Test Plan

Project Name: ProtoCommerce

Version: ProtoCommerce

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1. **Introduction**
   - **Purpose:** Test the functionality of the shopping process.
   - **Project Overview:** It's a commercial electronic project for adult people so they can make their electronic shopping easily.
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2. **Test Objectives**
   - Testing this website to ensure that shopping process is working properly ad perfect UI/UX for the user.

3. **Scope**
   - Elements and alerts in the Home page.
   - Shopping process in the shop pages.

4. **Test Strategy**
   - Implementation of UI web automation testing.

5. **Test Deliverables**
   - Excel sheet with detailed test cases
   - Automate all test cases using Cypress.

6. **Test Environment**
   - Laptop: Dell
   - Processor: Intel(R) Core(TM) i7-8665U CPU @ 1.90GHz   2.11 GHz
   - RAM: 32.0 GB
   - System Type: 64-bit operating system, x64-based processor
   - Windows: 10 Enterprise
   - Version: 20H2
   - OS build: 19042.2965
   - Browser: Chrome

7. **Entry and Exit Criteria**
   - Enty Criteria: Chrome browser installed and features on Home and Shop pages are done from dev side.
   - Exit Criteria: Shopping process is working properly.

8. **Test Schedule and Timeline**
   - Detailed Test Cases to ensure good coverage by manual and automation, implemented in 5 days.

9. **Resources**
   - Testers: one tester
   - Testing Tool: Cypress using JavaScript

10. **Risks and Contingency Plans**

   1. Lack of Test Data:

   - Risk: Insufficient or inaccurate test data can hinder testing efforts.
   - Contingency Plan: Generate synthetic test data or request production-like data. Use data masking and anonymization techniques to protect sensitive information.

2. Change in Requirements:

- Risk: Requirements may change during the testing phase.
- Contingency Plan: Maintain open communication with stakeholders to quickly address changing requirements. Implement a change management process to evaluate and incorporate changes into the testing scope.

3. Unavailability of Test Environment:

- Risk: Delays due to unavailable or unstable test environments.
- Contingency Plan: Create a dedicated test environment, or schedule testing during non-peak hours. Use virtualization and containerization to replicate environments.

4. Incomplete Test Coverage:

- Risk: Not covering all necessary test scenarios.
- Contingency Plan: Review and update test cases to ensure comprehensive coverage. Use risk-based testing to prioritize critical scenarios.

5. Resource Shortages:

- Risk: Insufficient personnel or tools for testing.
- Contingency Plan: Allocate additional resources or cross-train team members. Consider outsourcing some testing tasks if necessary.

6. Integration Issues:

- Risk: Integration problems with third-party systems or services.
- Contingency Plan: Conduct thorough integration testing and establish clear communication channels with third-party providers. Plan for fallback mechanisms if integrations fail.

7. Test Tool Failures:

- Risk: Test automation tool failures or compatibility issues.
- Contingency Plan: Have backup tools or scripts ready. Maintain regular updates and compatibility checks for test automation tools.

8. Data Security and Privacy Concerns:

- Risk: Exposure of sensitive data during testing.
- Contingency Plan: Implement data anonymization and encryption techniques. Ensure compliance with data protection regulations like GDPR.

9. Regression Test Delays:

- Risk: Delays in regression testing due to frequent code changes.
- Contingency Plan: Implement continuous integration (CI) and continuous testing to catch defects early. Prioritize critical regression tests.

11. Test Execution Strategy
- Excel sheet with detailed test cases and test data.
- All test cases will be automated using Cypress.

12. Test Reporting and Metrics
- All test cases will be documented in Excel sheet and bug will be documented on Jira management tool.
- All automated test cases will be shared on GitLab.

13. Review and Approval
- Testing Manager
- Product Owner

14. Test Plan Maintenance
- After every sprint, Test Plan will be updated.