Functional & Performance Testing Template

Model Performance Test

Date: 26 June 2025

Team ID: LTVIP2025TMID51307

Project Name: orderonthego: your on-demand food ordering solution

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Test Scenarios & Results

Test Scenario: End-to-End Order Flow
Scenario:
A user browses restaurants, adds items to cart, places an order, and the restaurant owner receives it in their dashboard.

Expected Outcome:

User is able to register/login securely.

Restaurants are visible and filterable.

Cart functionality works with correct total calculation.

Orders are reflected in the owner's dashboard.

Result:
Successfully passed – Real-time flow verified across User, Restaurant, and Admin roles.

Test Scenario: Admin Approval Workflow
Scenario:
A new restaurant signs up and waits for admin approval.

Expected Outcome:

Admin receives request notification.

Admin can approve or reject the restaurant.

Approved restaurants become publicly visible.

Result:
Functionality working as intended. Status updates are reflected instantly.

Test Scenario: Menu and Order Management
Scenario:
Restaurant owner adds menu items and receives orders.

Expected Outcome:

Owner can add, edit, and delete menu items.

New orders show up in the order dashboard.

Order status can be updated.

Result:
CRUD operations for menu and live order tracking passed without issues.

Test Scenario: User Experience Testing
Scenario:
Testing UI across devices and responsiveness.

Expected Outcome:

Site adapts on desktop, tablet, and mobile.

No visual breaks, broken buttons, or layout issues.

Result:
UI is responsive and intuitive on all screen sizes. Minor spacing issues were resolved in final styling.

Performance Testing Scenarios

Test Case ID	Scenario (What to test)	Test Steps (How to test)	Expected Result	Actual Result	Pass/Fail
PT-01	Smart City Analysis Response Time	Use timer to measure time from input submission to recommendation generation	Response time should be under 5 seconds for standard city analysis queries		
PT-02	IBM Granite LLM API Throughput Test	Send multiple simultaneous requests for different city scenarios	API should maintain consistent performance with concurrent requests (max 10 simultaneous)		
PT-03	Large Dataset Processing Load Test	Input comprehensive city data with multiple sustainability parameters	System should process large datasets without performance degradation or timeouts		
PT-04	Extended Session Stability Test	Perform continuous operations for 30 minutes with various city analysis requests	System should maintain stability and performance throughout extended usage		
PT-05	Memory Usage Monitoring	Monitor system resource usage during peak operations	Memory consumption should remain within acceptable limits (< 80% of allocated resources)		
PT-06	Scalability Testing	Gradually increase the complexity and size of city data inputs	System should scale appropriately with increased data complexity		

Smart City Specific Test Cases

Test Case ID	Scenario (What to test)	Test Steps (How to test)	Expected Result	Actual Result	Pass/Fail
SC-01	Energy Efficiency Recommendations	Input current energy consumption data and infrastructure details	Generate practical energy optimization suggestions using IBM Granite LLM		
SC-02	Transportation System Analysis	Provide traffic patterns, public transport data, and mobility requirements	Receive comprehensive transportation improvement recommendations		
SC-03	Waste Management Optimization	Input waste generation data, current management systems, and recycling rates	Get actionable waste reduction and management strategies		
SC-04	Green Infrastructure Planning	Submit urban planning data and environmental constraints	Generate suggestions for parks, green buildings, and sustainable infrastructure		
SC-05	Smart Technology Integration	Input existing city technology infrastructure and digital services	Receive recommendations for IoT integration and smart city technology adoption		
SC-06	Sustainability Score Calculation	Provide comprehensive city data across all sustainability metrics	Generate accurate sustainability scores with detailed breakdowns and improvement areas		

Integration Testing Scenarios

Test Case ID	Scenario (What to test)	Test Steps (How to test)	Expected Result	Actual Result	Pass/Fail
IT-01	Data Flow Integration	Test end-to-end data flow from input to IBM Granite LLM to output	Seamless data processing with proper formatting and transformation		
IT-02	Third-party API Integration	Test integration with external data sources (weather, demographics, etc.)	Successful data retrieval and integration from external sources		
IT-03	Database Connectivity	Test data storage and retrieval operations	Reliable database operations with proper error handling		
IT-04	User Interface Integration	Test UI components with backend IBM Granite LLM services	Smooth user experience with proper data display and interaction		

Security Testing Scenarios

Test Case ID	Scenario (What to test)	Test Steps (How to test)	Expected Result	Actual Result	Pass/Fail
ST-01	API Key Security	Test API key validation and unauthorized access attempts	Proper authentication and rejection of invalid credentials		
ST-02	Data Privacy Compliance	Verify handling of sensitive city data and personal information	Compliance with data protection regulations and secure data handling		
ST-03	Input Sanitization	Test various malicious inputs and injection attempts	System should sanitize inputs and prevent security vulnerabilities		

Test Environment Setup

Prerequisites

- IBM Granite LLM API access and valid credentials
- Test dataset with sample city sustainability data
- Performance monitoring tools
- Network connectivity for API calls

- Required testing frameworks and libraries

Test Data Requirements

- Sample city profiles (small, medium, large cities)
- Historical sustainability metrics
- Infrastructure data templates
- Valid and invalid input datasets for boundary testing

Success Criteria

- All functional tests pass with 100% success rate
- Performance tests meet specified response time requirements
- Security tests demonstrate proper protection mechanisms
- Integration tests show seamless component interaction

Notes and Observations

Use this section to document any additional findings, issues encountered, or recommendations for improvement during testing.

Prepared by: [Tester Name]
Reviewed by: [Reviewer Name]
Approved by: [Project Manager Name]