# PetCake Delight Requirements Document

## 1. Introduction and Rationale

**1.1 Introduction**:  
PetCake Delight is an e-commerce website designed to offer dog and cat owners a convenient platform to purchase customizable, pet-safe cakes for their pets. The website allows Shoppers to browse cakes by category (e.g., dog cakes, cat cakes, seasonal), customize orders (e.g., size, flavor, shape, icing, message, pet name), and place orders with offline payment options. Managers can manage products, orders, and site content to ensure a seamless operation.

**1.2 Rationale**:  
PetCake Delight uses all-natural ingredients to appeal to health-conscious pet owners, addressing the growing trend of pet humanization. The project aims to demonstrate web development skills using WordPress and WooCommerce, delivering a minimal viable product (MVP) with essential e-commerce functionality, mobile responsiveness, and a professional user experience.

**1.3 Objectives**:

* Provide Shoppers with an intuitive interface to browse, customize, and order cakes.
* Enable Managers to efficiently manage products, orders, and site content.
* Ensure the website is responsive across devices to support on-the-go shopping.
* Deliver a functional MVP by June 10, 2025.

#### ****1.4 Future Enhancements****

Future enhancements, prioritized as Nice-to-Have features, include:

* Online payment integration (e.g., Stripe, PayPal).
* Birthday reminders via email (e.g., Mailchimp integration).
* Customer reviews and wishlists.
* These features will be considered post-MVP based on user feedback and business needs.

## 2. Content Evaluation

### a. Navigation

The website will feature a clear, intuitive navigation structure to guide Shoppers and Managers through their tasks.

* **Main Menu** (visible to Shoppers):
  + **Home**: Displays featured cakes and promotional content.
  + **Shop**: Lists cake products by category (e.g., Dog Cakes, Cat Cakes, Seasonal).
  + **About**: Details the shop’s mission and pet-safe ingredient commitment.
  + **Cart**: Shows cart contents and links to checkout.
* **Footer Menu**:
  + Links to About page and privacy policy.
* **Manager Menu** (admin dashboard):
  + **Products**: Add, update, and manage cakes and stock.
  + **Orders**: View and update order statuses, receive notifications.
  + **Settings**: Configure pickup/delivery options and site content.
* **Implementation**: Use WordPress menu system with custom links for WooCommerce pages.

### b. Layout, Wireframe at the Start

The layout will be clean and responsive, prioritizing ease of use. Key page wireframes (to be created using Figma) include:

* **Homepage**:
  + Header: Logo, main menu, cart icon.
  + Hero Section: Large banner with a call-to-action (“Shop Now”).
  + Featured Cakes: Grid of 3–4 cakes with images and “View Details” buttons.
  + Footer: Links to About page and privacy policy.
* **Shop Page**:
  + Header: Same as Homepage.
  + Category Filter: Sidebar for desktop (checkboxes), dropdown for mobile.
  + Product Grid: Thumbnails, titles, prices, and “Add to Cart” buttons (6–8 products per page for optimal display).
  + Footer: Same as Homepage.
* **Product Page**:
  + Header: Same as Homepage.
  + Product Section: High-quality image, description, price, customization form (size, flavor, etc.), “Add to Cart” button.
  + Footer: Same as Homepage.
* **Cart Page**:
  + Header: Same as Homepage.
  + Cart Table: List of cakes, quantities, prices, update/remove options.
  + Checkout Button: Prominent button to proceed.
  + Footer: Same as Homepage.
* **Checkout Page**:
  + Header: Same as Homepage.
  + Form: Contact/shipping fields, pickup/delivery options, estimated date display.
  + Confirmation Button: Submit order.
  + Footer: Same as Homepage.
* **Admin Dashboard**:
  + Sidebar: Links to Products, Orders, etc.
  + Content Area: Dynamic forms/tables for managing products, orders, and content.

**Wireframe Plan**: Create wireframes for these pages before development to finalize layout. Wireframes will include placeholder text and specify 4-6 products per page on the Shop page for optimal display.

Homepage图示

中度可信度描述已自动生成

Shop图片包含 图示

描述已自动生成

Product detail

图形用户界面, 文本, 应用程序

描述已自动生成

Shopping Cart图形用户界面

描述已自动生成Checkout图形用户界面, 应用程序

描述已自动生成

Order Confirmation

文本

中度可信度描述已自动生成

About

文本

中度可信度描述已自动生成

Admin – Product Management图形用户界面, 图表

描述已自动生成

Admin – Order Management图形用户界面

描述已自动生成

Admin – Category Management图形用户界面

描述已自动生成

Admin – Stock Management

图形用户界面, 应用程序

描述已自动生成

### c. Content Descriptions and Sources

* **Text Content**:
  + **Homepage**: Welcome message, promotional text (e.g., “Celebrate with Pet-Safe Cakes!”). Source: Written by Peiyu Han.
  + **About Page**: Mission, pet-safe ingredients, values (300–500 words), and FAQ placeholder (e.g., “How long do cakes last?”, “What are your delivery areas?”). Source: Written by Peiyu Han.
  + **Product Descriptions**: Brief text for each cake (e.g., “Ube Delight for Dogs”). Source: Written by Peiyu Han.
  + **Emails**: Order confirmation email template. Source: Customized WooCommerce template.
* **Images**:
  + **Cake Images**: High-quality photos for each product (min. 800x800px, JPEG). Source: Licensed from Shutterstock (10–15 images). Fallback: Free stock images from Unsplash or client-provided photos.
  + **Homepage Banner**: Promotional image of a pet with a cake. Source: Licensed from Shutterstock.
  + **Icons**: Cart, menu,navigation icons. Source: Free icon sets (e.g., Font Awesome).
* **Other**:
  + **Privacy Policy**: Standard text for data handling, compliant with GDPR/CCPA (target market: US/EU). Source: Template from Termly.io, reviewed before launch.
* **Content Creation Plan**: Draft text in Week 1, secure images by Week 2, finalize content before development.

## 3. Functionality (User Stories)

### a. Must Have User Stories

These 30 user stories form the core MVP, covering browsing, customizing, ordering, and store management.

1. **~~As a Shopper, I want to browse Cake products by category (e.g., dog cakes, cat cakes, seasonal) so that I can easily find what I am looking for.~~**
   * Tasks: Configure WooCommerce categories, create listing template, style grid, add navigation, ensure responsiveness, add accessibility, test.
   * Hours: 10
2. **~~As a Shopper, I want to view detailed information about a Cake (e.g., description, price, ingredients) so that I can make an informed purchasing decision.~~**
   * Tasks: Customize product page template, style details, ensure responsiveness, add accessibility, test.
   * Hours: 6
3. **~~As a Shopper, I want to see a high-quality image of a Cake so that I can visualize the product.~~**
   * Tasks: Configure image settings, customize image display, style for responsiveness, add alt tags, test.
   * Hours: 4
4. **~~As a Shopper, I want to customize a Cake order (size, flavor, shape, icing, message, pet name) so that I can create a personalized product for my pet.~~**
   * Tasks: Configure WooCommerce Product Add-Ons plugin, design form, add fields, implement validation, integrate with cart, style, ensure accessibility, test, database functions. Note: May require custom code for complex validations.
   * Hours: 20
5. **~~As a Shopper, I want to add a Cake to my shopping cart so that I can purchase it.~~**
   * Tasks: Configure add-to-cart, customize button, style, ensure responsiveness, add accessibility, test.
   * Hours: 4
6. **~~As a Shopper, I want to see a confirmation message after adding a Cake to my cart so that I know the action was successful.~~**
   * Tasks: Implement confirmation message, style, ensure responsiveness, add accessibility, test.
   * Hours: 4
7. **~~As a Shopper, I want to view the contents of my shopping cart so that I can see what I am buying.~~**
   * Tasks: Customize cart template, style contents, ensure responsiveness, add accessibility, test.
   * Hours: 6
8. **~~As a Shopper, I want to update the quantity of Cakes in my cart so that I can adjust my purchase.~~**
   * Tasks: Configure quantity updates, customize inputs, style, implement validation, ensure responsiveness, test.
   * Hours: 4.5
9. **~~As a Shopper, I want to remove Cakes from my cart if I change my mind.~~**
   * Tasks: Configure remove functionality, customize button, style, ensure responsiveness, test.
   * Hours: 3.5
10. **~~As a Shopper, I want to proceed to checkout so that I can submit my order.~~**
    * Tasks: Configure checkout page, customize button, style, ensure responsiveness, test.
    * Hours: 4
11. **~~As a Shopper, I want to enter my contact and shipping information so that my order can be processed.~~**
    * Tasks: Configure checkout fields, customize form, style, implement validation, ensure responsiveness, test.
    * Hours: 8.5
12. **~~As a Shopper, I want to choose a pickup or delivery option so that I can receive my order conveniently.~~**
    * Tasks: Create shipping method, add options to checkout, style, ensure responsiveness, test.
    * Hours: 6
13. **~~As a Shopper, I want to see the estimated delivery or pickup date during checkout so that I can plan for my order.~~**
    * Tasks: Add date display, style, calculate dates, ensure responsiveness, test.
    * Hours: 4.5
14. **~~As a Shopper, I want to see a confirmation page after submitting my order so that I know it was successful.~~**
    * Tasks: Customize confirmation page, style, ensure responsiveness, test.
    * Hours: 4
15. **~~As a Shopper, I want to receive an order confirmation email so that I know my order has been placed successfully.~~**
    * Tasks: Configure email settings, customize template, style, test.
    * Hours: 5
16. **~~As a Shopper, I want to track the status of my orders.~~**
    * Tasks: Configure tracking, customize page/template, style, test.
    * Hours: 5
17. **~~As a Shopper, I want to view an About page so that I can learn about the shop’s pet-safe ingredients and values.~~**
    * Tasks: Create About template, style, add content, ensure responsiveness, add accessibility, test.
    * Hours: 6.5
18. **As a Shopper, I want to use the website on my mobile device so that I can shop on the go.**
    * Tasks: Apply responsive design to all Shopper-facing pages, test mobile functionality, optimize images.
    * Hours: 8
19. ~~As a Shopper, I want to use a contact form to inquire about orders.~~ 
    * Tasks: Configure contact form plugin (e.g., WPForms), customize fields, style, ensure responsiveness, test.
    * Hours: 4
20. As a Shopper, I want to subscribe to a newsletter so that I can receive updates and promotions.
    * Tasks: Integrate newsletter plugin (e.g., Mailchimp), customize form, style, ensure responsiveness, test.
    * Hours: 5
21. ~~As a Shopper, I want to upload a pet photo with my order so that I can personalize the cake further. (6 hours)~~
    * Tasks: Add upload field to customization form, implement validation/storage, style, ensure responsiveness, test.
    * Hours: 6
22. **~~As a Manager, I want to add new Cake products to the store so that Shoppers can purchase them.~~**
    * ~~Tasks: Configure product creation, customize form, style, test.~~
    * ~~Hours: 5~~
23. **~~As a Manager, I want to update Cake product details (description, price, images) so that I can ensure the information is accurate.~~**
    * ~~Tasks: Configure editing, customize form, style, test.~~
    * ~~Hours: 5~~
24. **As a Manager, I want to manage product categories so that products are organized logically.**
    * Tasks: Configure category management, customize interface, style, test.
    * Hours: 4.5
25. **~~As a Manager, I want to manage Cake product stock levels so that I can ensure products are available for purchase.~~**
    * ~~Tasks: Configure stock management, customize fields, style, test.~~
    * ~~Hours: 3.5~~
26. **~~As a Manager, I want to view all Orders so that I can manage and fulfill them.~~**
    * Tasks: Configure order dashboard, customize view, style, test.
    * Hours: 4.5
27. **~~As a Manager, I want to update the status of Orders so that Shoppers are informed about their progress.~~**
    * Tasks: Configure status updates, customize interface, style, test.
    * Hours: 4
28. **~~As a Manager, I want to receive notifications of new Orders so that I can process them promptly.~~**
    * Tasks: Configure notifications, customize template, style, test.
    * Hours: 3.5
29. **As a Manager, I want to configure pickup and delivery options so that Shoppers can choose their preferred method.**
    * Tasks: Create shipping method, customize settings, style, test.
    * Hours: 5
30. **As a Manager, I want the website to be mobile-responsive so that it provides a good user experience on all devices.**
    * Tasks: Apply responsive design to admin interfaces, test, optimize layouts.
    * Hours: 7

### b. Should Have User Stories

These 5 user stories enhance the experience, adding account management and order tracking.

1. **~~As a Shopper, I want to create an account so that I can save my information for future purchases.~~**
   * Tasks: Configure registration, customize form, style, implement validation, ensure responsiveness, test.
   * Hours: 6.5
2. **~~As a Shopper, I want to log in to my account so that I can view my order history and manage my profile.~~**
   * Tasks: Configure login, customize form, style, implement validation, ensure responsiveness, test.
   * Hours: 6
3. **~~As a Shopper, I want to view my order history so that I can see my previous purchases.~~**
   * Tasks: Configure order history page, customize template, style, ensure responsiveness, test.
   * Hours: 5
4. **~~As a Shopper, I want to search for products by name or keywords so that I can quickly locate specific items.~~**
   * ~~Tasks: Configure WooCommerce search, customize search bar, style, test.~~
   * ~~Hours: 5~~
5. **As a Manager, I want to view and manage customer accounts so that I can provide support and handle issues.**
   * Tasks: Configure user management, customize interface, style, implement updates, test.
   * Hours: 6.5

### c. Nice to Have User Stories

These 7 user stories add sophistication but are not required for the MVP.

1. **As a Shopper, I want to choose a payment method so that I can pay for my order securely.**
2. **As a Manager, I want to set up and manage payment gateways so that Shoppers can pay securely.**
3. **As a Shopper, I want to leave product reviews so that I can share my experience.**
4. **As a Shopper, I want to select a delivery location using Google Maps to ensure accuracy.**
5. **As a Shopper, I want to add items to a wishlist for future purchases.**
6. **As a Manager, I want to offer discount codes to attract customers.**
7. **As a Manager, I want to send birthday reminders via Mailchimp to encourage repeat purchases.**

### d. Hourly Estimates

* **Must Have User Stories**: 156 hours
  + Shopper Flow (21 stories): 114 hours
  + Manager Flow (9 stories): 42 hours
* **Should Have User Stories**: 29 hours
* **Total for Must Have and Should Have**: 185 hours
* **Note**: Nice to Have stories are excluded from estimates as they are optional.

### 4. Messages: Error, Success, and Status

To enhance usability and provide clear feedback to users, the PetCake Delight website will display appropriate messages during interactions. These messages will follow accessibility best practices and be styled consistently throughout the site.

#### 4.1 Message Types and Patterns

| **Type** | **Triggered When** | **Message Pattern / Example** | |
| --- | --- | --- | --- |
| **Success** | Shopper adds item to cart | | “🎉 Added to cart successfully!” |
|  | Order is submitted | | “✅ Your order has been placed. Thank you!” |
| **Error** | Required fields are left empty during checkout | | “⚠️ Please fill in all required fields.” |
|  | Invalid input (e.g., non-numeric value in quantity field) | | “❌ Invalid input. Please enter a valid number.” |
| **Status** | Order status is being updated by Manager | | “🔄 Updating order status...” |
|  | System is loading (e.g., fetching order tracking info) | | “⏳ Loading... Please wait.” |

#### 4.2 Display Style

 **Message Containers**:  
Messages will appear in styled alert boxes or notification bars, depending on context.

 **Placement**:

* **Success/Error**: Inline near the related form field or as a banner at the top of the screen.
* **Status**: Temporarily shown near the action button or relevant loading area.

 **Color Scheme**:

* **Success**: Green background with a checkmark icon
* **Error**: Red background with an alert or cross icon
* **Status**: Gray or blue background with a spinner icon or loading animation

 **Display Methods**:

* **Inline Notices**: Positioned within forms or UI sections (e.g., below the checkout button or beside inputs)
* **Banner Notifications**: Shown at the top of the page for global feedback (e.g., order confirmation, system error)
* **Modal Popups**: Used for key interactions like "Add to Cart" confirmation or deletion confirmation

 **Timing and Dismissal**:

* **Auto-dismiss**: Success and status messages automatically disappear after 3–5 seconds
* **Persistent Errors**: Error messages remain visible until the issue is resolved

 **Accessibility**:  
All messages will follow accessibility best practices, including:

* ARIA roles such as role="alert" or aria-live="polite"
* Sufficient color contrast
* Clear iconography and text for screen reader users

## 5. Technical Specifications

### a. Technology Stack

* **Frontend**:
  + HTML5: Semantic structure.
  + CSS3: Styling and responsive design.
  + JavaScript: Form validation and dynamic elements.
* **Backend**:
  + PHP 8.0: WordPress and WooCommerce functionality.
  + MySQL: Database management.
* **CMS/E-commerce**:
  + WordPress 6.6: Core platform.
  + WooCommerce latest compatible version at launch: E-commerce functionality (products, cart, checkout).
* **Development Tools**:
  + Visual Studio Code: Code editor.
  + LocalWP: Local development environment.
  + Git: Version control.

### b. Hosting Information

* **Provider**: Hostinger (optimized for WordPress).
* **Plan**: Premium Shared Hosting (includes SSL, supports WordPress optimization).
* **Domain**: To be purchased (e.g., petcakedelight.com).
* **Setup**: Install WordPress, configure SSL, set up WooCommerce post-launch. Target page load time: <3 seconds. Backup Frequency: Daily automated backups using UpdraftPlus, stored securely off-site. Disaster Recovery Plan: Restore from latest backup within 4 hours of downtime. Maintain a fallback hosting option (e.g., SiteGround) for emergency migration. Document recovery steps in /wp-content/docs/recovery-guide.md.

### c. Other Third-Party Software

* **Plugins**:
  + **WooCommerce (latest compatible version)**: E-commerce functionality.
  + **Yoast SEO (latest compatible version)**: SEO optimization. Link.
  + **Elementor (latest compatible version)**: Page building.
  + **WooCommerce Product Add-Ons (latest compatible version)**: Cake customization.
  + **WPForms or Fluent Forms**: Custom checkout form fields.
  + **WooCommerce Custom Checkout Fields**: Additional checkout fields.
  + **Payment Plugins (initial setup):**

Bank Transfer: For delivery orders.

Cash on Delivery: For pickup orders.

(**Future enhancement: Stripe / PayPal integration)**

* + Wordfence: Security protection.
  + UpdraftPlus: Automated backups.
  + RankMath or Yoast SEO: SEO optimization.
  + Complianz: Privacy policy and cookie consent (GDPR/CCPA-compliant).
  + Possible Addition: Caching plugin (e.g., WP Rocket or W3 Total Cache) to enhance performance, to be evaluated during testing.
* **Libraries**:
  + **Font Awesome 6.5**: Icons.
* **Services**:
  + **Google Maps API**: For Nice-to-Have delivery validation only.
* **Note**: All plugins will be kept updated to the latest compatible versions at launch.

## 6. Development Specifications

### a. Folder Structure

* **WordPress Root**:
  + /wp-content/
    - /themes/
      * /petcake-child/: Custom child theme.
        + style.css: Main stylesheet.
        + functions.php: Custom functions.
        + /templates/: Custom page templates (e.g., product-listing.php, customization-form.php).
    - /plugins/
      * /petcake-customization/: Custom plugin.
        + petcake-customization.php: Main plugin file.
        + /includes/: Helper functions.
    - /uploads/: Media files (cake images).
    - /docs/: Project documentation (e.g., README.md, setup-guide.md, recovery-guide.md).

### b. File-Naming Conventions

* Use lowercase with hyphens (e.g., product-listing.php).
* Prefix custom files with petcake- (e.g., petcake-customization.php).
* CSS files: style.css(main theme), custom.css(additional styles).
* JavaScript files: custom.js(custom scripts).

### c. Accessibility Standards

* **Compliance**: WCAG 2.1 Level AA.
  + Semantic HTML for all pages.
  + Alt tags for all images (Must Have #3, #16).
  + ARIA labels for forms and dynamic elements (Must Have #4, #6, #11).
  + Keyboard-navigable interactive elements, tested with tools like NVDA.
* **Testing**: Manual keyboard navigation and automated tools (e.g., WAVE).

### d. Responsiveness Requirements

* Support mobile (320px–768px), tablet (769px–1024px), desktop (1025px+).
* Use CSS media queries and flexible layouts (Must Have #17, #26).
* Test on Chrome, Firefox, Safari, and mobile browsers (iOS Safari, Android Chrome).

### e. GitHub Links

* **Repository**: github.com/fish1219705/petcake-delight (to be created).
* **Structure**: Include theme, plugin, and documentation folders.
* **Commits**: Aim for daily commits during active development, with at least 3–5 commits per week.

## 7. Schedule

The project is estimated at 179 hours for Must Have and Should Have user stories, assuming 40 hours/week over 5 weeks to meet the June 10, 2025 deadline.

* **Week 1: Planning (13 hours)**
  + Finalize Requirements Document.
  + Create wireframes.
  + Draft initial content (Homepage, About page, product descriptions).
* **Week 2: Setup and Content (20 hours)**
  + Set up WordPress and WooCommerce.
  + Create child theme and initial templates.
  + Finalize Homepage and About page content, source images.
* **Week 3: Shopper Flow – Browsing and Customization (28 hours)**
  + Implement Must Have #1–6 (browsing, product details, customization, cart).
  + Test responsiveness.
* **Week 3: Shopper Flow – Cart and Checkout (28 hours)**
  + Implement Must Have #7–13 (cart management, checkout, delivery options).
  + Test checkout flow.
* **Week 3: Shopper Flow – Confirmation and Pages (23 hours)**
  + Implement Must Have #14–17 (confirmation, About page, mobile).
  + Finalize Shopper-facing content.
* **Week 4: Manager Flow (23 hours)**
  + Implement Must Have #18–26 (product management, orders, content, mobile).
  + Test admin functionality.
* **Week 4: Should Have Features (22 hours)**
  + Implement Should Have #1–5 (account management, order tracking).
  + Test account features.
* **Week 5: Testing and Deployment (22 hours)**
  + Conduct full-site testing:
    - Functionality: All user stories (Must-Have and Should-Have).
    - Responsiveness: Mobile, tablet, desktop across browsers.
    - Accessibility: WCAG 2.1 Level A compliance (keyboard navigation, ARIA labels).
  + Deploy to Hostinger.
  + Finalize documentation, including 5-hour buffer for debugging.

**Total**: 179 hours, completed by June 10, 2025 (starting May 9, 2025).

## 8. Conclusion

PetCake Delight will deliver a user-friendly e-commerce platform for dog and cat owners to purchase customizable, pet-safe cakes. The MVP, built with WordPress and WooCommerce, will include essential features for browsing, customizing, and ordering, with robust management tools for Managers. The project demonstrates proficiency in web development, including custom theme and plugin integration, while meeting responsiveness and basic accessibility standards. The 179-hour development timeline ensures a polished product by June 10, 2025, with potential for future enhancements like online payments and birthday reminders. This document provides a clear roadmap for development, content creation, and deployment, aligning with project goals.