Problem Statement + Overall Project Description

Project Title
Microservice simulation software to monitor and optimize services

Team Members:
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Project Description
In recent years, the micro-service architecture has been favored by many software companies as a way to structure large projects and applications so that independent pieces of software can be developed asynchronously and with little to no dependencies. In this type of architecture, pieces of software are broken apart into smaller "services" that are self-contained and functional (usually deployed via cloud services). The result is a graph-like network of several services that communicate with one another via HTTP or RPC. Although this provides many benefits to developers, opting in to this architecture presents many difficult tasks such as how these services communicate with other services and how to share such data and information in an efficient manner.

This project aims to develop a network monitoring system specific to the micro-service architecture. It presents itself as an online web application that allows for users to simulate the passing of data, messages, and information to these services and the creation of new services in a user-friendly manner. Users will be able to simulate the creation of their own "services" whether it be an API, database, or website, and track the metrics associated with these interactions such as delays, errors, and latency in their system.

Disclaimer:
This project was approved by the instructor.