Sameer U Rege - SDET QA

This document represents a comprehensive end-to-end QA project strategy and execution details
for a 1.6-year E-commerce CRM project handled by Sameer U Rege as SDET QA.

The document includes Agile Scrum practices, SDLC, STLC, project deliverables, reporting formats, and production sign-off processes.
It outlines all activities and responsibilities carried out to ensure successful project delivery and release quality.

1. Project Overview

The E-commerce CRM project aimed to streamline online customer interactions, automate sales pipelines,
improve order management, and enable data-driven decision-making. The platform integrated multiple
customer touchpoints such as web store, payment gateway, user dashboard, email notifications,
and advanced analytics modules.

Role of Sameer U Rege as SDET QA:

- Design, develop, and maintain automation frameworks.
- Define test strategies and ensure 100% coverage of critical workflows.
- Perform API, UI, and database testing.
- Generate detailed QA reports and sign-off documentation for each release cycle.

2. End-to-End Project Approach

The QA approach for the 1.6-year project included:

- Understanding business requirements and creating Requirement Traceability Matrix (RTM).

- Risk-based testing for critical features like cart, checkout, and payment.

- Early automation (Shift-Left Testing) for faster regression validation.

- Continuous integration and nightly automation runs using Jenkins.

- Defect life cycle management and RCA (Root Cause Analysis).

3. Agile Scrum Implementation

The team adopted Agile Scrum for iterative development and testing.

Agile Practices:

- Sprint Duration: 2 weeks.

- Ceremonies: Daily stand-ups, sprint planning, sprint review, retrospective.

- Sprint Deliverables: Automated test scripts, manual test cases, and defect reports.

- QA Involvement: Participation in backlog grooming, estimation of QA effort, and defining acceptance criteria.

4. SDLC in the Project

The Software Development Life Cycle followed phases:

1. **Requirement Analysis**: Collaboration with stakeholders to finalize functional & non-functional requirements.
2. **Design**: Validation of UI mockups and workflow diagrams.
3. **Development**: Iterative coding and unit testing.
4. **Testing**: Comprehensive QA with automation and manual efforts.
5. **Deployment**: Staging and production deployments after sign-off.
6. **Maintenance**: Hotfix and patch testing post-release.

5. STLC in the Project

The Software Testing Life Cycle phases were:

- **Test Planning**: Defined strategy, test scope, tools, and resources.

- **Test Design**: Created detailed test cases, automation scripts, and test data.

- **Test Execution**: Performed functional, regression, smoke, and integration testing.

- **Defect Reporting & Tracking**: Documented defects in JIRA and ensured closure.

- **Test Closure**: Prepared Test Closure Reports and updated metrics dashboards.

6. QA Deliverables & Reports

The QA team delivered the following artifacts:

- Test Strategy & Test Plan documents.

- RTM mapping business requirements to test cases.

- Daily QA status reports and weekly dashboards for stakeholders.

- Defect density and defect leakage metrics.

- Sprint-wise Automation Execution Reports with pass/fail trends.

- Test Closure Reports for every release cycle.

7. Production Sign-Off Process

Before any release to production:

- All critical defects were resolved and verified.

- Regression suite executed with 100% pass rate.

- Final UAT sign-off obtained from business users.

- Performance tests validated the application under expected load.

- Backup and rollback plans reviewed and approved.

8. E-commerce CRM Testing Scenarios

Key testing scenarios covered:

- User Registration and Login workflows.

- Shopping cart, order creation, and payment validations.

- Discounts, coupon codes, and tax calculation logic.

- API testing for order, customer, and product endpoints.

- Database validation for customer and order tables using SQL queries.

- Security testing (XSS, CSRF, SQL Injection).

9. Sample Report Formats

Daily QA Status Report Includes:

- Executed test cases count.

- Defects logged/resolved with priority and severity.

- Automation execution status.

Defect Report Includes:

- Defect ID, module, severity, steps to reproduce, RCA, and fix status.

Test Summary Report Includes:

- Total test cases planned, executed, passed, failed, blocked.

- Sprint-wise test coverage and defect trend charts.

10. Lessons Learned & Key Achievements

Key Lessons:

- Early test involvement reduces production defects by 30%.
- Automation regression saved 50% of test execution time.
- Effective sprint retrospectives improved QA processes.

Achievements:

- Successful on-time sign-off for 12+ major releases.
- Improved release quality with less than 2% defect leakage to production.
- Designed reusable automation framework integrated with CI/CD.

Sameer U Rege's contribution as an SDET QA ensured a seamless quality strategy and high customer satisfaction throughout the project lifecycle.