**Test Planning for Nbyula Marketplace Website**

**Objective:**

The objective of the test planning for Nbyula Marketplace Website is to ensure thorough and comprehensive testing of the website to identify and resolve defects, validate functionality, performance, security, and usability, and ensure the delivery of a high-quality and reliable marketplace website to end-users.

**Timeline:**

The test activities will be carried out over a period of six months, starting from the current date until the planned delivery date of the marketplace website.

**Test Activities:**

**Requirements Review (Month 1):**

* Review the project requirements and specifications to gain a clear understanding of the expected behaviour and functionality of the marketplace website.
* Collaborating with the Product Owner/Product Manager (PO/PM) and development team to clarify any ambiguous requirements or specifications.
* Create a comprehensive test plan that outlines the scope, objectives, deliverables, and timelines for the upcoming test activities.

**Test Environment/Framework Setup (Month 1):**

* Identify and set up the necessary test environment
* Install and configure the required testing tools and frameworks, such as test management tools, automated testing tools, and performance testing tools, as needed eg. selenium, python, pytest, pycharm
* Validate the test environment to ensure it is stable and ready for testing.

**Test Case Development (Month 2):**

* developing detailed test cases that cover all the functionality and features of the marketplace website.
* Ensure that the test cases are comprehensive, clear, and easy to understand, with proper input data, expected results, and steps to reproduce.
* Review and validate the test cases with the PO/PM and development team to ensure they accurately reflect the intended behaviour of the marketplace website.

**Functional Testing (Months 2-4):**

* Execute the test cases to validate the functionality of the marketplace website.
* Identify and report any defects, inconsistencies, or deviations from the expected behaviour.
* Collaborate with the development team to reproduce and resolve the reported defects.
* Retest the resolved defects to ensure they have been properly fixed.
* Continuously update the test cases based on the evolving requirements and specifications.
* Documentation is required at the end

**Performance Testing (Months 3-5):**

* Perform performance testing to evaluate the website's responsiveness, scalability, and stability under various load conditions.
* Use performance testing tools to simulate realistic user scenarios and measure the website's performance metrics, such as response time, throughput, and resource utilisation
* Identify and report any performance bottlenecks or issues.
* Collaborate with the development team to optimise the website's performance based on the performance testing results.
* Documentation is required at the end

**Security Testing (Months 4-6):**

* Perform security testing to identify and address any potential security vulnerabilities in the marketplace website.
* Conduct vulnerability assessments, penetration testing, and other security testing techniques to identify and report any weaknesses or vulnerabilities in the website's architecture, authentication, authorization, input validation, and data handling.
* Collaborate with the development team to implement appropriate security measures, such as encryption, access controls, and error handling, to mitigate the identified security risks.
* Documentation is required at the end

**Usability Testing (Months 5-6):**

* Conduct usability testing to evaluate the website's user interface, navigation, and overall user experience.
* Use usability testing techniques, such as user surveys, interviews, and feedback sessions, to gather user feedback and insights.
* Identify and report any usability issues, such as confusing navigation, unclear instructions, or inconsistent branding.
* Collaborate with the development team to implement usability improvements based on the user feedback.
* Documentation is required at the end

**Deliverables:**

* Test plan outlining the scope, objectives, deliverables, and timelines for the test activities.
* Comprehensive test cases covering all the functionality and features of the marketplace website.
* Test reports documenting the test results, defects,