Context

WeTrust is a company with a great track record in the business world. His work is based on helping to improve the relationships of trust within the other companies in the country. According to the company, its approach would help each company to be more efficient in its processes and operations by increasing the trust between its employees. However, recently there was a crisis in the company, a communication error that carried the wrong message through all the employees, which resulted in a huge loss of money and the manager discovered a great flaw in the trust of WeTrust employees. Overwhelmed by the situation, he decided to contact a trained team at Icesi University to help him identify in which sections of his company trust is most affected, and in this way, prevent another similar crisis from happening again. He wants to know how the levels of trust are in each section, he wants to know how trust is damaging the communication and he wants to be told who distrusts who. However, the manager does not have much time to see a presentation of his entire company, so he is asking the team from Icesi to design a program that allows him to review everything he asked for at any time. So that the program can be developed, all the employees of the company responded to surveys that gave the necessary information regarding trust.

What your team is asked to do is a computer program which can allow its user to consult all the information about the company listed below:
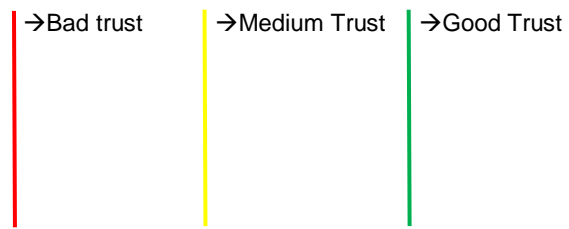
  a. A diagram of all the employees who answered the surveys. Each employee must be represented by its unique id number.
  b. The trust between all the employees in the company represented by 3 colors (red, yellow, green) to indicate the level of trust that exists among them. Check example #1 below.

Since the trust is a crucial factor when it comes to communication, the program must be able to indicate the following:
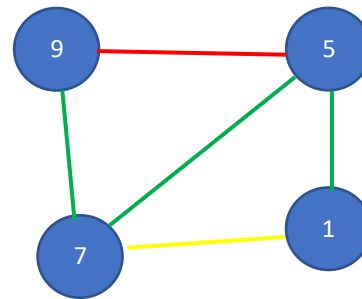
  a. The best way to pass a message throughout the entire company with the minimum risk of losing information. This means, passing the message through the employees with the most trust, or, in other words, the employees that have less difficulty to communicate between them.
  b. The best way to give a message from one employee to the other without risking misinterpretation or conflict. Meaning the best alternatives of employees to pass the message. Check example #2 below.

Furthermore, the program is required to have a simple, user friendly, interface, so that the manager does not have the need of any explications regarding the functionality of the program.

Example #1

| →Bad trust | →Medium Trust | →Good Trust |

Example #2

Best way to communicate employee (id) 9 with employee (id) 5 is through employee (id) 7.