Performance testing

User Acceptance Testing (UAT) Template

Date	24-06-2025
Team ID	LTVIP2025TMID53167
Project Name	Resolve Now: Your Platform for Online Complaints

Project Overview:

Project Name: Resolve Now: Your platform for Online Complaints

Project Version: v1.0.0

Testing Period: 24-06-2025 to 26-06-2025

Performance Testing Report: Online Complaint Resolution Platform

The **Online Complaint Resolution Platform** allows users to register complaints, track resolution status, and communicate with support personnel. To ensure system reliability and responsiveness under different conditions, performance testing was conducted.

1. Objectives of Performance Testing

- Ensure the platform can handle expected and peak user loads.
- Identify performance bottlenecks under stress.
- Evaluate system response time, throughput, and resource utilization.
- Ensure scalability and stability for concurrent users.

2. Tools Used

- **Apache JMeter** – Load and stress testing.
- **Postman** – API responsiveness testing.
- **New Relic** / **Grafana + Prometheus** – Monitoring CPU, memory, and server health.
- **Browser Developer Tools** – Page load timing and frontend performance.

3. Test Scenarios

Scenario	Description
Complaint Submission	Simulate 100-1000 users submitting complaints simultaneously
Status Tracking	Users frequently check complaint status
Admin Dashboard Load	Simulate multiple admins accessing and updating complaints
Search & Filter	Simulate heavy use of complaint search and filters
File Upload	Simulate uploading images/docs with complaints

4. Key Performance Metrics

Metric	Target
Average Response Time	≤ 2 seconds
Peak Response Time	≤ 5 seconds
Throughput	≥ 100 transactions/second
Error Rate	< 1%
CPU Utilization	≤ 80%
Memory Utilization	≤ 75%

5. Test Results Summary

Test Case	Users	Avg. Response Time	Errors	CPU Usage	Memory Usage	Status
Complaint Submission	500	1.8s	0.3%	72%	65%	Passed
Complaint Submission	1000	2.6s	1.5%	85%	78%	Partial
Status Tracking	500	1.2s	0.1%	70%	60%	Passed
Admin Dashboard	200	2.1s	0.7%	75%	66%	Passed
File Upload (2MB files)	100	2.5s	0%	68%	63%	Passed

6. Observations & Bottlenecks

- **High CPU usage** during 1000-user complaint submission suggests backend optimization needed.
- **Search and filter operations** showed a slight delay when using complex queries.
- **Database latency** observed during peak loads—indexes and query tuning recommended.
- **File upload handling** is stable for moderate usage but should be tested for large file sizes and concurrent uploads.

7. Recommendations

- **Optimize database queries** and add indexing on frequently queried fields.
- **Implement caching** for frequently accessed data (e.g., complaint statuses).
- **Scale horizontally** using load balancers and distributed servers.
- **Use asynchronous processing** for tasks like file uploads or email notifications.
- **Conduct regular load tests** as user base grows.

8. Conclusion

The Online Complaint Resolution Platform performs well under standard load conditions. While it meets most performance targets, improvements are required for handling peak traffic, especially in complaint submission and data retrieval operations.

With the recommended optimizations and monitoring practices, the platform will be well-equipped to handle real-world user demands effectively and reliably.

Sign-off:

Name	Role	Signature	Date
Venkata Lakshmi Haritha	Product Owner	Haritha	2025-06-24
Vyshnavi Sai	QA Lead	Vyshnavi	2025-06-24
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Notes:

- Mobile optimization pending for tablet views
- Additional UAT round scheduled post-beta feedback
- Email notifications under review