**Project Planning & Management**

### **1. Project Proposal**

**Project Title:** Quality Assurance and Testing of an E-Commerce Platform  
 **Objective:** To ensure the reliability, functionality, and security of an online shopping website by implementing a structured software testing strategy, incorporating both manual and automated testing methodologies.  
 **Scope:**

* Comprehensive functional testing, covering login, product search, checkout, and order management.
* Performance and load testing to evaluate system responsiveness under varying traffic conditions.
* Security assessment to identify vulnerabilities in user authentication and data protection mechanisms.
* UI/UX evaluation to enhance user engagement and accessibility.
* Tools utilized: Selenium, Postman, JMeter, Jira, and other industry-standard testing frameworks.

### **2. Project Plan**

**Timeline & Milestones:**

| **Phase** | **Key Activities** | **Completion Deadline** |
| --- | --- | --- |
| Requirements Analysis | Identify stakeholders, document functional & non-functional requirements | Feb 24, 2025 |
| Test Implementation | Execute manual and automated tests, track defects | April 11, 2025 |
| System Analysis & Design | Develop test strategies, test case documentation, and system diagrams | Feb 24, 2025 |
| Planning | Define objectives, scope, risk assessment | Feb 24, 2025 |
| Reporting & Final Presentation | Compile test results, analysis, and project demonstration | April 11, 2025 |

### **3. Task Assignments & Roles**

* **Test Manager:** Oversees the testing process, ensures adherence to quality standards.
* **Functional Tester:** Conducts exploratory and scripted testing, verifies application functionality.
* **Automation Engineer:** Develops and maintains automated test scripts to improve efficiency.
* **Performance Engineer:** Conducts load and stress testing to ensure optimal system performance.
* **Security Analyst:** Identifies vulnerabilities, ensuring compliance with security best practices.

### **4. Risk Assessment & Mitigation Strategy**

| **Risk** | **Impact** | **Mitigation Plan** |
| --- | --- | --- |
| Ambiguous requirements | Delayed test execution | Frequent stakeholder engagement and requirement validation |
| Defect leakage | Production failures | Implement rigorous test cycles and regression testing |
| Tool incompatibility | Delayed automation setup | Conduct early tool evaluation and environment setup |
| Security vulnerabilities | Data breaches | Perform continuous security testing and implement encryption mechanisms |

### **5. Key Performance Indicators (KPIs)**

* **System Response Time:** Web pages should load within 3 seconds under standard conditions.
* **Defect Detection Rate:** At least 95% of critical issues should be identified before deployment.
* **Test Coverage:** A minimum of 98% of core functionalities must be tested.
* **Security Compliance:** No unresolved high-severity security vulnerabilities.
* **User Satisfaction Score:** Minimum of 90% positive feedback from test users.

### **6. Project Deliverables**

* **Comprehensive Test Plan Document** outlining strategies, tools, and methodologies.
* **Test Execution Reports** including test cases, defect logs, and resolution tracking.
* **Performance and Load Testing Reports** with detailed system behavior analysis.
* **Final Presentation & Technical Documentation** summarizing testing outcomes and recommendations.