# Test Plan for ShoppersStack RESTful Web Service

The objective of this e-commerce project is to develop a user-friendly and secure online shopping platform for customers to browse, purchase and track their orders.

## Objective:

The goal of this test plan is to ensure the quality, functionality, and reliability of the ShoppersStack RESTful Web Service. This service supports various functionalities, including user registration, login, product browsing, cart management, order placement, and more. The testing aims to validate that all endpoints operate as expected, meet performance requirements, and adhere to security standards.

## Scope:

The test plan covers functional, integration, performance, security, and usability testing for all APIs listed in the Swagger documentation at: https://www.shoppersstack.com/shopping/swagger-apis/shoppingcart/swagger.yaml

**Scope of testing includes:**

1. Shopper Profile: CRUD operations for shopper registration and profile management.  
2. Shopper Cart: Managing shopping cart functionalities like adding, updating, and removing items.  
3. Shopper Order: Validating order placement, cancellation, and tracking.  
4. Authentication and Authorization: Testing secure login, password reset, and account verification endpoints.  
5. Payment Integration: Ensuring wallet and bank card operations are secure and functional.

## Test Environments:

The following environments will be used for testing:

- Windows 10: Google Chrome, Mozilla Firefox, Microsoft Edge  
- macOS: Safari  
- Android Mobile OS: Chrome  
- iPhone Mobile OS: Safari  
- QA Environment: https://www.shoppersstack.com/shopping  
- Pre-Prod Environment: https://www.shoppersstack.com/shopping/pre-prod

## Test Strategy:

The testing process will follow these strategies:

- Equivalence Partitioning and Boundary Value Analysis  
- Smoke and Sanity Testing  
- Regression Testing  
- Load and Performance Testing  
- Security Testing (SQL Injection, XSS prevention, etc.)  
- Exploratory Testing for unplanned scenarios

## Test Schedule:

The testing activities are planned as follows:  
- Test Plan Creation: Week 1  
- Test Case Development: Week 2  
- Test Execution: Week 3 and Week 4  
- Summary Report Submission: End of Week 4

## Tools:

- JIRA: Bug tracking and reporting  
- Postman: API testing and validation  
- Swagger UI: API documentation and testing  
- Apache JMeter: Performance testing  
- Jenkins: CI/CD pipeline testing

## Risks and Mitigations:

1. Non-availability of stable builds: Mitigation - Work on other tasks or use backup builds.  
2. Limited testing time: Mitigation - Increase resources dynamically based on project needs.  
3. Environment issues: Mitigation - Ensure proper environment setup and backups.

## Approvals:

All documents, including test plans, test scenarios, and reports, will be sent to the client for approval before moving to subsequent phases.