Algorithmic Challenge and HTTP Service Implementation

This case study comprises two primary tasks:

1. **Algorithmic Challenge**
   Implement an algorithm to solve the problem described in this link. T. You may utilize various online dictionaries for your solution, such as the Tournament Word List. The goal is to compute the shortest sequence of words connecting a given start word to an end word.

2. **HTTP Service Implementation**
   Design and implement an HTTP service that exposes a single endpoint to interact with your algorithm.

   - **Functionality:**
     Users will provide the start and end words via the endpoint. The service will respond with the solution (the shortest word sequence).

   - **Logging:**
     For each request, log the following details in a database:

     - User input
     - Server response
     - Elapsed time
     - Any other relevant information

Technical Requirements

- Package the solution using **Docker Compose**, including both the application and the database.
- Write a concise **README.md** file with instructions on how to run the service and any additional comments.
- Use **Javascript/Typescript** for the implementation.
- Version control the project using **GitHub**.

Recommendations

You are free to use any database, runtime, frameworks, or libraries that you are comfortable with or familiar with. While the estimated time to complete the task is

approximately **2-3 hours** (assuming familiarity with the technologies), it is perfectly acceptable to submit a partially implemented or non-optimal solution. Examples of reasonable omissions include:

- Lack of comprehensive tests for the algorithmic solution
- Limited error-handling in the HTTP service
- Minimal documentation in the code

At the end of the task, provide access to your Git repository by sharing it with @gntikos