🧪 Combined Fullstack Coding Assignment

🚗 Project Title: *Vehicle Diagnostics & Configuration Dashboard*

📘 Scenario

You are part of an automotive platform team building a diagnostics dashboard for connected vehicles. Your task is to create a minimal fullstack application that:

- Accepts log file input from a diagnostic tool
- Parses and stores relevant entries on the backend
- Displays vehicle diagnostic data on the frontend
- Allows basic searching and filtering
- Demonstrates clean architecture and team-level thinking

🎯 Objective

Build a mini fullstack system that:

1. Processes diagnostic logs in a structured format
2. Exposes a REST API for querying the data
3. Provides a frontend dashboard to display and filter results

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🔧 Requirements

📄 Frontend (Angular)

- Angular 15+ application
- A **search panel** (form) with fields like:
  - Vehicle ID
  - Error code
  - Timestamp range
- A **table view** to show matching log entries

- Basic state management with **NgRx or Signals**
- Reusable components
- Clean UX, responsiveness, and accessibility

🗄️ Backend (Node.js + TypeScript)

- Use **NestJS** or Express.js
- Parse a given diagnostic log file:

```
[2025-07-24 14:21:08] [VEHICLE_ID:1234] [ERROR] [CODE:U0420] [Steering angle sensor malfunction]
```

- Store entries in memory or file-based DB (e.g., lowdb, SQLite)
- REST API:
  - `GET /logs?vehicle=1234`
  - `GET /logs?code=U0420`
  - `GET /logs?from=...&to=...`
- Input validation & error handling

📄 Deliverables

- Source code (ZIP or GitHub repo)
- README including:
  - Setup instructions
  - Architecture overview (diagrams if possible)
  - Design decisions and assumptions
- API documentation (OpenAPI preferred)
- Optional: Dockerfile or Docker Compose setup

Good luck!
