

PERFORMANCE TESTING PHASE

Team ID	NM2025TMID02892
Project Name	Medical Inventory Management System
Team Members	AAMEER MOHAMED N(Reg.No:910322104001) AJITH M (Reg.No:910322104004) KARUPPAIAH A (Reg.No: 910322104024) SUTHAKAR M (Reg.No:910322104056)

Folder Reference:

Document/Performance Testing/

Includes:

- Performance Testing.pdf
- Readme.md

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)

5. Result Summary

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

