

# Specification for Animal Adoption Application

## 1. System Users

### 1. Administrator

- Enters data about the association.
- Registers the first volunteer.

### 2. Volunteer - Moderator

- Adds new posts about animals.
- Modifies and updates existing posts.
- Promotes regular members to volunteers.
- Approves registration requests and posts.
- Can participate in voting for new volunteers.
- Communicates with the association and sees all messages.
- Manages donations (views all payments and can import payments from mBanking XML files).

### 3. Registered User

- Sends post requests (must be approved by a volunteer).
- Sends private messages.
- Rates and comments on posts.
- Can send adoption requests with information about the animal care period.
- Can rate animals after adoption or temporary care (aggressiveness, ease of taming, 5 stars + text).

### 4. Unregistered User

- Can view approved content in read-only mode.
- Can send a registration request.

## 2. Functionality Specifications

### 1. Animal Post

Animal Data:

- Animal type (dog, cat).
- Breed (optional).
- Color.

- Condition.
- Estimated year of birth.
- Location where found/currently located.
- Health condition (if possible to determine).
- Images and videos (optional).

Data Visibility:

- Unregistered users do not see the address.

## 2. User Management

- Volunteers can promote regular members to volunteers.
- Voting for new volunteers (all volunteers vote yes/no, the application only counts votes).
- Unregistered users can send registration requests.
- Registered users can send post requests (must be approved by a volunteer).
- Registered users can send private messages and rate.
- Blacklist for users who send an excessive number of adoption requests.

## 3. Post Interaction

- Posts can be modified (directly by volunteers, via request for users).
- Posts can be commented on and liked.
- Adoption requests with information about the animal care period.
- Rating animals after adoption or temporary care (aggressiveness, ease of taming, 5 stars + text).

## 4. Communication

- Correspondence with the association visible to all volunteers.

## 5. Financial Tracking

- Tracking donations.
- Each payment should be visible (the user who made the payment doesn't have to be visible).
- Donations can be general or for a specific animal.
- Importing payments from mBanking (XML format).
- Account number - 18 digits.

## 3. Data Security

- Data encryption should be implemented to protect sensitive information.

## 4. Processes and Workflows

### 1. Adding a Post

- Volunteer enters animal data and adds the post.

- The post can contain images and videos.
- Data is stored in the database.

## 2. Registration Request

- Unregistered user sends a request.
- Volunteer approves or rejects the request.

## 3. Appointing a New Volunteer

- Volunteer proposes a new volunteer.
- All volunteers vote yes/no.
- The application counts votes and displays the result.

## 4. Managing Donations

- Users can donate for general needs or a specific animal.
- Payments are recorded in the system.
- Volunteers can import payments from mBanking XML files.

## 5. Animal Adoption

- Users send adoption requests with information about the care period.
- Volunteers review and approve requests.
- Users rate the animal after adoption.

# 5. Non-Functional Requirements

## 1. Performance

- The system should support at least 1000 concurrent users.
- Page load time should not exceed 3 seconds.

## 2. Scalability

- The system should be able to handle a 50% increase in user base without performance degradation.

## 3. Availability

- The system should have 99.9% uptime.

## 4. Usability

- The user interface should be intuitive and accessible on both desktop and mobile devices.
- The system should support multiple languages.

## 5. Security

- All user passwords must be hashed and salted.
- Implement two-factor authentication for volunteer accounts.

## 6. Compatibility

- The application should be compatible with the latest versions of major web browsers (Chrome, Firefox, Safari, Edge).

## 7. Maintainability

- The codebase should follow clean code principles and be well-documented.

## 8. Backup and Recovery

- Daily backups of all data should be performed.
- A disaster recovery plan should be in place with a recovery time objective (RTO) of 4 hours.

# 6. Improvements

## 1. Search and Filter Functionality

- Implement advanced search and filter options for animals based on various criteria.

## 2. Notification System

- Add email and in-app notifications for important events (e.g., adoption request updates, new messages).

## 3. Reporting

- Implement a reporting system for volunteers to generate statistics on adoptions, donations, and user engagement.

## 4. Integration with Social Media

- Allow sharing of animal posts on social media platforms to increase visibility.

## 5. Mobile App

- Develop a mobile application for easier access on smartphones.

## 6. Volunteer Schedule Management

- Implement a calendar system for volunteers to manage their schedules and tasks.