**SOFTWARE**

**REQUIREMENTS SPECIFICATION**

**For**

# Pet Adoption System

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## 1. Introduction

### 1.1 Purpose

The primary objective of this project is to develop a user-friendly System for managing pet adoptions. The document gives the detailed description of the both functional and non-functional requirements proposed by the client. This System aims to streamline the adoption process for both shelters and potential adopters. The main purpose of this project is to maintain Pets Adoption system using computers and to provide different reports. This project describes the hardware and software interface requirements using ER diagrams and UML diagrams.

### 1.2 Document Conventions

* Entire document should be justified.
* Convention for Main title

Font face: Times New Roman



Font style: Bold

Font Size: 14

* Convention for Sub title

Font face: Times New Roman



Font style: Bold

Font Size: 12

* Convention for body

Font face: Times New Roman



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### 1.3 Scope of Development Project

Project Scope : Pet Adoption System

The Pet adoption and Sales System is a comprehensive platform aimed at facilitating the

Adoption and purchase of pets , promoting responsible pet ownership and streamlining the

Processes for both adoption centre’s and the general public . The system will serve as a centralized

Hub for connection prospective pet owner with reputable adoption centers and individuals looking

To rehome their pets.

Facilitates the adoption process by providing a user-friendly interface for adoption centers

To showcase available pets.

Enable the public to easily browse , search, and express interest in adopting pets.

Integrate a secure online marketplace for individuals and adoption centers to sell pets responsible

### 1.4 Definitions, Acronyms and Abbreviations

JAVA -> platform independence

SQL-> Structured query Language

ER-> Entity Relationship

UML -> Unified Modeling Language

IDE-> Integrated Development Environment

SRS-> Software Requirement Specification

### 1.5 References

* Research Papers

https://www.researchgate.net/publication/373627974\_PET\_ADOPTION\_SYSTEM\_USING\_WEB\_TECHNOLOGY

<https://www.irjet.net/archives/V10/i2/IRJET-V10I2109.pdf>

<https://www.researchgate.net/publication/337794259_JSP-Based_Pet_Adoption_System>

https://www.irjet.net/archives/V9/i4/IRJET-V9I4298.pdf

## 2. Overall Descriptions

### 2.1 Product Perspective

Use Case Diagram of Pet Adoption System

Student

Staff

search\_book

verify\_member

check\_limit

check\_availability

calculate\_fine

User

View\_logs

issue\_book

>>

<<

include

return\_book

renew\_book

<<

include

>>

<<

include

>>

<<

extend

>>

*searches*

*requests*

*request\_renew*

*give\_book*

add\_book

Librarian

*monitors\_request*

*take\_book*

*monitors\_renew*

update\_record

*adds\_new\_book*

*perform\_transaction\_updation*

1

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*performs*

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**User Profiles :** Individuals can create profiles , manage pet listing and track their adoption or sales

History.

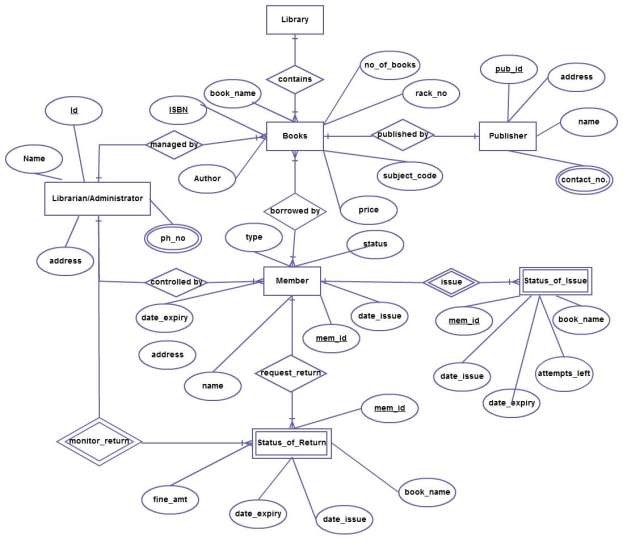
**Search and filters**: User can search for pets based on various criteria such as species , bread,location

And age.

**Application Submission**: Allow users to submit adoption application with personal information .

### 2.2 Product Function

Entity Relationship Diagram of pet Adoption System



The Pet Adoption System is an online web based platform designed to streamline and simplify the processes related to pet adoption, sales and user interaction. This aims to connect the adoption center and user to adoption of pet .this aims to connect adoption centers , user interested in adopting pet ,and individual looking to sell pets in a centralized and user friendly environment.

### 2.3 User Classes and Characteristics

The Pet Adoption System caters to various user classes, each with distinct characteristics and roles within the platform. Understanding the needs and behaviors of these user classes is crucial for designing a system that meets their specific requirements. Below are the key user classes and their characteristics:

**Adopters**:

**Characteristics**:

Prospective pet owners looking to adopt a pet.

Diverse backgrounds and preferences in terms of pet species, breeds, and characteristics.

Interested in the well-being and health of the pets available for adoption.

Seek a user-friendly interface for browsing and searching available pets.

**Roles**:

Create user profiles to track adoption history.

Browse and search for pets based on various criteria.

Submit adoption applications with personal information and preferences.

Communicate with adoption centers to inquire about pets and the adoption process.

**Adoption Centers**:

**Characteristics:**

Organizations or entities responsible for facilitating pet adoptions.

Deal with diverse pet species and breeds.

Verify and ensure the well-being of pets before listing them for adoption.

Manage adoption applications and conduct screening processes for potential adopters

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**Roles:**

Create and manage profiles to showcase available pets.

Verify and update pet information, including health status and adoption fees.

Review and process adoption applications.

Communicate with adopters to facilitate the adoption process.

**Public Sellers:**

**Characteristics:**

Individuals looking to sell pets directly to other users.

Responsible pet owners who want to find suitable homes for their pets.

Interested in a secure and straightforward process for selling pets.

**Roles:**

Create user seller profiles to list pets for sale.

Provide detailed information about pets, including images and descriptions.

Set prices and manage the availability status of pets.

Communicate with potential buyers interested in purchasing pets.

### 2.4 Operating Environment

The product will be operating in windows environment. The Pet Adoption System is a website and shall operate in all famous browsers, for a model we are taking Microsoft Internet Explorer,Google Chrome,and Mozilla Firefox.Also it will be compatible with the IE 6.0. Most of the features will be compatible with the Mozilla Firefox & Opera 7.0 or higher version. The only requirement to use this online product would be the internet connection.

The hardware configuration include Hard Disk: 40 GB, Monitor: 15” Color monitor, Keyboard: 122 keys. The basic input devices required are keyboard, mouse and output devices are monitor, printer etc.

### 2.5 Assumptions and Dependencies

The assumptions are:-

* The coding should be error free
* The system should be user-friendly so that it is easy to use for the users
* The information of all users, Pets and Adoption must be stored in a database that is accessible by the website
* The system should have more storage capacity and provide fast access to the database
* The system should provide search facility and support quick transactions
* The Pet adoption System is running 24 hours a day
* Users may access from any computer that has Internet browsing capabilities and an Internet connection
* Users must have their correct usernames and passwords to enter into their online accounts and do actions

The dependencies are:-

* The specific hardware and software due to which the product will be run
* On the basis of listing requirements and specification the project will be developed and run
* The end users (admin) should have proper understanding of the product
* The system should have the general report stored
* The information of all the users must be stored in a database that is accessible by the Pet Adoption System
* Any update regarding the adoption of Pets is to be recorded to the database and the data entered should be correct

### 2.6 Requirement

Software Configuration:-

This software package is developed using java as front end which is supported by sun micro system. Microsoft SQL Server as the back end to store the database. Operating System: Windows NT, windows 98, Windows XP

Language: Java Runtime Environment, JavaFX

Database: MS SQL Server (back end)

Hardware Configuration:-

Processor: Pentium(R)Dual-core CPU

Hard Disk: 40GB

RAM: 256 MB or more

### 2.7 Data Requirement

The inputs consist of the query to the database and the output consists of the solutions for the query. The output also includes the user receiving the details of their accounts. In this project the inputs will be the queries as fired by the users like create an account, selecting pets and putting into account. Now the output will be visible when the user requests the server to get details of their account in the form of time, date and Adopted pets are currently in the account.

## 3. External Interface Requirement

### 3.1 GUI

The Pet Adoption System boasts an intuitive graphical interface designed to accommodate both users and administrators. Adopters and sellers can effortlessly navigate the system, viewing available pets, submitting applications, and managing their profiles. Adoption centers and administrators, on the other hand, have access to tools for efficiently managing pet listings, verifying information, and handling adoption applications. The graphical user interface (GUI) provides a customizable experience for administrators, allowing them to perform tasks like creating, updating, and viewing pet details. The system supports quick reporting features, allowing users to view adoption and sales statistics over specific time frames. The GUI also facilitates stock verification and search functionalities based on diverse criteria. The design is uniform across all modules, ensuring a standard and straightforward user experience. The login interface prompts users to register if they are not yet members and provides a secure login/logout module. Additionally, features like pet search, categories view for different species and breeds, and a control panel for adoption centers are seamlessly integrated into the graphical user interface, adhering to simplicity and standardization defined by the system.

Login Interface:-

In case the user is not yet registered, he can enter the details and register to create his account. Once his account is created he can ‘Login’ which asks the user to type his username and password. If the user entered either his username or password incorrectly then an error message appears.

Search:-

The User or Adoption Center can enter the type of Pets he is looking for and the Species he is interested in,then he can search for the required pet by entering Pet Type.

Categories View:-

Categories view shows the categories of Pet available and provides ability to the Adoption Center to add/edit or delete category from the list.

Adoption Center’s Control Panel:-

This control panel will allow Adoption Center to add/remove users; add, edit, or remove a resource. And manage lending options.

## 4. System Features

The Pet Adoption System encompasses a comprehensive set of features to facilitate a seamless and user-friendly experience for all stakeholders. Adopters benefit from an intuitive interface for effortless browsing and searching of available pets, streamlined application submission processes, and effective communication tools with adoption centers. Adoption centers can efficiently manage pet listings, verify and update pet information, and process adoption applications through dedicated tools. Public and User Sellers have access to user-friendly profiles for listing pets, robust pricing and availability management features, and communication platforms to engage with potential adopters and buyers. The system also provides administrators with robust user account management tools, the ability to verify adoption center profiles, and features for dispute resolution. Security measures, educational resources, mobile responsiveness, and future enhancement capabilities contribute to the overall robustness of the system, ensuring a reliable and efficient platform for pet adoption and sales.

## 5. Other Non-functional Requirements

### 5.1 Performance Requirement

The Pet Adoption System must adhere to stringent performance requirements to ensure a seamless and efficient user experience. Swift response times during user interactions, such as browsing pets, submitting applications, and processing transactions, are imperative to enhance user satisfaction. The system should be capable of handling concurrent user activities, ensuring optimal performance even during peak usage periods. Efficient data retrieval and storage mechanisms must be implemented to support quick access to pet information and user profiles. Additionally, regular system maintenance, including database optimization and server updates, is essential to sustain high performance levels. The Pet Adoption System must exhibit reliability, responsiveness, and scalability, meeting the performance demands of both adopters and adoption centers, thereby fostering a positive and efficient platform for pet adoption and sales.

### 5.2 Safety Requirement

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup so that the database is not lost. Proper UPS/inverter facility should be there in case of power supply failure.

### 5.3 Security Requirement

* System will use secured database
* Normal users can just read information but they cannot edit or modify anything except their personal and some other information.
* System will have different types of users and every user has access constraints
* Proper user authentication should be provided  No one should be able to hack users’ password
* There should be separate accounts for admin and members such that no member can access the database and only admin has the rights to update the database.

### 5.4 Requirement attributes

* There may be multiple admins creating the project, all of them will have the right to create changes to the system. But the members or other users cannot do changes
* The project should be open source
* The Quality of the database is maintained in such a way so that it can be very user friendly to all the users of the database
* The user be able to easily download and install the system

### 5.5 Business Rules

A business rule is anything that captures and implements business policies and practices. A rule can enforce business policy, make a decision, or infer new data from existing data.This includes the rules and regulations that the System users should abide by. This includes the cost of the project and the discount offers provided. The users should avoid illegal rules and protocols. Neither admin nor member should cross the rules and regulations.

### 5.6 User Requirement

The users of the system are members and Adoption Center who act as administrator to maintain the system. The members are assumed to have basic knowledge of the computers and

internet browsing. The administrators of the system should have more knowledge of the internals

of the system and is able to rectify the small problems that may arise due to disk crashes, power

failures and other catastrophes to maintain the system. The proper user interface, user manual,

online help and the guide to install and maintain the system must be sufficient to educate the

users on how to use the system without any problems.

The admin provides certain facilities to the users in the form of:-  Backup and Recovery

* Forgot Password
* Data migration i.e. whenever user registers for the first time then the data is stored in the server
* Data replication i.e. if the data is lost in one branch, it is still stored with the server
* Auto Recovery i.e. frequently auto saving the information
* Maintaining files i.e. File Organization
* The server must be maintained regularly and it has to be updated from time to time

## 6. Other Requirements

### 6.1 Data and Category Requirement

There are different categories of users namely Pets ,User , Adoption Center , Public Seller etc. Depending upon the category of user the access rights are decided. It means if the user is an administrator then he can be able to modify the data, delete, append etc. All other users except the Adoption Center and Public Seller only have the rights to retrieve the information about database. Similarly there will be different categories of Pets available. According to the categories of Pets their relevant data should be displayed. The categories and the data related to each category should be coded in the particular format.

### 6.2 Appendix

A: Admin, Abbreviation, Acronym, Assumptions, Adoption Center; PE: pets; C: Class, Client, Conventions; D: Data requirement, Dependencies; G: GUI; K: Key; S: Public Seller ; M:

Member; N: Non-functional Requirement; O: Operating environment; P:

Performance,Perspective,Purpose; R: Requirement, Requirement attributes; S: Safety, Scope, Security, System features; U: User, User class and characteristics, User requirement;

### 6.3 Glossary

The following are the list of conventions and acronyms used in this document and the project as well:

* Administrator: A login id representing a user with user administration privileges to the software
* User: A general login id assigned to most users
* Client: Intended users for the software
* SQL: Structured Query Language; used to retrieve information from a database
* SQL Server: A server used to store data in an organized format
* Layer: Represents a section of the project
* User Interface Layer: The section of the assignment referring to what the user interacts with directly
* Application Logic Layer: The section of the assignment referring to the Web Server. This is where all computations are completed
* Data Storage Layer: The section of the assignment referring to where all data is recorded  Use Case: A broad level diagram of the project showing a basic overview
* Class diagram: It is a type of static structure diagram that describes the structure of a system by showing the system’s cases, their attributes, and the relationships between the classes
* Interface: Something used to communicate across different mediums  Unique Key: Used to differentiate entries in a database

### 6.4 Class Diagram

