

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

Here's a detailed Performance Testing Plan for the Automated Car Catalog System for Enhanced Showroom. This testing ensures that the system performs reliably, responsively, and efficiently under various user loads and conditions—critical for a showroom environment where real-time interaction matters.

Performance Testing Plan

Objectives

Ensure fast load times and smooth browsing for users

Validate system stability under peak showroom traffic

Test the 3D/AR viewer responsiveness and media loading

Identify performance bottlenecks in backend, API, or database

Ensure scalability and reliability across devices

Define Requirements and Scope:

Identify Key Showroom Processes:

Determine which aspects of the car catalog and showroom experience need to be tested. This might include:

- Car browsing and filtering based on various criteria (price, features, etc.).
- Accessing and displaying detailed car information (specs, images, videos).
- Configuring and customizing virtual cars.
- Generating quotes and financing options.
- Integrating with other systems (inventory management, sales, etc.).

Define Performance Metrics:

Establish what constitutes good performance.

This could include:

- Page load times.
- Response times for user interactions.
- Resource usage (CPU, memory, network).
- Error rates.