

Team ID: LTVIP2025TMID55453

Team Lead: Vanjarapu Suryavardhan

Team Members: V. Naga Venkata Pavan, V. Sai Viswanadh,
Uppada Sagar

Project Name: ShopMart: Your Digital Grocery Store Experience

Performance Testing Strategy

The performance testing strategy for **ShopMart** involves evaluating the system under various real-world conditions – different devices, network speeds, and various load scenarios. Testing is carried out at both **component level** and an **end-to-end level** to ensure full-stack performance efficiency and user satisfaction.

Key Objectives:

- Verify system performance and responsiveness under different load conditions.
- Ensure reliability during high transaction actions (e.g., adding items to cart, placing orders)
- Observe backend and UI behavior to identify potential stress points and system bottlenecks.

Scope of Testing

Testing Area	Details
Frontend Performance	Measure load time, UI responsiveness, performance of React components, lazy loading behavior.
Backend API Performance	Test performance of APIs related to product listings, login/signup, cart and checkout processes.
Database Performance	Monitor MongoDB query performance for operations like inventory fetch, cart update, and order placement.
Payment Processing	Test payment gateway response time, success rate, and reliability under simulated user loads.
Image/File Uploads	Evaluate image upload speeds, especially under constrained or fluctuating network conditions.
Concurrent User Handling	Evaluate how the app handles multiple users carrying out tasks simultaneously such as browsing and order placements.

Test Cases

Test Case ID	Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC001	User Login	1. Open login page → 2.	Redirect to	User logged in	Pass

		Enter valid credentials → 3. Click Login	homepage		
TC002	Product Browsing	1. Login → 2. Navigate to product page → 3. Apply filters	Filtered product results appear	Filters applied successfully	Pass
TC003	Add to Cart	1. Click product → 2. Click "Add to Cart"	Product appears in cart	Product added successfully	Pass
TC004	Admin Login	1. Open admin login → 2. Enter admin credentials	Admin dashboard loads	Admin logged in successfully	Pass
TC005	Place Order	1. Add item to cart → 2. Checkout → 3. Confirm Order	Confirmation message displayed	Order placed and confirmed	Pass

Bug Reporting

Bug ID	Bug Description	Steps to Reproduce	Severity	Status	Additional Feedback
BG001	Cart quantity does not update	1. Add item → 2. Change quantity → 3. Total remains incorrect	Medium	In Progress	Causes user-side billing issues