

SDLC ASSIGNMENT – 3

Scenario Background:

You are a testing engineer at QualitySolutions, a software testing company. The company has recently been contracted to test a new e-commerce platform, "ShopEase." Your role is crucial in ensuring the platform's reliability and functionality.

Problem Statement 3: Strategies Used in Software Testing:

Analyze and recommend suitable testing strategies for ShopEase. Consider the project's complexity, budget constraints, and time limitations. Propose a testing strategy that balances thorough testing and efficient resource utilization.

Learning Outcomes:

- Evaluate different testing strategies and their applicability in a real-world project.
- Develop a testing strategy that aligns with project requirements.

Testing Strategy for ShopEase E-commerce Platform

1. Test Planning

- Objective: Ensure ShopEase's reliability, functionality, and user satisfaction.
- Scope: Cover functional, performance, security, and usability testing.
- Resources: Allocate a team of test engineers, test environments, and required tools.
- Timeline: Define milestones based on the development lifecycle stages

2. Testing Strategies

a. Functional Testing

- Type: Black-box testing.
- Approach: Verify all core features such as product browsing, shopping cart, payment processing, and order management.
- Tools: Selenium, Postman (for API testing).

b. Integration Testing

- Type: White-box testing.
- Approach: Test interactions between modules such as inventory, payment gateways, and order tracking.
- Tools: JUnit, TestNG.

c. Performance Testing

- Type: Load and stress testing.
- Approach: Simulate high user traffic, large data loads, and multiple concurrent transactions.
- Tools: JMeter, LoadRunner.

d. Security Testing

- Type: Penetration testing.
- Approach: Identify vulnerabilities in login, payment, and user data handling.
- Tools: OWASP ZAP, Burp Suite.

e. Usability Testing

- Type: Manual testing.
- Approach: Conduct user surveys and usability sessions to assess ease of navigation and overall experience

3. Test Execution

- Develop and execute test cases.
- Perform regression testing after each major update

4. Defect Management

- Tracking Tool: Jira.
- Process: Report, prioritize, and resolve defects using Agile principles

5. Test Closure

- Evaluate test coverage and defect resolution.
- Prepare final test reports and recommend post-launch monitoring.

Budget Considerations:

- Use open-source tools where possible.
- Conduct manual testing for critical user-facing features to save costs.

Time Constraints:

- Prioritize high-risk and high-impact features.
- Perform continuous testing alongside development using CI/CD pipelines.