Michael Reilly
Professor Dugas
CS-581-WS
10/28/20

I pledge my honor that I have abided by the Stevens Honor System.

PURPOSE: The purpose of the program is to collect the data of a .csv file based on reviewer's trust in other reviewers from epinions.com and use that data to create triads analyze the data distributions, expected and actual, that it gives.

INPUT: The input to the command line to run the program is: python3 Reilly_HW5.py filename With filename being a provided .csv file with reviewers, reviewees and weights respectively as the columns of data.

OUTPUT: The output of the program is a display of all the collected data. This includes the count of edges in the network, the count of self-loops, the count of edges that aren't self-loops, the count of positive edges, the count of negative edges, the probabilities of both positive and negative edges, the count of all triangles, the expected distribution of the data, and the actual distribution of the data.

WHAT THE PROGRAM DOES: After the user prompts the input in the command line, the program goes into the main to parse the arguments. It then executes the triad_processing function which will collect all the data that was asked to be collected from the file. This includes finding the all self-loops, total edges, number of triangles, and both the expected and actual distributions, as described in the output section. As this is happening, the output will also be developed and printed continuously while it's running, rather than printing it all at once at the end of the function's execution. This output is a printed display of all the information.

ADDITIONAL INFORMATION: One issue that arose is that the function can only execute the epinions96.csv and epinions_small.csv files. The file epinions.csv was too large and thus took too long to execute so it is recommended not to use files of that size. Another thing worth noting is that parts of code were found online, be it from stackoverflow, or the original documentation of networkx and how to use it. All those pieces of code are noted with a comment with the link to the location where I found the information.