Mrava FE Challenge: AI Chatbot

1. Context

You are provided with a prebuilt React + Vite + Tailwind frontend with:

- Login page
- Internal chat page (connected to a streaming SSE endpoint)

The goal is to implement a production-ready frontend where:

- Users can chat with the AI backend, which streams responses paragraph by paragraph.
- The UI and bundles are **role-aware**: users only receive the JS/CSS relevant to their role.
- Unauthorized code/data should **never reach the client**, even in the bundle.

2. Requirements

- **Chat Frontend**
  - Input box to send messages to the SSE endpoint `/talk?prompt={message}`.
  - Server responses must stream incrementally and accumulate in **a single response bubble**.
  - Disable input while the server is responding.
  - Auto-scroll chat window as new chunks arrive.
- **Service Registry pattern**
  - An example of the service pattern is given in `Login.tsx`
  - All data must originate from a ServiceRegistry (e.g., login, chat).
  - Simulate API delays (e.g., 100ms) with Promises.
  - Displaying streamed data requires handling **asynchronous updates** in React.
- **Visually:**
  - Keep the chat visually realistic with bubbles (user vs AI).
  - Append server messages in real-time as one growing bubble.
  - Tailwind-only classes for the user's role to minimize CSS shipped.
  - Handle SSE disconnects gracefully with a retry button.

Note: Try sending the prompt "matrix" to the backend API.

3. Technical Requirements

A docker-compose.yaml to include:

- Mock frontend app (localhost:8080)

- ○ Mock password inside: src/service/mock/data/users.data.ts
- docker-compose.yaml

To run the application:

- Docker desktop
- docker cli

to run

$> make up

to put down

$> make down

4. Delivery Requirements

What we ask from you is to spend 4 hours building the solution described in this challenge. Please prioritize accordingly. Feel free to research best practices and use LLMs.

Once you're ready, we can schedule a 30-minute to 1-hour meeting next week, where you will have the opportunity to present your work to us.