Functional & Performance Testing

BookNest: Where Stories Nestle	Team ID: LTVIP2026TMIDS24289
Team Leader: Keerthi Mekala	Member 1: Adil Mohammed
Member 2: Vasanth Metla	Member 3: Rahimtulla Shaik

Project Overview

Project Name	BookNest: Where Stories Nestle
Project Version	v1.0
Testing Date	21 February 2026
Frontend URL	http://localhost:5173
Backend API URL	http://localhost:4000
Database	MongoDB Atlas (Cloud)

Functional Testing

Functional tests verify that each feature of BookNest works as expected per the requirements.

TC ID	Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail	Tester
FT-01	API Health Check	1. Start backend server 2. Call GET /item 3. Check response	API responds with 200 OK and book data	API returned correct data with 200 OK	**Pass**	Keerthi
FT-02	Form Validation	1. Submit empty registration form 2. Check error messages	Validation errors shown for empty fields	Errors displayed correctly	**Pass**	Adil
FT-03	Authentication Flow	1. Register user 2. Login 3. Check localStorage	User object with id, name, email saved in localStorage	localStorage updated correctly after login	**Pass**	Vasanth
FT-04	Role-Based Access	1. Try accessing /seller without login 2. Check redirect	Unauthorized users redirected to login	Redirect to login works correctly	**Pass**	Rahimtulla
FT-05	Add Book API	1. Login as seller 2. POST /items with book data 3. Check response	Book saved to DB and returns 200	Book added to DB successfully	**Pass**	Keerthi
FT-06	Wishlist API	1. Login as user 2. POST /wishlist/add 3. GET /wishlist/:id	Book saved to and retrieved from wishlist	Wishlist API working correctly	**Pass**	Adil
FT-07	Order API	1. Login as user 2. POST /userorder 3. GET /getorders/:id	Order saved and retrieved correctly	Order API working correctly	**Pass**	Vasanth
FT-08	Delete Book API	1. Login as seller 2. DELETE /itemdelete/:id 3. Check book removed	Book removed from DB	Book deleted successfully from DB	**Pass**	Rahimtulla

Performance Testing

Performance tests verify that BookNest meets speed and reliability standards under normal and load conditions.

TC ID	Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail	Tester
PT-01	Page Load Time	1. Open browser 2. Navigate to home page 3. Measure load time	Page loads within 3 seconds	Page loaded in ~1.5 seconds	**Pass**	Keerthi
PT-02	API Response Time	1. Call GET /item endpoint 2. Measure response time	API responds within 2 seconds	API responded in ~800ms	**Pass**	Adil
PT-03	Multiple Sessions Load	1. Open app in 3 browsers 2. Login simultaneously 3. Check performance	App handles multiple sessions without crash	All sessions worked correctly	**Pass**	Vasanth
PT-04	Database Query Speed	1. Add 20+ books 2. Load home page 3. Measure time	All books load within 3 seconds	Books loaded in ~1.2 seconds	**Pass**	Rahimtulla
PT-05	Login API Speed	1. Submit login form 2. Measure time to response	Login API responds within 1 second	Login responded in ~600ms	**Pass**	Keerthi
PT-06	Order Placement Speed	1. Place an order 2. Measure time for confirmation	Order confirmed within 2 seconds	Order confirmed in ~900ms	**Pass**	Adil

Performance Summary

Metric	Target	Actual	Status
Home Page Load Time	< 3 seconds	~1.5 seconds	**Pass**
API Response Time (GET /item)	< 2 seconds	~800ms	**Pass**
Login API Speed	< 1 second	~600ms	**Pass**
Order Confirmation Speed	< 2 seconds	~900ms	**Pass**
Multi-Session Stability	No crashes	Stable	**Pass**