K-Link Enterprise Solutions Co.,Ltd.
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Full-Stack Developer Coding Test (Mini Chat App)

15 NOV 2022 / 7:00 PM

DELIVERABLES

- A final version of your code put on github publicly.
- Must provide **README** file with description how to run the project.
- Must provide **API list** via postman collection.
- Must deploy on your preferred service (eg. Firebase, Netify, VPS, Heroku, etc)

REQUIREMENTS

- You must start a project from scratch. For the front-end, use only the latest version of **ReactJs(Typescript)**.
- You have to choose one of two options for UI(frontend).

  (**Tailwind CSS** or pure **HTML/CSS/SCSS**)

- For Backend & API, you can use one of your favorite server side languages/frameworks.
- Must use one of **OOP Design Patterns** to solve the business logic problem.
- Main business logic is the delivery method section. So, all business logic handlers must be placed in the backend.

APPLICATION PROBLEM

Imagine that you're creating a realtime chat application. The first version of your app can only chat by three delivery methods (Red, Green, Blue). In future, you will add another one or more delivery methods. Each delivery method has two functions like color converter, different timeout.

- Green method will take 3 seconds to convert the color of text.

- Red method will take 2 seconds to convert the color of text.
- Blue method will take 1 second to convert the color of text.

Each message will be delivered to the frontend after converting the color by timeout function.

You will plan to compitable and plugable for future delivery methods.

Remark: In reality, those delivery method's functions will be more complex than the above example problem.

APPLICATION FEATURES

- Must be able to login with email and password. (No signup UI needed but must provide in API collection)
- Users can choose one of three delivery methods(Red, Green, Blue) before sending the message to the chatroom.
- After sending the message, messages will appear with related colors as handled by the delivery method.

BONUS POINT

- Code agility
- Docker (Container)
- Modular and maintainable architecture
- Any **extra fine-tune** features will count toward the bonus point as well.

Ref. DESIGN

You can reference the following sketch.

https://www.figma.com/file/UA08ConVQSCc0u0oko0b5p/Klink-Dev_Assignment-(Sketch)

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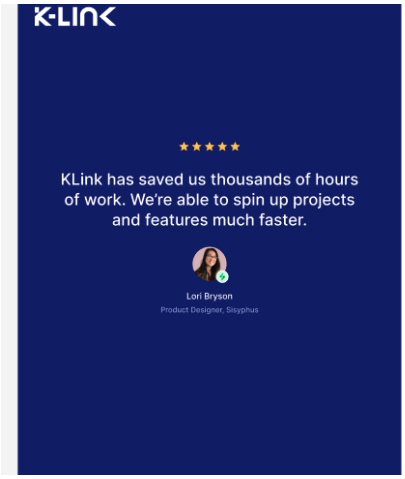

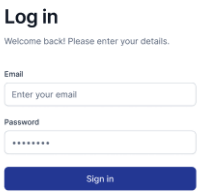

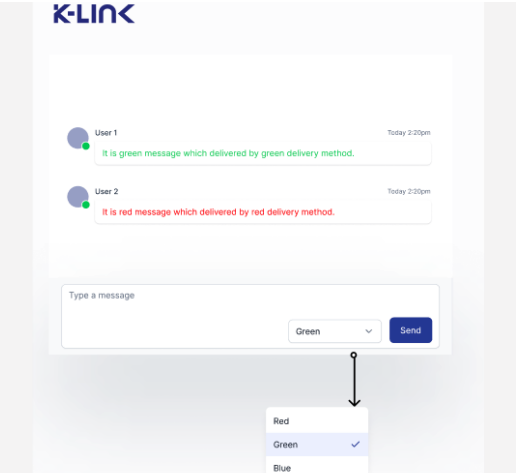

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