

# Software Test Design

petstore



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- Introduction

- Document overview

The pet store Software Test Description (STD) document outlines the test preparations, test cases, and test procedures for qualification testing of the pet store website. This document is prepared in accordance with the guidelines outlined in the Software Requirements Specification (SRS) and Software Design Description (SDD) documents.

- Project overview

The PetStore.com website is a popular online marketplace for pet supplies, offering a wide range of products for pets and pet owners. Similar to Airbnb, the website, known as "PetStore," connects pet owners with suppliers who have pet products available for purchase. Users can search for products based on category, brand, price range, and pet type. They can view detailed product listings, including photos, descriptions, and customer reviews, and purchase products directly through the website. PetStore aims to provide a user-friendly platform for pet owners to find and purchase pet supplies, and for suppliers to list their products and manage orders. The key features are designed to enhance the user experience and ensure the smooth operation of the platform.

- project references

#	Documents	Title
R1	STP	Software Test Plan
R2	Business Specification	Business Specification
R3	Requirements document	Requirements

- Tests basic preparations

- Hardware basic preparation

- **Browser Devices:**

- 1- Variety of devices:** Test on different browsers like chrome ,edge and firefox.

- 2- Operating systems:** Include Devices with various operating systems such as windows unix.

- **Computers:**

- 1- System Specifications:** Include computers with different specifications (RAM, CPU, GPU) to test the pet store website interface under various system loads.

- **Network Hardware:**

- 1- Routers:** For testing network stability, latency, and performance impacts on the app's functionality.

- Software basic preparation

- **Operating systems:** Include Devices with various operating systems such as windows unix.

- **Testing tools:** pycharm ,selenium , selenium grid and jenkins .

- **The tested software:** pet store website.

- Data preparation

- Homepage

- Ensure the website is loaded and accessible.
      - Verify the presence of the logo, navigation menu, and search bar.
      - Test navigation links to ensure they direct to the correct pages.

- Product Listing Page

- Ensure the product listing page is accessible.
      - Verify that products are displayed correctly with accurate information.
      - Test sorting and filtering options to ensure they work as expected.

- Product Details Page

- Navigate to a product details page.
      - Verify that product details (e.g., description, price, images) are displayed accurately.
      - Test the "Add to Cart" functionality to ensure products can be added successfully.

- Cart Page
  - Add products to the cart and verify they are displayed correctly.
  - Test the checkout process to ensure products can be successfully purchased.
- Checkout Process
  - Test each step of the checkout process (e.g., shipping, payment) to ensure it functions smoothly.
  - Verify that users can complete the checkout process successfully.
- User Account
  - Test user registration and login functionality.
  - Verify that users can create accounts, log in, and manage their profiles.
  - Test profile management functionalities to ensure users can update their information.
- User Management
  - Test user registration, login, and logout processes.
  - Verify that users can successfully log in and log out of their accounts.
  - Test user profile management to ensure users can update their profiles.
- Product Management
  - Test adding, editing, and deleting products from the inventory.
  - Verify that products can be added, edited, and removed successfully.
- Order Management
  - Test placing orders for products.
  - Verify that users can place orders and receive order status updates.
- Performance Testing
  - Test website response times under different loads to ensure it can handle traffic.
  - Test website scalability to ensure it can accommodate growth.
- Compatibility Testing
  - Test website functionality on different browsers (Chrome, Firefox, Safari, Edge) to ensure compatibility.
  - Verify that the website functions correctly on different devices (desktop, mobile).
- Security Testing
  - Test for vulnerabilities such as XSS, CSRF, and SQL injection.
  - Test data encryption and secure communication to ensure user data is protected.

- Usability Testing
  - Test website navigation and user interface to ensure it is user-friendly.
  - Gather feedback from users to identify areas for improvement.
- Authentication
  - Test API authentication mechanisms to ensure secure access.
- Product API
  - Test endpoints for adding, editing, and deleting products.
  - Verify that products can be managed through the API.
- Order API
  - Test endpoints for placing orders and updating order status.
  - Verify that orders can be managed through the API.
- User Journey
  - Test the entire user journey from browsing products to completing a purchase.
  - Verify that users can successfully complete a purchase without issues.
- User Scenarios
  - Test different user scenarios (e.g., new user, returning user, admin user) to ensure functionality is consistent for all user types.
  - Verify that each user type can perform their intended actions without errors.

## ● Test scenarios

### Homepage

- Open the PetStore.com website.
- Verify that the homepage is loaded successfully.
- Check that the logo, navigation menu, and search bar are visible.
- Click on each navigation link (e.g., Home, Products, Cart) and verify that the corresponding page is loaded.

### Product Listing Page

- Navigate to the Products page.
- Verify that the products are displayed with accurate information (name, price, description).
- Test the sorting options (e.g., by price, by popularity) and verify that the products are sorted correctly.
- Test the filtering options (e.g., by category, by brand) and verify that the products are filtered correctly.

### Product Details Page

- Select a product from the product listing.
- Navigate to the product details page.

- Verify that all product details (description, price, images) are displayed accurately.
- Test the "Add to Cart" button and verify that the product is added to the cart successfully.

#### Cart Page

- Click on the Cart icon to view the cart page.
- Verify that all added products are displayed with correct details (name, price, quantity).
- Test the checkout process by clicking on the "Proceed to Checkout" button and verify that the correct products are included.

#### Checkout Process

- Start the checkout process from the cart page.
- Enter shipping address details and proceed to the payment step.
- Select a payment method and enter payment details.
- Complete the checkout process and verify that the order is successfully placed.

#### User Account

- Click on the Login/Register button and select the Register option.
- Fill in the registration form with valid information.
- Click on the Register button and verify that the new account is created successfully.
- Log in to the newly created account using the registered credentials and verify successful login.
- Test profile management functionalities by updating user information (e.g., name, email, password) and verify that the changes are saved successfully.

#### User Management

- Register a new user account and verify successful registration.
- Log in with the newly registered user account and verify successful login.
- Log out of the user account and verify successful logout.

#### Product Management

- Access the admin dashboard (if available) and navigate to the product management section.
- Add a new product to the inventory and verify successful addition.
- Edit an existing product and verify that the changes are reflected correctly.
- Delete a product from the inventory and verify that it is removed successfully.

#### Order Management

- Place an order for a product and verify that the order is successfully placed.
- Check the order status and verify that it is updated correctly.
- Cancel an order and verify that it is canceled successfully.

### Performance Testing

- Test website response times under normal load conditions and verify that response times meet acceptable thresholds.
- Increase the load on the website and monitor response times to ensure scalability.

### Compatibility Testing

- Test website functionality on different browsers (Chrome, Firefox, Safari, Edge) and verify consistent behavior.
- Test website functionality on different devices (desktop, mobile) and verify that it is responsive.

### Security Testing

- Test for common security vulnerabilities such as XSS, CSRF, and SQL injection.
- Verify that sensitive data is encrypted and transmitted securely.

### Usability Testing

- Test website navigation and verify that it is intuitive and user-friendly.
- Gather feedback from users on the overall user experience and identify areas for improvement.

### Authentication API

- Test API authentication mechanisms and verify that only authenticated users can access restricted endpoints.
- Verify that invalid authentication attempts are rejected.

### Product API

- Test endpoints for adding, editing, and deleting products through the API and verify successful manipulation of product data.

### Order API

- Test endpoints for placing orders and updating order status through the API and verify successful processing of orders.

### End-to-End User Journey

- Test the entire user journey from browsing products to completing a purchase and verify successful completion.
- Test different user scenarios (e.g., new user, returning user, admin user) to ensure functionality is consistent for all user types.

- Requirements Traceability

Requirement ID	Requirement Description	Test Case ID	Test Case Description
REQ-001	The website shall have a homepage with a logo, navigation menu, and search bar.	1	Verify that the homepage contains a logo, navigation menu, and search bar.
REQ-002	Users shall be able to view a list of products on the Products page, with accurate information and images.	2	Verify that the Products page displays a list of products with accurate information and images.
REQ-003	Users shall be able to view detailed information about a product on the Product Details page.	3	Verify that the Product Details page displays detailed information about a selected product.
REQ-004	Users shall be able to add products to the cart and proceed to checkout.	4	Verify that users can add products to the cart and proceed to checkout.
REQ-005	Users shall be able to create a new account, log in, and manage their profile.	6	Verify that users can create a new account, log in, and manage their profile.
REQ-006	Admin users shall be able to add, edit, and delete products from the inventory.	8	Verify that admin users can add, edit, and delete products from the inventory.



REQ-007	Users shall be able to place orders and check their order status.	9	Verify that users can place orders and check their order status.
REQ-008	The website shall perform well under normal load conditions and scale as traffic increases.	10	Test website performance under normal load conditions and verify scalability.
REQ-009	The website shall be compatible with major browsers (Chrome, Firefox, Safari, Edge) and responsive on different devices (desktop, mobile).	11	Test website compatibility with major browsers and responsiveness on different devices.
REQ-010	The website shall be secure, protecting user data and preventing common security vulnerabilities.	12	Test website security measures to protect user data and prevent security vulnerabilities.
REQ-011	The website shall have an intuitive and user-friendly interface.	13	Test website navigation and user interface for intuitiveness and user-friendliness.
REQ-012	The API shall require authentication for accessing restricted endpoints.	14	Test API authentication mechanisms for accessing restricted endpoints.
REQ-013	The API shall provide endpoints for managing products (add, edit, delete).	15	Test API endpoints for managing products (add, edit, delete).
REQ-014	The API shall provide endpoints for managing orders (place order, update status).	16	Test API endpoints for managing orders (place order, update status).

REQ-015	The entire user journey, from browsing products to completing a purchase, shall be seamless.	17	Test the entire user journey to ensure a seamless experience from browsing to purchase.
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