TEST PLAN FOR OTHOBA.COM

1) Introduction:

The primary objective of this test plan is to ensure the functionality, usability, security, and performance of the othoba.com website. This includes verifying that all features and functionalities of the website meet the specified requirements and deliver an optimal user experience.

1.1) Scope:

The scope of this test plan encompasses all aspects of the othoba.com website, including but not limited to:

- Navigation and user interface
- Product browsing and search functionality
- Shopping cart and checkout process
- User account management
- Payment processing and security
- Content management and updates
- Compatibility across different browsers and devices
- Performance under various load conditions

1.1.1) In Scope:

Creating a test plan for a website like othoba.com would involve several key areas to ensure its functionality, usability, security, and performance. Here's a high-level outline of what such a test plan might include:

1. Introduction:
    - Overview of the website and its purpose.
    - Objectives of the testing.
    - Scope of testing.

2. Testing Objectives:
    - Clearly defined goals for the testing process.
    - Examples include functionality, usability, compatibility, performance, and security.

3. Testing Scope:
    - Website components to be tested (e.g., homepage, product pages, checkout process, etc.).
    - Supported devices and browsers.
    - User roles and permissions to be tested (e.g., admin, customer, guest).

4. Testing Strategy:
    - Approach to testing (e.g., manual testing, automated testing, or a combination).
    - Test environments (e.g., development, staging, production).
5. Functional Testing:
    - Test scenarios for core functionality (e.g., browsing products, adding items to the cart, placing orders).
    - User account management (registration, login, password recovery).
    - Search functionality.
    - Checkout process (including payment processing)

6. Usability Testing:
    - Evaluation of user interface design and navigation.
    - Accessibility testing to ensure compliance with accessibility standards.
    - Consistency across different pages and sections.

7. Compatibility Testing:
    - Testing on different devices (desktops, laptops, tablets, smartphones).
    - Testing on various operating systems (Windows, macOS, Linux, iOS, Android).
    - Testing on different web browsers (Chrome, Firefox, Safari, Edge, etc.).

8. Performance Testing:
    - Load testing to evaluate website performance under different levels of traffic.
    - Stress testing to identify breaking points.
    - Response time measurement for key actions (e.g., page loading, checkout process).

9. Security Testing:
    - Vulnerability scanning for common web security issues (e.g., SQL injection, cross-site scripting).
    - Authentication and authorization testing.
    - Data encryption and transmission security.

10. User Acceptance Testing (UAT):
    - Involving actual users to evaluate the website's functionality, usability, and overall user experience.
    - Gathering feedback for potential improvements.

11. Test Deliverables:
    - Documentation of test cases.
    - Bug reports with detailed steps to reproduce issues.
    - Performance test reports.
    - UAT feedback summary.

By following this test plan, you can systematically evaluate the othoba.com website to ensure it meets quality standards and delivers an optimal user experience.

1.1.2) Out of Scope:

Here's an outline of what might be considered out of scope for testing the othoba.com website:

1. Third-party Integrations:
    - Testing of third-party services or APIs not directly controlled or managed by othoba.com, such as payment gateways, shipping carriers, or social media integrations.

2. Legacy Browser Support:
    - Testing on outdated or unsupported web browsers, unless specifically required by stakeholders.

3. Performance Testing Beyond Normal Conditions:
    - Testing extreme scenarios such as excessively high traffic loads or deliberate network throttling beyond what would reasonably occur in real-world usage.

4. Localization Testing:
    - Testing the website for localization and translation issues, unless explicitly stated as a requirement.

5. Hardware Compatibility Testing:
    - Testing on specific hardware configurations or devices not commonly used by the target audience.

6. Legal and Compliance Testing:
    - Compliance testing for specific regulations or standards unless explicitly required by stakeholders (e.g., GDPR compliance, ADA compliance).

7. Load Testing Beyond Expected Capacity:
    - Testing the website's performance under extremely high loads that exceed normal operating conditions, unless specified as a critical requirement.

8. Non-Functional Testing Beyond Standard Parameters:
    - Testing aspects like aesthetic appeal, subjective user experience beyond what directly impacts functionality or usability.

1.2) Quality Objective:

Here's a test plan outlining quality objectives for testing the website:

1. Objective 1: Functionality
    - Goal: Ensure that all website features and functions work as intended without errors or unexpected behavior.
    - Key Metrics:
        - Percentage of critical functions tested without issues.
        - Number of critical defects found during functional testing.
    - Test Activities:
        - Execute comprehensive test cases covering all core functions (e.g., browsing products, adding to cart, checkout).
        - Verify functionality across different devices and browsers.
        - Conduct regression testing to ensure new features do not impact existing functionality.

2. Objective 2: Usability
    - Goal: Provide a user-friendly experience that is intuitive and easy to navigate.
    - Key Metrics:
        - Average time to complete common tasks (e.g., search, checkout).
        - User satisfaction scores from usability testing.
    - Test Activities:
        - Perform heuristic evaluation to identify usability issues.
        - Conduct user testing sessions to gather feedback on website navigation and layout.
        - Analyze user interaction data to identify pain points and areas for improvement.

3. Objective 3: Performance
    - Goal: Ensure the website loads quickly and performs well under typical usage conditions.
    - Key Metrics:
        - Page load times for critical pages (e.g., homepage, product listings).
        - Server response times under varying loads.
    - Test Activities:
        - Conduct load testing to simulate expected traffic volumes and identify performance bottlenecks.
        - Monitor server resources (CPU, memory, etc.) during peak traffic periods.
        - Optimize code and assets to improve page load times and overall performance.

4. Objective 4: Security
    - Goal: Protect user data and ensure the website is resistant to common security threats.
    - Key Metrics:

        - Number of security vulnerabilities identified and remediated.
        - Compliance with industry security standards (e.g., OWASP Top 10).
    - Test Activities:
        - Perform security scanning and penetration testing to identify vulnerabilities.
        - Implement secure coding practices and encryption techniques to protect sensitive data.
        - Regularly update software and dependencies to mitigate known security risks.

5. Objective 5: Compatibility
    - Goal: Ensure the website functions correctly across different devices, browsers, and operating systems.
    - Key Metrics:
        - Percentage of test cases passed on various combinations of devices and browsers.
        - Number of compatibility-related defects found and resolved.
    - Test Activities:
        - Test website on different browsers (Chrome, Firefox, Safari, Edge) and devices (desktop, mobile, tablet).
        - Verify compatibility with different operating systems (Windows, macOS, iOS, Android).
        - Address any CSS or JavaScript issues affecting cross-browser compatibility.

6. Objective 6: Accessibility
    - Goal: Ensure the website is accessible to users with disabilities and compliant with accessibility standards (e.g., WCAG).
    - Key Metrics:
        - Compliance level with WCAG guidelines.
        - Accessibility audit findings and remediation efforts.
    - Test Activities:
        - Conduct manual accessibility testing using assistive technologies (e.g., screen readers).
        - Use automated accessibility testing tools to identify common accessibility issues.
        - Implement accessible design patterns and ensure proper use of ARIA attributes.

7. Objective 7: Reliability
    - Goal: Ensure the website operates reliably without frequent crashes or downtime.
    - Key Metrics:
        - Mean Time Between Failures (MTBF).
        - Percentage of uptime over a specified period.

- Test Activities:
    - Perform stress testing to assess website resilience under high loads or adverse conditions.
    - Monitor server logs and error reports for signs of instability.
    - Implement redundancy and failover mechanisms to minimize service disruptions.

By setting clear quality objectives and conducting thorough testing activities, you can ensure that othoba.com meets the desired quality standards and provides a positive user experience for its visitors.

1.3) Roles and Responsibilities

Defining roles and responsibilities in a test plan ensures that everyone involved in the testing process understands their duties and contributes effectively to achieving the project's objectives. Here's a breakdown of roles and responsibilities for testing the othoba.com website:

1. Project Manager:
    - Oversees the entire testing project.
    - Defines the testing strategy and approach.
    - Ensures that testing activities are aligned with project goals and deadlines.
    - Manages resources and budgets for testing.
2. Test Manager:
    - Leads the testing team.
    - Develops the test plan and schedules.
    - Coordinates with stakeholders to gather requirements and acceptance criteria.
    - Reports testing progress and issues to project stakeholders.

3. Test Lead:
    - Coordinates testing activities within the team.
    - Reviews test cases and ensures adequate coverage.
    - Monitors test execution and progress.
    - Acts as a point of contact for test-related queries.

4. Testers:
    - Functional Testers:
        - Focus on testing the functionality of the website.
        - Develop test cases based on requirements and user stories.
        - Execute test cases and document test results.
        - Report defects and verify fixes.

    - Usability Testers:
        - Evaluate the user interface and user experience.
        - Conduct usability testing sessions with target users.

        - Document usability issues and suggest improvements.
        - Provide feedback on design and layout.

    - Performance Testers:
        - Conduct performance testing to assess website responsiveness and scalability.
        - Define performance test scenarios and scripts.
        - Execute load, stress, and endurance tests.
        - Analyze performance metrics and identify performance bottlenecks.

    - Security Testers:
        - Identify and assess security vulnerabilities.
        - Conduct security testing using manual and automated techniques.
        - Collaborate with developers to remediate security issues.
        - Ensure compliance with security standards and best practices.

    - Compatibility Testers:
        - Ensure website compatibility across different browsers, devices, and platforms.
        - Test website functionality on various combinations of browsers and devices.
        - Report compatibility issues and work with developers to resolve them.

    - Accessibility Testers:
        - Verify website compliance with accessibility standards (e.g., WCAG).
        - Conduct accessibility testing using assistive technologies and automated tools.
        - Identify accessibility barriers and recommend solutions.

5. Automation Engineers:
    - Develop and maintain automated test scripts.
    - Integrate automated tests into the continuous integration/continuous deployment (CI/CD) pipeline.
    - Monitor and troubleshoot test automation framework.
    - Provide support for executing automated tests and analyzing results.

6. Stakeholders:
    - Provide input on testing priorities and requirements.
    - Participate in user acceptance testing (UAT).
    - Review test plans, test cases, and test results.
    - Approve the final release based on testing outcomes.

2) Test Methodology

2.1) Overview

2.2 Test Levels:

For testing a website like Othoba.com, various test levels are typically employed to ensure thorough testing coverage across different aspects of the system. Here are the common test levels that can be applied:

1. Unit Testing:In the context of Othoba.com, unit testing might involve testing functions or modules responsible for specific website features, such as user authentication, product search, or checkout process.

2. Integration Testing: In the case of Othoba.com, integration testing might involve testing interactions between the frontend (UI) and backend (server-side logic), as well as interactions with third-party services such as payment gateways or inventory management systems.

3. System Testing:System testing for Othoba.com would involve testing end-to-end scenarios, such as user registration, product browsing, ordering, and payment processing, to ensure the entire website operates smoothly.

2.3 Bug Triage

2.4 Suspension Criteria and Resumption Requirements

Testing should be paused until the development team has fixed every failed case if team members report that 40% of the test cases failed.

2.5 Test Completeness

- Outlines the standards for what constitutes a test phase's successful completion.
- Unless a valid justification is provided, a 100% run rate is required.
- The pass rate is 96%, and meeting it is required.

3.Test Deliverables:

Test deliverables are provided as below

Before testing phase

- Test plans document.
- Test case document.
- Test Design specifications.

During the testing

- Test Tool Simulators.
- Test data
- Test Trace-ability Matrix – Error logs and execution logs.

After the testing cycles is over

- Test Results/reports
- Defect report
- Installation/ Test procedures guidelines
- Release notes

4.Resource & Environment Needs

4.1 Testing Tools

Testing tools play a crucial role in ensuring the quality and reliability of a website like Othoba.com. Here's a selection of testing tools that can be used across various stages of the testing process:

- Selenium WebDriver:Selenium is a popular open-source tool for automating web browsers.It can be used for functional testing, regression testing, and browser compatibility testing of Othoba.com.

- Cypress: Cypress provides a user-friendly interface and fast test execution, making it suitable for testing the frontend of Othoba.com.

- JMeter:JMeter can be used to conduct load testing and stress testing of Othoba.com to ensure it can handle expected levels of traffic.

- Postman:It can be used to test the RESTful APIs that power various functionalities of Othoba.com, such as user authentication, product management, and order processing.
- Burp Suite:Burp Suite can be used to perform security testing of Othoba.com to identify and address potential security risks.

- Google Lighthouse:Google Lighthouse can be used to evaluate and optimize the performance and accessibility of Othoba.com.
- Browser Developer Tools:Browser developer tools can be used to inspect elements, debug JavaScript code, analyze network requests, and measure performance metrics of Othoba.com.

4.2 Test Environment

Determine the hardware and software requirements for hosting Othoba.com.
Following software is required in addition to client-specific software.

- Windows 11 and above
- Office 2021 and above
- MS Exchange, etc.