ***IMPORTANT***

- Program header must include your name and assignment information (use comments).
- Comments must also be used at the beginning of the program to give an overall description of the purpose of the program.
- Comments must also include detailed running instructions to run in a terminal window.
- Comments should also be used throughout the code to explain what it is doing. It should be possible to re-create your program based on the comments alone. Poorly commented programs will receive poor grades.