Nodejs Internship Pre-Assessment Assignment

Objective

Build a Node.js backend service that ingests IoT sensor temperature readings, persists them to MongoDB, and exposes an API to retrieve the latest reading for a device.

Functional Requirements

- Implement POST /api/sensor/ingest to accept readings.
- Implement GET /api/sensor/:deviceId/latest to return the latest reading.
- Persist data in MongoDB Atlas using Mongoose.
- Validate required fields: deviceId and temperature.
- If timestamp missing, server should default to current time.

Payload Structure

POST /api/sensor/ingest

Example JSON:
```
{
  "deviceId": "sensor-01",
  "temperature": 32.1,
  "timestamp": 1705312440000
}
```

GET /api/sensor/:deviceId/latest returns latest document.

Database Schema (Suggested)

- deviceId: string
- temperature: number
- timestamp: number (epoch ms)
- createdAt: ISO date (default: now)

Bonus Task (+10 pts)

Implement an MQTT subscriber for topic: iot/sensor/<deviceId>/temperature and insert messages into MongoDB.

Scoring (100 pts)

- API correctness: 70 pts
- Documentation & README: 10 pts
- MongoDB integration: 10 pts
- MQTT Bonus: 10 pts

Submission Requirements

- Submit GitHub repository link.
- Include README with setup and curl/Postman examples.
- Use MongoDB Atlas free-tier.
- Node.js 18+ or 20 LTS recommended.