Test strategy

- Focus on core functionalities such as adding products to the cart, navigating through checkout, searching products, sorting results, and consistency of user sessions.
- Engage early in the project lifecycle by conducting project pre-mortem, aligning with QE goals, and planning tests to uncover potential issues proactively.
- Automate end-to-end tests for each user story to ensure functionality across different user states (logged-in and logged-out).
- Initially prioritize the most critical test cases to include in a smoke suite for rapid feedback and early detection of regressions.
- Ensure the reliability of the smoke suite exceeds 95%, validating its effectiveness in detecting issues.
- Execute the smoke suite against each pull request, making it a mandatory step before merging changes. Address any test failures within the pull request context promptly.
- Use metrics from the smoke suite and other avenues such as crash reports, and DORA metrics to gauge overall application health and identify trends in test failures for proactive resolution.

Test Scenarios

Shopping (Logged - in)

- Verify product is successfully added to the cart from the product detail page.
- Validate cart total updates correctly upon adding multiple products.
- Ensure all added products are displayed in the cart with correct details (name, price, quantity).
- Verify user can update quantity and see changes reflected in cart total.
- Verify checkout process includes steps for shipping address, shipping options, and payment details.
- Confirm user receives appropriate confirmations and notifications throughout checkout steps.
- Test payment processing integration to simulate successful and failed transactions.

Shopping (Logged out)

- Add/edit products to the cart and ensure functionality mirrors the logged-in state.
- Attempt to complete checkout without signing in/up to verify user is prompted accordingly.
- Test seamless transition to logged-in state upon signing in/up during checkout.
- Ensure the cart state remains consistent across different interactions and sessions.
- Close the browser and reopen it within a reasonable timeframe to check cart contents persist.
- Verify cart retains products added during the guest session after signing in/up.

Search Products (Logged-In and Logged-Out States)

- Perform searches with valid keywords and ensure relevant products are displayed.
- Test search results are displayed in both grid and list views as per user preference.
- Verify sorting options (e.g., by price, name, relevance) reorder search results correctly.
- Test filtering products by suppliers, manufacturers, categories, and attributes.
- Verify you can add products to compare with each other

Automation Tools

- We will use Playwright and Typescript to automate the test cases. Initially, we will automate the most important and core test cases.
- Implement robust monitoring and reporting mechanisms for test execution results. Send results to Slack or another communication channel for faster feedback.

Test cases to automate as Smoke suite (High priority) -

- As a guest user add the product to the cart, sign up during the checkout process, and complete the checkout.
- As an existing user add product to the cart, and complete the checkout.
- As a signed-in user edit the cart and ensure the cart value reflects the latest changes.
- Search for products ensuring search suggestions work and see relevant results.
- Search for products and compare the products.
- Ensure you can sort the results after searching for the products.