**Software Requirements Specification (SRS)**

**Pawdot - Pet Adoption Platform**

**1. Introduction**

**1.1 Purpose**

**Pawdot is a web-based pet adoption platform that connects pet seekers with shelters and pet owners. The platform aims to facilitate the adoption process by providing a seamless user experience for browsing, selecting, and adopting pets.**

**1.2 Document Conventions**

* **The document follows IEEE SRS standards.**
* **Bold text is used for headings.**
* **Italic text is used for emphasis.**

**1.3 Intended Audience and Reading Suggestions**

**This document is intended for:**

* **Developers**
* **Designers**
* **Product Owners**
* **Testers**
* **Stakeholders**

**1.4 Product Scope**

**Pawdot aims to:**

* **Provide an intuitive platform for pet seekers.**
* **Enable pet shelters and owners to list pets for adoption.**
* **Facilitate communication between adopters and pet providers.**
* **Offer a dashboard for tracking adoption status.**

**1.5 References**

* **IEEE SRS standards**
* **Web accessibility guidelines**

**2. Overall Description**

**2.1 Product Perspective**

**Pawdot is a standalone web application that integrates with external APIs for location-based pet searches and authentication services.**

**2.2 Product Functions**

* **User Authentication: Sign up, login, and profile management.**
* **Pet Listings: Browse, search, and filter pets available for adoption.**
* **Adoption Requests: Users can request to adopt pets.**
* **Communication: Chat and message system between users and pet providers.**
* **Admin Dashboard: For managing pet listings and adoption requests.**

**2.3 User Characteristics**

* **Pet Seekers: Users looking to adopt pets.**
* **Pet Providers: Shelters and pet owners listing pets.**
* **Administrators: Manage platform functionality and user activity.**

**2.4 Constraints**

* **The platform must be mobile-friendly.**
* **Secure authentication using JWT.**
* **Compliance with GDPR and data protection regulations.**

**3. Specific Requirements**

**3.1 Functional Requirements**

**Customer’s Requirements**

* **Login**
  + **To log in to the system, users must provide:**
    - **Email Address: Must be a valid email address.**
    - **Password: Must have at least 8 characters; the text field must be in password mode.**
* **Create Account**
  + **Customers can register on the platform.**
  + **Required information for registration:**
    - **Email Address: Must be valid.**
    - **Password: Must have at least 8 characters, in password mode.**
    - **Contact Details:**
      * **Name**
      * **Current Location**
      * **Mobile**
      * **Mailing Address**
  + **Upon successful registration, this information will be stored in the database.**
* **Manage Profile**
  + **Customers can update their profile information when required.**
  + **All fields except the email address will be updatable.**
  + **Updated information will be saved to the database.**
* **Search for Pets**
  + **Customers can search for pets using filters like breed, age, size, and location.**
* **Adoption Requests**
  + **Users should be able to send adoption requests.**
* **Notifications and Updates**
  + **Customers will receive notifications for adoption request status and new pet listings.**
  + **Notifications will be sent via email or app notifications.**
* **Feedback and Suggestions**
  + **Customers can provide feedback on the adoption experience and suggest platform improvements.**

**Admin Requirements**

* **Manage Listings**
  + **Admins can approve, decline, or remove pet listings.**
* **Manage Adoption Requests**
  + **Admins can approve or decline adoption requests.**
* **Monitor User Activity**
  + **Admins can track user interactions and reports.**

**3.2 External Interface Requirements**

* **Software Interfaces**
  + **Integration with external pet databases and mapping services.**
  + **Compatibility with major browsers and mobile platforms.**
* **Communication Interfaces**
  + **The system will use email and push notifications for updates.**
  + **HTTP and HTTPS protocols will ensure secure data transmission.**

**4. Non-Functional Requirements**

**4.1 Security and Privacy Requirements**

* **Authentication**
  + **The platform will require secure authentication for all users via unique credentials.**
  + **Multi-factor authentication (MFA) will be implemented for enhanced security.**
* **Authorization**
  + **Role-based access control will ensure users only access permitted functionalities.**
  + **Sensitive data will be protected from unauthorized access through encryption.**
* **Privacy**
  + **User data will be handled in compliance with GDPR and other data protection laws.**
  + **No personal information will be shared without explicit user consent.**

**4.2 Performance Requirements**

* **The platform will handle a minimum of 10,000 concurrent users without performance degradation.**
* **Response time for user actions will not exceed 2 seconds under normal load.**

**4.3 Usability Requirements**

* **The platform will have an intuitive interface with easy navigation for all user types.**
* **Accessibility features will be implemented to support users with disabilities (e.g., screen readers, keyboard navigation).**

**4.4 Scalability Requirements**

* **The system will be designed to scale horizontally to accommodate future growth in users and features.**
* **New modules or features can be integrated without disrupting existing functionality.**

**4.5 Availability Requirements**

* **The platform will maintain 99.9% uptime, excluding scheduled maintenance.**
* **Automatic failover mechanisms will ensure minimal disruption in case of server failures.**

**4.6 Compatibility Requirements**

* **The platform will support major browsers such as Chrome, Firefox, Safari, and Edge.**
* **Mobile responsiveness will be ensured for devices of various screen sizes.**

**4.7 Maintenance Requirements**

* **Regular software updates will be deployed to address security vulnerabilities and improve functionality.**
* **A dedicated support team will handle bug reports and user issues within a maximum of 24 hours.**

**5. Appendices**

* **Glossary of terms**
* **API documentation**
* **Compliance guidelines**