Full Stack Engineer Coding Challenge

LIGHTFEATHER IO LLC

Rules of Submission

1. This challenge must be completed in under 48 hours.
2. Your code and any assets must be version controlled with Git.Your submission must include a hyperlink to a github.com repository that you have pushed your project to.
3. The github project should have a README file that includes instructions on anything that would need to be done to **install and run** your submission.
    a. Your submission must be dockerized. If you've never used Docker before, please feel free to leverage templates that we've created here: https://github.com/Team-LightFeather/coding-challenge-templates
    b. If you prefer, you may also dockerize your submission on your own (for more brownie points!)
    c. Submissions that cannot be run **will not be graded.**
4. Submit your code using the form link found in the email.

Background

LightFeather IO, LLC has decided to develop an internal management system that will assist in the rapid growth of the company. This management system is intended to be a large and complex system of microservices that will all interact with each other. A set of requirements have already been established, and **any additional modules to this system will need to be extensible and flexible** to work within the entire system. Due to the rapid growth of the company, LightFeather wants to keep this system scalable and flexible to support a growing user base.

Objective

You have been tasked with creating one of these modules. This will require a backend microservice and a frontend UI to manage. Note that you are starting a new module that will be expanded on in the future. The module must be bundled together and exposed via a Docker container. The specifications for your module are described below. **You have 48 hours to complete this task.** If you have any questions regarding this code challenge or any of the requirements, please email michael.dere@lightfeath.io.

Submission

You must provide a link to your github repository with all of your code, in a *single repository*. The project must run inside a working docker container. You may submit the link to your repository via the form link found in the email.

Reference

LightFeather has supplied you with a list of reference repositories that you may use to assist you in creating this module. *Use of these resources are optional.*

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Specifications: Supervisor management notification module

This module will coordinate the supervisors currently working at LightFeather and the jurisdiction they cover. Any employee in the company can submit their contact information for a specific supervisor to be notified of any announcements the supervisor has made.

Backend Service

This microservice will be responsible for consolidating the list of current supervisors as well as updating the notification service. *As a part of this coding challenge, any submissions to this module will simply display the results. This data does not need to be moved to another service.*

1. This service must be implemented as a REST microservice with the following endpoints
    a. `GET /api/supervisors`
        i. This should return a JSON array of all the supervisors. The supervisors can be dynamically loaded via the REST endpoint at https://o3m5qixdng.execute-api.us-east-1.amazonaws.com/api/managers
        ii. The format of the supervisors returned must be displayed in the following format: “<jurisdiction> - <lastName>, <firstName>”
        iii. The supervisors must be sorted in alphabetical order, first by jurisdiction, then my last name, finally by first name.
        iv. Numeric jurisdictions should be removed from the response.
    b. `POST /api/submit`
        i. This endpoint should accept a request for a new notification request for a supervisor. The following data is required in the payload
            1. firstName
            2. lastName
            3. email
            4. phoneNumber
            5. Supervisor
        ii. If this is a successful request, then all the associated information should be printed to the console of the backend service.
        iii. If the request omits the first name, last name, or supervisor field then the endpoint needs to return an error response with an appropriate message.
        iv. Validation Requirements
            1. Name fields are required and must only contain letters, no numbers.
            2. Standard validation against phone number and/or email must be applied.
            3. Any invalid requests must send back an error response.
        v. Note that the phoneNumber and email fields are optional fields, and not required. Omitting these fields does not indicate an error condition.

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Front End Requirements

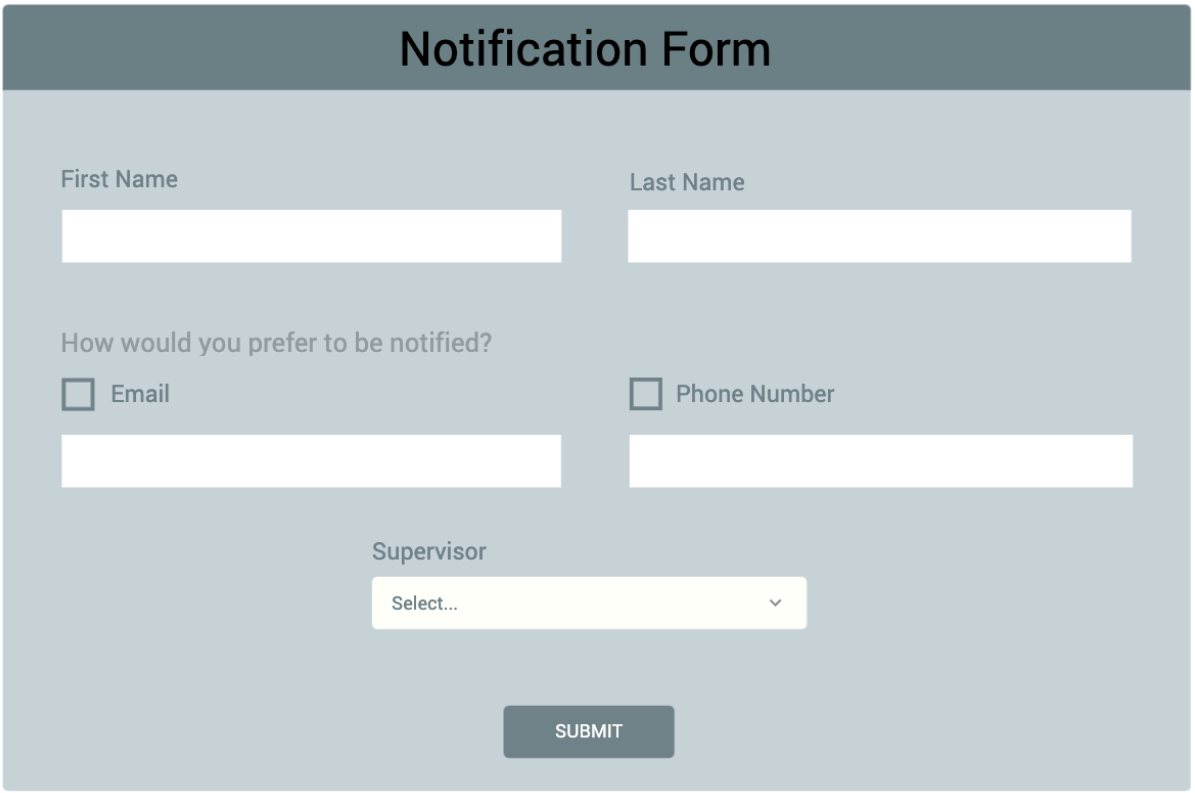
This supervisor notification module will require a front end. An example form is shown on page 3. The form should provide a proper input field for all required fields and a means of submitting this information to the backend service endpoints. The front end should display any applicable error messages to the user for any invalid requests. All successful submissions should clear the form with a message indicating the request was a success. All API requests in the UI should be made to the Backend service described above.

The supervisor dropdown should be populated with the response from the `GET /api/supervisors` endpoint. The results of the form should be sent to `POST /api/submit`

Documentation

All modules must be documented with a README.md file in the root of the repository. Instructions should include all required steps to build and run the container to view and access the module.

Example Form



Styling note: Your form can look similar to the mockup provided, but we will not be grading on specific fonts, colors, margins, padding, etc. unless otherwise stated.

Please note that this assignment is fictitious and this system, and any code you submit will not be included in any internal systems at LightFeather IO, LLC.