Project Development Phase
Performance Monitoring

Date	29 March 2025
Team ID	SWTID1742575574
Project Name	Grocery webapp
Maximum Marks	

Performance Monitoring:

Performance monitoring is a critical part of maintaining a high-performing Grocery WebApp post-deployment. It involves the continuous observation and analysis of system metrics like server CPU usage, memory consumption, database performance, API response times, and error rates. Monitoring can be integrated to provide real-time insights into application health and performance.

Monitoring helps in proactively identifying issues such as slow page loads, transaction failures, or API timeouts, allowing for quick resolutions before they impact users**.**

Metric	Description	Tools Used
Response Time	Time taken for APIs and pages to load	Postman, Chrome DevTools
Throughput	Number of requests handled per second	Apache JMeter
Error Rate	Percentage of failed transactions	JMeter, Browser Logs
Server Load	CPU and Memory usage	Node.js Monitoring Tools
Database Performance	Query execution time, read/write speeds	MongoDB Atlas Profiler

Optimization plan

Area	Issue	Strategy
Login API	Latency under load	Implement load balancer
Checkout DB Ops	Query slowdowns	Indexing, limit nested population
Static Assets	Slow initial load	Enable lazy loading, minify JS/CSS
Search Function	UI delay	Debounce input, preload results
Server Memory	Resource spikes	Use `pm2` clustering and autoscaling