Test Plan:

Following is a brief testing plan that covers all the main testing activities.

Objective:

- To provide an overview of all the testing efforts to be conducted by the testing team in terms of testing types, features to be tested, test environment setup, testing strategies, testing deliverables, and risks involved.

Features To Be Tested:

All the main features are listed which need to be tested along with their priority as (H, M, and L) high, medium, and low based on the risk associated with each feature.

- Add to cart feature on the product details page (H)
- Product quantity selection on the product details page(H)
- Added product to the Cart (H)
- Verification of the added product and its relevant information in the cart table (H)

Test Approach:

- All testing tasks will be conducted in line with the STLC and in support of the SDLC.
- The testing team will test the features in a methodical approach to ensure a thorough and systematic coverage of the features.
- The project is following an Agile approach, with weekly sprints. In each sprint, the requirements identified for that particular sprint will be provided to the testing team to test.

Test Strategy:

To ensure that the system's functional, performance, security, and quality requirements are met, a well-defined test strategy would be required.

- **Requirement Analysis:** Analyze the requirement specifications of the system.
- **Test Planning:** Plan the test activities and create a test plan according to that.
- **Test Deliverables Preparation:** A comprehensive test case document will be created by the tester that will cover all main and edge cases. Other test deliverables will also be created.
- **Test Environment and Tool Setup:** Test environment should be configured.
- **Test Data Preparation:** Test data will be created by QA on the client's test and production environment based on the test scenarios.
- **Testing Levels:** Multiple levels of tests will be performed such as Unit Testing, Integration Testing, System Testing, and Acceptance Testing.
- **Testing Types:** A suite of various testing types will be executed which involves Functional Testing, Smoke Testing, Integration Testing, API Testing, System Testing, UI Testing, Compatibility Testing, Performance Testing, UAT Testing etc.

- **Test Case Execution:** By conducting various testing types, test cases will be executed and their results will be maintained.
- **Bug Reporting**: All the bugs will be logged according to their severity and priority along with their proper information. Bug lifecycle will be maintained.
- **Bugs Verification and Regression Test Cycles:** All the fixed bugs will be retested and their status will be updated accordingly. Regression tests will also be performed in some scenarios to verify the bug fix change on the already developed features.
- **Test execution summary report:** After the completion of all testing activities, a test summary report will be delivered to the relevant stakeholders.
- **Change Management:** Any change request in the requirements will be properly documented, approved, and developed then will be thoroughly tested.

Test Entry Criteria:
- All the necessary documentation and requirement information should be available to the tester to allow him to test and observe the behavior of the system.
- The required features should be developed and unit testing should be done.
- The correct version of the code should be deployed to the testing environment.
- All the software testing tools and environments that will be used should be successfully configured, installed, and functional.
- All the necessary testing documentation such as test plan, test cases, RTM, etc. should be designed.
- Test data should be prepared.

Test Exit Criteria:
- All the features are thoroughly tested and a certain level of test coverage has been achieved.
- All major or high-priority bugs should have been fixed, retested, and passed.
- No bug should be in an open state or unresolved.
- Regression tests should be implemented to ensure that no related feature is affected due to bug fixing.
- Test Summary Report should be created and other testing activities should be completed.

Test Deliverables:
- Test Plan
- Test Cases
- RTM
- Bug Report
- Test Execution Logs
- Test Summary Report

Testing Environments:
- **Environmental Requirements:** Test environment and Production environment of the web application.

- **Software Requirements**: Windows/Mac machine, Browser (Chrome, Firefox, etc.), Selenium/Cypress and Postman installation.
- **Other Testing Tools Requirements:** Google Docs (For test documentation i.e. RTM, Test Plan, etc.), JIRA, TestRail, Git, etc.

Risks:

Risk Item	Impact Level	Mitigation Action	Contingency Action
Features might not be ready on the scheduled timeline	High	Estimated timeline should be provided by the relevant teams	PM will make sure the timelines are properly followed up
Test environment might not be set on time due to any configurational issue	High	Testing schedule should be provided to the relevant team so they make sure to set up the environment according to the schedule	It will be immediately communicated to the relevant team to set the environment on a priority basis
Unavailability of any resource for any reason	Medium	Backup of the resources should be available	Backup resource will perform the tasks.