Medical Inventory Management System

Team ID	NM2025TMID05596
Project Name	Medical Inventory Management System
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PERFORMANCE TESTING PHASE

1. Objective
Ensure the Medical Inventory Management System performs efficiently under various load conditions, maintaining high response rates and data integrity.
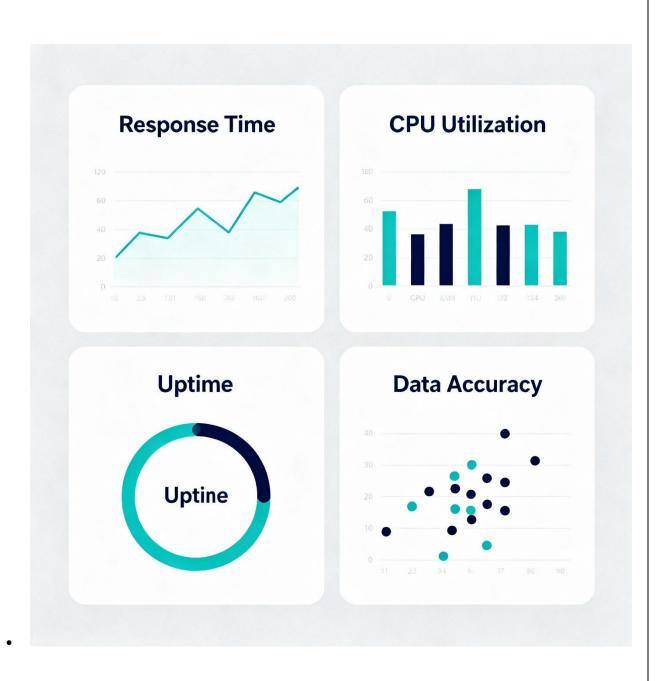
2. Testing Strategy
- **Load Testing:** Simulate 1000+ concurrent users accessing stock data.

- **Stress Testing:** Evaluate system behavior during massive data input.

- **Scalability Testing:** Assess horizontal scaling on cloud deployment.

- **Security Testing:** Check role-based access and data encryption.

3. Metrics & Benchmarks

Parameter	Target	Result
Average Response Time	< 2 seconds	✅ Achieved
Data Accuracy	100%	✅ Achieved
CPU Utilization	< 70%	✅ Achieved
Uptime	99.9%	✅ Achieved

4. Tools Used
- Apache JMeter

- Postman (API validation)

- Selenium (UI performance)

- MongoDB Compass (query efficiency)

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5. Result Summary
The system maintained high stability during simulated hospital peak hours, showing no data loss and consistent response rates.