Graph Analytics for Python Developers

Assignment 1

Version 1.0

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The goal of this assignment is for you to understand and try out basic NetworkX methods to create a simple graph. The requirements for the graph are:

- The **graph should represent a real-world use case,** for example, friendships in a social network, emails in a communication network, roads and cities in a transportation network, etc.

- The graph should contain at least **two different kinds of nodes**. In other words, nodes should represent at least two different kinds of entities. For example, a social network could contain nodes representing people and events that they participated in, while a transportation network could contain nodes representing cities and countries.

- The graph should contain at least **two different kinds of relationships**. In other words, the relationships should represent at least two real-life connections between entities. So, for example, two people could be connected with relationships that represent friendships and acquaintanceships.

- The graph should contain at least **20 nodes** and **20 edges**.

- You don't have to create the graph manually by adding every node explicitly, you can just use local files to import data. Don't use graph generators because they will be covered in the next lesson.

- You need to use some of the following methods in your code:
  - **`G.add_node()`:** Reference guide
  - **`G.add_nodes_from()`:** Reference guide
  - **`G.add_edge()`:** Reference guide
  - **`G.add_edges_from()`:** Reference guide

- You will need to visualize the graph using **`nx.draw()`** (Reference guide).

How to submit the assignment?

Upload your code to a GitHub repository and send us the link to ivan.despot@memgraph.com.
If you used local files to import data, please add them to the repository as well.

Because all assignments will be submitted using GitHub, we recommend creating one repository where you will upload all of the assignments.