Assignment 02.01

Implementing and Extending OpenTelemetry Observability

Objective

Deploy the OpenTelemetry Docker demo, understand its architecture, resolve predefined scenarios, and enhance the system by adding a new metric to one of the applications.

Instructions

- Clone and deploy the OpenTelemetry Docker demo following the official guide.
- Explore the deployed system to understand its overall architecture and how different services communicate and generate telemetry data.
- Complete the provided scenarios within the demo documentation to familiarise yourself with tracing and metrics collection:
  - https://opentelemetry.io/docs/demo/scenarios/recommendation-cache/
  - Understand what the https://opentelemetry.io/docs/demo/feature-flags/ is all about. Change the values and compare the results
- Choose one of the applications within the demo, based on your preferred tech stack.
- Familiarise yourself with the application's code and create a new metric that could provide meaningful insight into the application's performance or behaviour
  - Check how the Telemetry is being injected in the code. Look for specificities and compare between:
    - C#, Java and Python
- Integrate your new metric with OpenTelemetry and ensure it's captured and visible in the observability backend (e.g., Grafana).
- Document the process, including your chosen metric, code changes made, and how the new metric provides value to observability.