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# Performance Testing for Calculating Family Expenses using ServiceNow

## Objective

The primary objective of performance testing is to ensure that the Family Expense Calculation application developed on ServiceNow performs efficiently under expected and peak load conditions. The goal is to identify performance bottlenecks and optimize system response time, scalability, and resource utilization.

## Scope

The performance testing covers: Expense data entry and submission by multiple users, automatic calculation and aggregation of expenses (monthly/annual), report generation and dashboard loading, API integrations with ServiceNow database tables, and workflow execution for approval and notifications.

## Performance Metrics

### Metric — Description — Target Benchmark

Response Time — Time taken to process an expense entry and display the result —  $\leq 3$  seconds

Throughput — Number of transactions processed per second —  $\geq 50$  TPS

Concurrent Users — Number of users supported simultaneously — 100 users

CPU & Memory Utilization — Resource usage under load — CPU  $< 70\%$ , Memory  $< 75\%$

Error Rate — Percentage of failed transactions —  $< 2\%$

## Tools and Environment

Platform — ServiceNow (Now Platform)

Testing Tool — JMeter / LoadRunner

Database — ServiceNow internal tables (Expense, User, Family)

Environment — ServiceNow Developer Instance

Network — Cloud-hosted environment with stable connectivity

## Conclusion

The Family Expense Calculation module built on ServiceNow meets all defined performance benchmarks. The system demonstrates excellent scalability and stability under normal and stress conditions. Further optimization may focus on API response caching and query efficiency to enhance speed during report generation.