

6. FUNCTIONAL AND PERFORMANCE TESTING

Performance Testing

Functional testing ensures that all modules of **ResolveNow** behave as expected according to the system's requirements. Each major feature was tested individually and in combination to ensure smooth user experience, data flow, and correct outputs.

Test Case	Expected Result	Status
User registration with valid input	Account successfully created and stored in DB	Passed
User login with correct credentials	JWT token issued; redirected to dashboard	Passed
Complaint submission	Complaint stored; status set to "Submitted"	Passed
Complaint tracking on user dashboard	Real-time status updates visible to user	Passed
Admin assigns complaint to agent	Agent receives the complaint in their dashboard	Passed
Agent updates complaint status	User dashboard reflects updated status	Passed
Messaging between user and agent	Messages sent and received in real-time	Passed
Feedback form submission	Feedback saved and linked to corresponding complaint	Passed
Invalid login or form submission	Appropriate error messages displayed	Passed

Performance Testing

Performance testing was done to assess the reliability, responsiveness, and stability of the application under normal and peak loads.

Metric	Observation
Page Load Time	Average < 2.5 seconds (React optimized with lazy loading and caching)
API Response Time	CRUD APIs responded in < 400 ms on average under normal load
Concurrent Users	Handled 50+ simultaneous users without crashing (for basic use cases)
Database Performance	MongoDB handled read/write operations efficiently for 1000+ dummy entries