Software Requirements Specification for Pet Adoption System

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1. Introduction

1.1 Purpose

This document specifies the software requirements for a Pet Adoption System. It is intended to be used by the development team to implement the system and by stakeholders to understand the system's functionality.

1.2 Scope

The Pet Adoption System will facilitate the process of adopting pets by connecting potential adopters with available pets, managing the adoption process, and assisting staff in pet care management.

1.3 Definitions, Acronyms, and Abbreviations

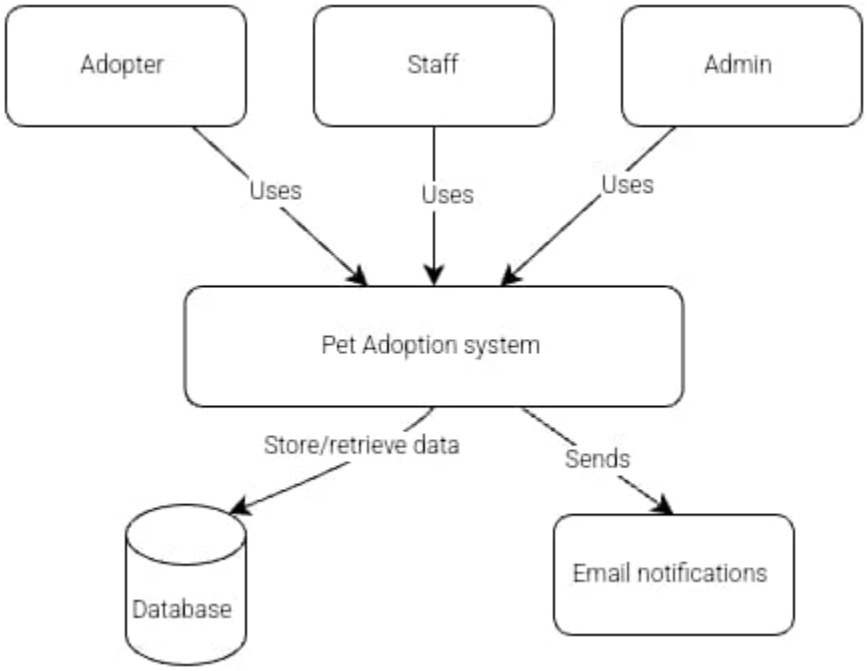
- SRS: Software Requirements Specification
- Admin: System administrator
- UI: User Interface

2. Overall Description

2.1 System Perspective

The Pet Adoption System is a standalone web-based application that will be accessed by various users through web browsers. It will interact with a database to store and retrieve information about pets, users, and adoption processes.

System Context Diagram:



2.2 System Functions

- User authentication and authorization
- Pet browsing and searching
- Adoption application submission and tracking
- Pet profile management
- Adoption request processing
- Report generation
- Visit scheduling and recording
- Donor rating

2.3 User Characteristics

1. Admin:

1. Technically proficient
2. Responsible for system management and oversight

2. Adopter:

1. General public with varying levels of technical proficiency
2. Interested in adopting pets

3. Staff:

1. Trained in using the system.
2. Responsible for managing pets and adoption processes.

2.4 Constraints

- The system must comply with local animal welfare regulations.
- The system must be accessible through standard web browsers.
- The system must protect user data in compliance with data protection laws.

2.5 Assumptions and Dependencies

- Users have access to devices with internet connectivity.
- The system assumes a stable internet connection for real-time updates.
- The system depends on a reliable hosting service for 24/7 availability.

3. System Features

3.1 User Authentication

- Description: The system shall allow users to create accounts, log in, and manage their profiles.
- Inputs: Username, password, user role, personal information.
- Process: Verify credentials, manage sessions.
- Outputs: Authentication token, success/failure messages.

3.2 Pet Browsing and Searching

- Description: Users can view available pets and search using various criteria.
- Inputs: Search parameters (species, breed, age).
- Process: Query database based on search criteria.
- Outputs: List of matching pets with details.

3.3 Adoption Application

- Description: Adopters can submit applications for pets.
- Inputs: Adopter information, pet selection, application form data.
- Process: Save application, notify staff.
- Outputs: Application confirmation, application ID.

3.4 Application Review and Processing

- Description: Staff can review and process adoption applications.
- Inputs: Application ID, review notes, decision.

- Process: Update application status, notify adopter.
- Outputs: Updated application status, notification to adopter.

3.5 Pet Profile Management

- Description: Staff can add, update, and manage pet profiles.
- Inputs: Pet details (species, breed, health status).
- Process: Create/update database records.
- Outputs: Confirmation of changes, updated pet listings.

3.6 Report Generation

- Description: Admins can generate various reports on system activities.
- Inputs: Report type, date range.
- Process: Query database, compile data.
- Outputs: Formatted report.

4. External Interface Requirements

4.1 User Interfaces

- Web-based interface accessible via standard browsers.
- Responsive design for desktop and mobile devices.
- Intuitive navigation and form layouts.

4.2 Hardware Interfaces

- No specific hardware interfaces required beyond standard computing devices.

4.3 Software Interfaces

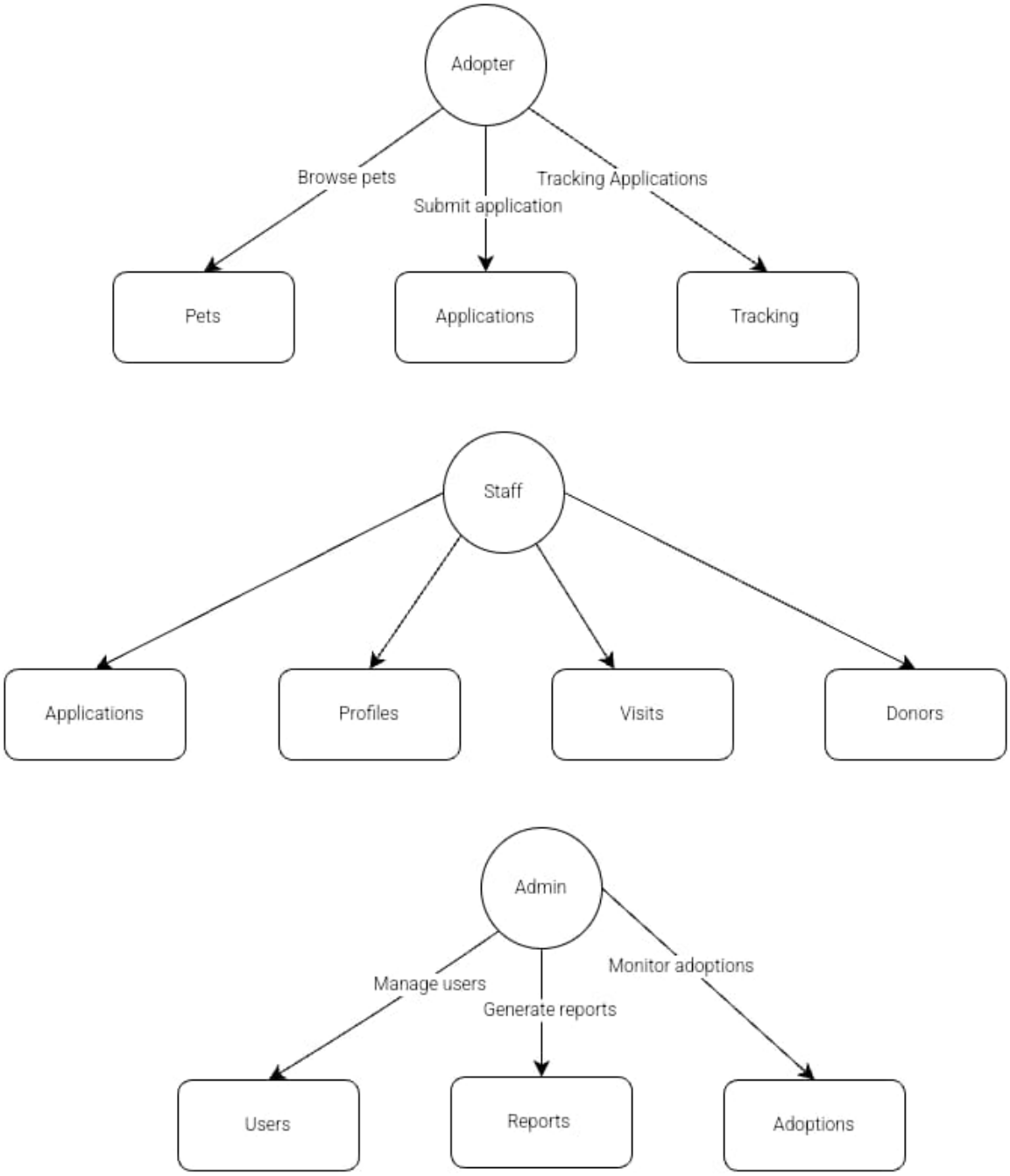
- Database Management System for data storage.
- Email server for sending notifications.

4.4 Communications Interfaces

- HTTPS for secure web communications.
- SMTP for email notifications.

5. System Models

5.1 Main Use Case Diagram



6. Non-Functional Requirements

6.1 Performance

- The system shall support up to 1000 concurrent users.
- Page load times shall not exceed 3 seconds under normal conditions.

6.2 Security

- All communications shall be encrypted using HTTPS.
- Passwords must be hashed and salted before storage.
- User sessions shall timeout after 30 minutes of inactivity.

6.3 Usability

- The UI shall be navigable using keyboard-only input.
- The system shall be compatible with screen readers.
- Error messages shall be clear and actionable.

6.4 Reliability

- The system shall have an uptime of 99.9%.
- Data backups shall be performed daily.

6.5 Maintainability

- The system shall use a modular architecture to facilitate updates
- Code shall be documented following industry standard practices

6.6 Scalability

- The system shall be designed to handle a 100% increase in user base within 2 years without significant performance degradation.

7. Other Requirements

7.1 Legal and Regulatory Requirements

- The system must comply with local animal welfare laws.
- User data handling must comply with relevant data protection regulations.

7.2 Data Retention and Archiving

- Adoption records shall be retained for 7 years.
- Inactive user accounts shall be archived after 2 years of inactivity.

8. Appendices

8.1 Glossary

- Pet: Any animal available for adoption through the system.
- Adoption: The process of legally transferring ownership of a pet to an adopter.
- Donor: An individual who contributes to the pet adoption organization.