Task: Create a backend for a Messaging application.

Description:

A message is a text sent from user A to user B. Users have nicknames and are identified by unique ids. To simplify - you do not need to implement any sort of authentication. You can impersonate as any user just by providing his id in the request header.

Implement the following user stories as HTTP API following REST principles.

1. As a non-user, I can create my account by providing my nickname (nicknames should be unique)

2. As a user, I can send a message to another user identified by his id (you cannot send a message to yourself)

3. As a user, I can view all messages that I received

4. As a user, I can view all messages that I sent

5. As a user, I can view all messages received from a particular user

All messages should be persisted in PostgreSQL.

Bonus:

Sending a message should put a message on a queue using any messaging system like RabbitMQ, Kafka, JMS, SQS - up to you.

Note:

When reviewing the code we will pay attention to the following things:

- The application should be easy to run – preferably at the click of the run button or command. For fast and easy database setup we recommend using a docker container or TestContainers.
- we value more **production-ready code** rather than a full implementation of all the requirements described - for example - clean code, use of industry best practices
- the code should be split following architecture standards, clear separation of concerns (i.e. clear distinction between Repositories, Services, Controllers)
- the code should be tested – as you would do with an application you are deploying to production, to make sure your code is delivering what is supposed to be delivered
- Have small documentation to understand which requirements were implemented and how to run and use the application. This can also include a list of things you would improve to your current implementation

The project should be placed on Git repository - for example Github, Bitbucket, better if it has no name that makes it easy to find by other applicants.