Assignment 3
(100 points)

Purpose:

To allow you to exercise with a logical thinking process to formulate algorithms, and to implement the algorithms using the Python Programming Language. The logic will include but is not limited to: lists, control, tuples, social graphs. This is an individual assignment.

Questions:

Write a Python program for each of the following:

The following is a social network graph. Each edge (link) in the graph represents a friendship between the involved people. The number on the link represents the number of times the involved people communicated with one another. No number on an edge means 0 communication is happening.

You are to write a python program that will store the relations between the people involved in this social network somehow, as well as the degree of their communication. You are also going to print the following:

- A list of all friends of each person in the network (15 points).
- A list of unique friends of friends of each person in the network. (15 points)
- The three highest people involved in some kind of direct communication with others in the network. (15 points)
- The list of people who are involved in zero communications with others. (15 points)
- The average number of friends in the network. (15 points)
- All person(s) who have more than 4 friends. (15 points)
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10 points are awarded for a professional evaluation of your submission.