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# Introduction

## Purpose

This QA test plan outlines the strategy, scope, approach, and resources required for testing the Skybot Electric Scooter portal. The portal allows customers to browse, purchase, and get information about Skybot's electric scooters.

## Project Overview

Skybot, a company specializing in electric scooters, is developing an Internet portal to facilitate product browsing, purchasing, and customer interactions. This QA test plan outlines the strategy, scope, and methodology for ensuring the portal meets all functional, performance, usability, security, and compatibility requirements

# Scope

## In-Scope

 Functional Testing

 Usability Testing

 Performance Testing

 Security Testing

 Compatibility Testing

## Out-of-Scope

 Backend System Testing

 Integration with third-party services not managed by Skybot

# Testing Strategy

## Functional Testing

 Verify user registration, login, and logout.

 Validate product browsing, searching, and filtering.

 Test the shopping cart and checkout process.

 Ensure correct handling of payment processing.

 Confirm email notifications for account creation, order confirmation, and shipping updates

## Usability Testing

 Assess the ease of navigation and user interface.

 Validate the clarity of information and instructions.

 Test the accessibility features for compliance with standards.

## Performance Testing

 Load testing to ensure the portal can handle expected traffic.

 Stress testing to determine the portal's breaking point.

## Security Testing

 Verify secure communication (HTTPS).

 Test for vulnerabilities.

## Compatibility Testing

 Test on different web browsers.

 Validate responsiveness on various devices.

# Environment Requirements

## Test Environments

 **Hardware**: Servers, network infrastructure, test devices.

 **Software**: Web browsers, security testing tools (OWASP ZAP) etc.

 **Data**: Test data for user accounts, products, orders

# Test Scenarios

## Functional Test Scenarios

 **User Registration**: Verify user can register with valid details.

 **Login/Logout**: Validate login/logout functionality with valid and invalid credentials.

 **Product Search**: Test searching for products using different criteria.

 **Product Details**: Verify the display of product details.

 **Test drive**: Test the registration form for a test drive.

 **Shopping Cart**: Add/remove items, update quantities, and view the cart.

 **Checkout**: Test the entire checkout process including payment.

 **Order Confirmation**: Validate the receipt of order confirmation emails.

 **Review**: Test the ability to send a product review.

 **Warranty**: Test the ability to sign up for a warranty and non-warranty service.

## Usability Test Scenarios

 **Navigation**: Assess the ease of navigating between pages.

 **Information Clarity**: Verify the clarity of information provided.

 **Accessibility**: Check compliance with accessibility standards (e.g., WCAG).

## Performance Test Scenarios

 **Load Test**: Simulate multiple users accessing the portal simultaneously.

 **Stress Test**: Identify the maximum load the portal can handle before performance degrades.

## Security Test Scenarios

 **Secure Communication**: Verify all data is transmitted over HTTPS.

 **Vulnerability Scan**: Test for common web application vulnerabilities: SQL Injection, Server-Side Request Forgery, Broken Authentication etc.

## Compatibility Test Scenarios

 **Browser Compatibility**: Test the portal on various browsers (Chrome, Firefox, Safari, Edge).

 **Device Compatibility**: Validate responsiveness on different devices (desktops, tablets, smartphones).

## Test Execution

 Prepare test cases based on the above scenarios.

 Execute test cases and record results.

 Report defects and track them to closure.

 Retest resolved defects.

# Entry and Exit Criteria

## Entry Criteria

 Customer requirements are verified and approved

 Test environment is set up and accessible.

 Test data is prepared.

 Test cases are reviewed and approved.

## Exit Criteria

 All critical and high priority defects are resolved.

 Test execution is complete.

 Test summary report is prepared and reviewed.

# Deliverables

 Test Plan Document

 Test Cases

 Test Data

 Test Execution Reports

 Defect Reports

 Test Summary Report

# Risks and Mitigations

## Risks

 Delays in test environment setup.

 Unavailability of test data.

 High number of defects impacting schedule.

 Change of requirements by the customer, when all tests have already been completed.

## Mitigations

 Plan for buffer time in the schedule.

 Prepare backup test data.

 Prioritize defect resolution based on severity.