Home Assignment

Hi there,
Below is a description for a short home assignment to test your coding skills. It should take no more than a few hours and hopefully you will enjoy it.

In this task, you will implement a web server application that would help our office stay safe during a global pandemic.

Please follow the instructions below and try to implement as many levels as you can.
Note that only levels 1-4 are mandatory (without the bonus addition), the rest are optional and may teach you some new skills.

Level 1

Build a REST API server (using .Net Core/.Net 5 or Node.JS) that would support the following use case -
As an employee, I want to be able to log when arriving at the office and when leaving the office. I also want to be able to get all my past logs.
Bonus: Add swagger UI or any other UI descriptor tool

Level 2

Add the following use case -
As an employee, I want to notify if I've been diagnosed positive, so that everyone I've been in touch with within the past week will be notified that they should go to quarantine.
You may simulate notifications by listing the emails of the exposed employees to console output or send an actual email.
Bonus: Add tests

Level 3

Dockerize your application. Create a docker container that installs and runs your application.
Running the following command should run the app on a local docker setup with the app accessible on localhost:5000 -
docker run -p 5000:5000 <docker image name>

Level 4

Add persistent storage to your application (create a database to support your application).

Level 5

Deploy your app to the cloud. Most cloud providers provide free tier accounts. Pick one (AWS, Google Cloud, MS Azure, Heroku, etc.) and create a live environment.
The DB could be a managed DB service offered by the cloud provider or a database docker container running alongside your application.

Good luck!