

ACKNOWLEDGEMENT

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Regards

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ABSTRACT

Currently, there is a notable absence of comprehensive online platforms for managing pet adoption and sales in Nepal. This project, Pet Link, introduces a user-friendly website enabling people to effortlessly adopt and sell pets. Users can explore available pets, select their preferred ones, and initiate the adoption process seamlessly. Additionally, users can list their own pets for sale, providing a platform for responsible pet trading. The project is structured with three core modules: admin, user, and adoption management.

The **Admin Module** allows administrators to oversee the overall system, managing user accounts and pet listings to ensure smooth operation and maintain system integrity. The **User Module** provides an interface for individuals to browse, adopt, and sell pets, complete with detailed profiles and search functionalities. The **Purchase/Sell Management Module** handles the logistics of the adoption and sales processes, ensuring each transaction is secure and transparent.

This initiative aims to enhance the pet adoption and sales experience in Nepal, making it more accessible to the public. The front end of this system is developed using HTML, CSS, and JavaScript, providing a responsive and interactive user experience. PHP is employed as the server-side language, ensuring efficient processing and dynamic content generation, while MySQL is used for robust and reliable database management.

The report elaborates on the development process, including system architecture, database design, and the challenges faced during implementation. It also evaluates the platform's performance, usability, and scalability through user feedback and technical testing.

Pet Link aspires to revolutionize the pet adoption and sales landscape in Nepal, promoting responsible pet ownership and enhancing the pet community's connectivity and support.

Keywords: *CSS, DFD, HTML, JavaScript, MySQL, PHP.*

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LIST OF ABBREVIATIONS

CRUD	Create Read Update Delete
CSS	Cascading Style Sheets
DFD	Data Flow Diagram
ER	Entity Relationship
HTML	Hyper Text Markup Language
PHP	Hypertext Preprocessor
SQL	Structured Query Language

CHAPTER 1

PROJECT INTRODUCTION

1.1. Introduction

Pet Link is a groundbreaking initiative aimed at bridging the gap in the availability of comprehensive online platforms for pets shop in Nepal. This project introduces a user-friendly website that empowers individuals to effortlessly adopt pets. Users can explore available pets, select their preferred ones, and seamlessly initiate the adoption process.

The primary goal of this initiative is to revolutionize the pet adoption process in Nepal, making it more accessible and efficient for the public. The front end of this system is developed using HTML, CSS, and JavaScript, while PHP is employed as the server-side language and MySQL for the database.

1.2. Problem statements

In Nepal, the process of adopting pets is currently hindered by a series of significant challenges that render it inconvenient and inefficient for potential pet owners.

Firstly, the adoption process is notoriously slow and complicated, often involving lengthy waiting times and cumbersome procedures. This inefficiency discourages many individuals who are eager to adopt pets quickly and seamlessly, thereby reducing the number of successful adoptions.

Secondly, the existing methods fail to provide sufficient and accessible information about the pets. Prospective adopters are often left without crucial details regarding a pet's health, behavior, and background. This lack of information can lead to uninformed decisions, resulting in mismatches between pets and their new owners.

Lastly, current systems do not cater to individuals who prefer purchasing pets over adoption. There is a noticeable absence of platforms that facilitate the sale and purchase of pets, limiting the options available to potential pet owners.

Addressing these issues, the Pet Link project aims to streamline the adoption process, ensure comprehensive and easily accessible pet information, and introduce a platform that supports both the

adoption and purchase of pets. This initiative strives to make pet acquisition in Nepal more efficient, informative, and user-friendly, ultimately increasing the number of pets that find loving homes.

1.3. Objectives

- To connect users with pets and facilitate the adoption of animals.
- To create a user-friendly and responsive platform where users can easily buy and sell pets, fostering connections within the community.
- To enrich the pet care experience by providing detailed manuals and curated kits available for purchase.

1.4 Scope and Limitations

1.4.1. Scope

- The system is accessible online 24/7, allowing users to browse and apply for PET LINKs at any time.
- An online adoption system streamlines the adoption process, reducing the time and effort required for completion.
- Each pet listing includes images and videos to provide potential adopters or buyers with a clear understanding of the pet's appearance and behavior, aiding informed decision-making.

1.4.2. Limitation

- Adoption applications cannot be edited once submitted, ensuring the integrity and finality of each application.
- Online payment options are currently unavailable, requiring transactions to be completed through alternative means.

1.5 Report organization

The main report is structured into five chapters. Following this introductory chapter,

Chapter 2 presents the Background Study and Literature Review conducted prior to and during the project inception.

Chapter 3: Details the System Analysis and Design, encompassing:

System Analysis: Including Requirement Analysis, Feasibility Analysis, Data Modeling, and Process Modeling.

System Design: Comprising Architectural Design, Database Schema Design, Interface Design, and Physical DFD.

Chapter 4 provides an overview of the testing phase, offering a brief introduction to the testing process and listing all tests conducted up to the current project phase.

Finally, Chapter 5 concludes the report with lessons learned, project outcomes, and Future Recommendations.

CHAPTER 2

BACKGROUND STUDY AND LITERATURE REVIEW

2.1. Background study

While PET LINK processes worldwide have seen significant improvements with the advent of digital platforms, Nepal faces unique challenges in providing convenient access to PET LINK services. The traditional approach to adopting pets often involves tedious and time-consuming procedures, such as multiple visits to shelters and extensive paperwork. This inconvenience has not kept pace with the expectations of modern pet adopters. To address this gap, the PET LINK is introduced. It aims to modernize and simplify the PET LINK process in Nepal, bringing it in line with the digital age.

2.2. Literature review

The pet industry in Nepal is experiencing significant growth, offering a range of services and products for pet owners. Dog hostels, such as those highlighted by Premium Pet Store in Nepal, provide essential boarding and grooming services, indicating a shift towards more comprehensive pet care ([1]). Social media platforms, particularly Facebook, have become crucial in connecting pet owners with services, promoting community support and awareness about pet care ([2]). Additionally, comprehensive service providers like Nepal Pet Service and Pet Mama Nepal offer grooming, veterinary care, and boarding, setting high standards for quality and customer satisfaction in the industry ([3]).

Nepal provide convenient access to pet products, reflecting broader digitalization trends ([4]). The availability of structured project proposal formats also aids in the development and implementation of effective pet care projects ([5])

CHAPTER 3

SYSTEM ANALYSIS AND DESIGN

3.1. System analysis

During analysis, data were collected on the available files, decision points and transactions handled by the present system. Various operations performed by currently existing systems and their relationships within and outside the system were studied in detail. Interviews, on-site observation and questionnaire are the tools used for system analysis.

3.1.1. Software Development Life Cycle

In the PETS LINK, the Waterfall Model was used as this system had well-known requirements and well-understood technology.

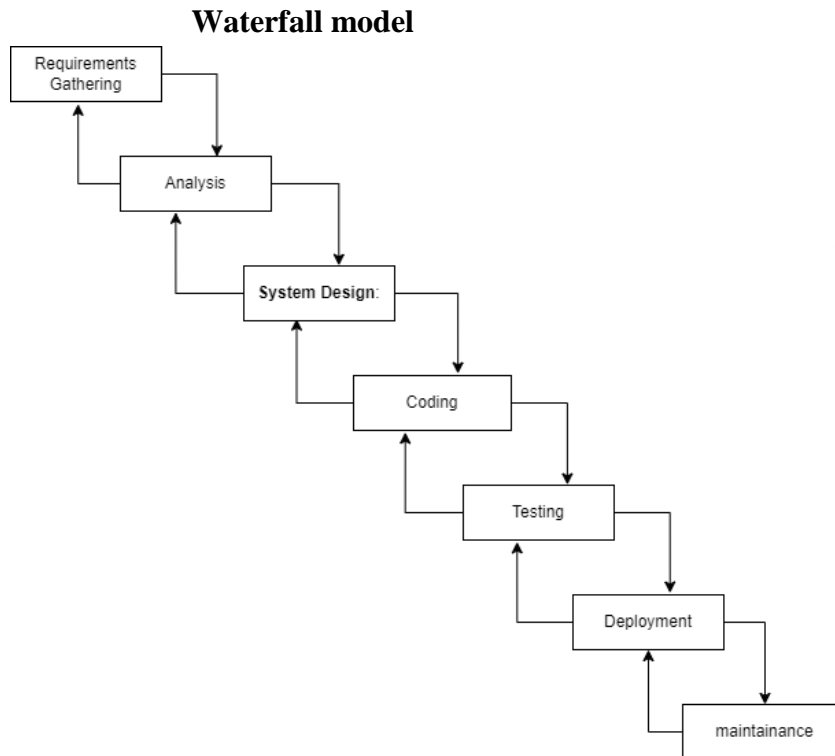


Figure 3.1 Waterfall Model

Requirement Analysis: During this phase, we collected various functional and non-functional requirements by doing researches of the domain as well as studying previously existing systems. We filtered through the requirements by analyzing the requirements and discarded those requirements that we felt would not suit in our system.

System Design: The software design based on approved documentation defines the software and hardware requirements for the software as well as defines the overall system architecture. We studied our requirement documentation and designed the system architecture. We performed activities like Database Schema Design, UI design, DFD, ERD, and many more for this phase of SDLC.

Implementation (Coding): In the implementation phase, the actual coding of the "Pet Link" system takes place based on the design specifications. This involves developing CRUD operations for managing pet records, coding user interfaces with HTML, CSS, and JavaScript, and implementing server-side logic using PHP to handle data processing and business rules.

Testing: After coding, the system undergoes rigorous testing to identify and fix defects. This includes unit testing individual components, integration testing combined modules, system testing the entire application, and user acceptance testing (UAT) to ensure the system meets user requirements and expectations.

Deployment: Once testing is complete and the system is stable, it is deployed to the production environment. This phase involves installing software components, configuring system settings, ensuring security measures, and deploying the "Pet Link" system to a suitable hosting environment.

3.2. Requirement analysis

Software requirement means requirement that is needed by software to increase quality of software product. For this phase, we researched through a lot of websites and applications that are similar to our concept in order to collect requirements. We collected requirements and decided which ones to embed in the system and which to discard.

3.2.1. Functional requirement

The functional requirements for the "Pet Link" project, specifically for the pet purchase and sale functionalities, System encompass several crucial processes, including user module and admin module.

User Module

- **User Registration and Login** allows users to register, log in, validate and manage their credentials, and secure their sessions. Second,
- **Add Pet for Sale** enables users to navigate to the "Add Pet" page, enter pet details such as breed, age, and price, submit listings, and manage these listings. Third,
- **View and Search Pets** lets users browse available pets view detailed information for selected pets such as name, age, type, price, Image, video and other detail.
- **Purchase Pet** facilitates the selection and purchase of pets through a secure payment process, confirms the purchase, updates pet status, and provides purchase confirmation details.
- **View Sale and Purchase Records** allows users to navigate to their history page, view past sales and purchases, maintain transaction records, and access detailed transaction history.

Admin Module

- **Manage Users**, admins edit existing ones, delete user accounts, and view user details.
- **Manage Pets** function allows admins to edit, delete pet listings, and verify and approve user-submitted listings.
- **Manage Purchase Listings** enables admins to view purchase records, edit purchase details, delete records, and maintain a transaction history for auditing purposes.
- **View Reports** provides the capability to generate sales reports, view user activity reports, access purchase history reports, and analyze system performance metrics.

Database Module

- **User Data Management** involves storing user registration details, managing login credentials, maintaining user session data, and securely handling user information.
- **Pet Data Management** includes storing pet details, updating pet listing information, managing pet availability status, and ensuring data consistency and accuracy.
- **Transaction Data Management** focuses on recording sale and purchase transactions, maintaining a comprehensive transaction history, and supporting auditing and reporting requirements.
- **System Data Management** covers backup and restoration of system data, optimizing database performance, ensuring data security and integrity, and efficiently handling data migration and updates.

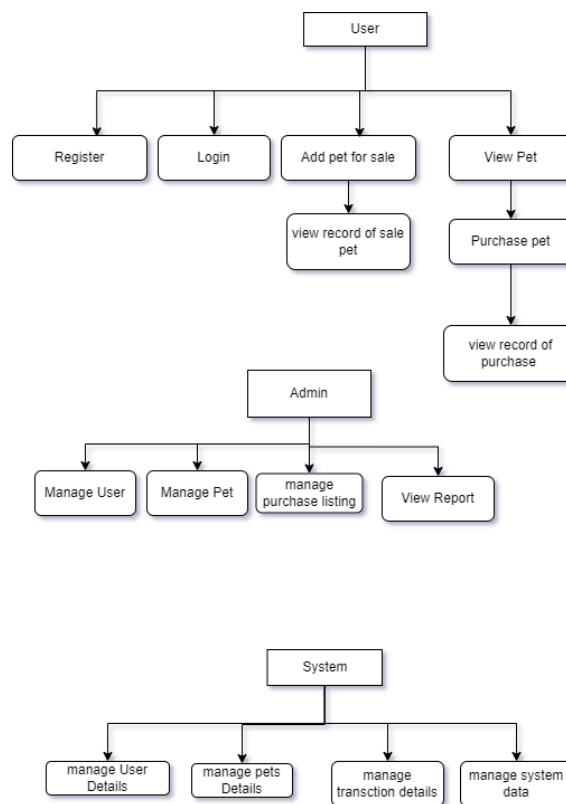


Figure 3.2 Functional Requirement

Use Case Diagram

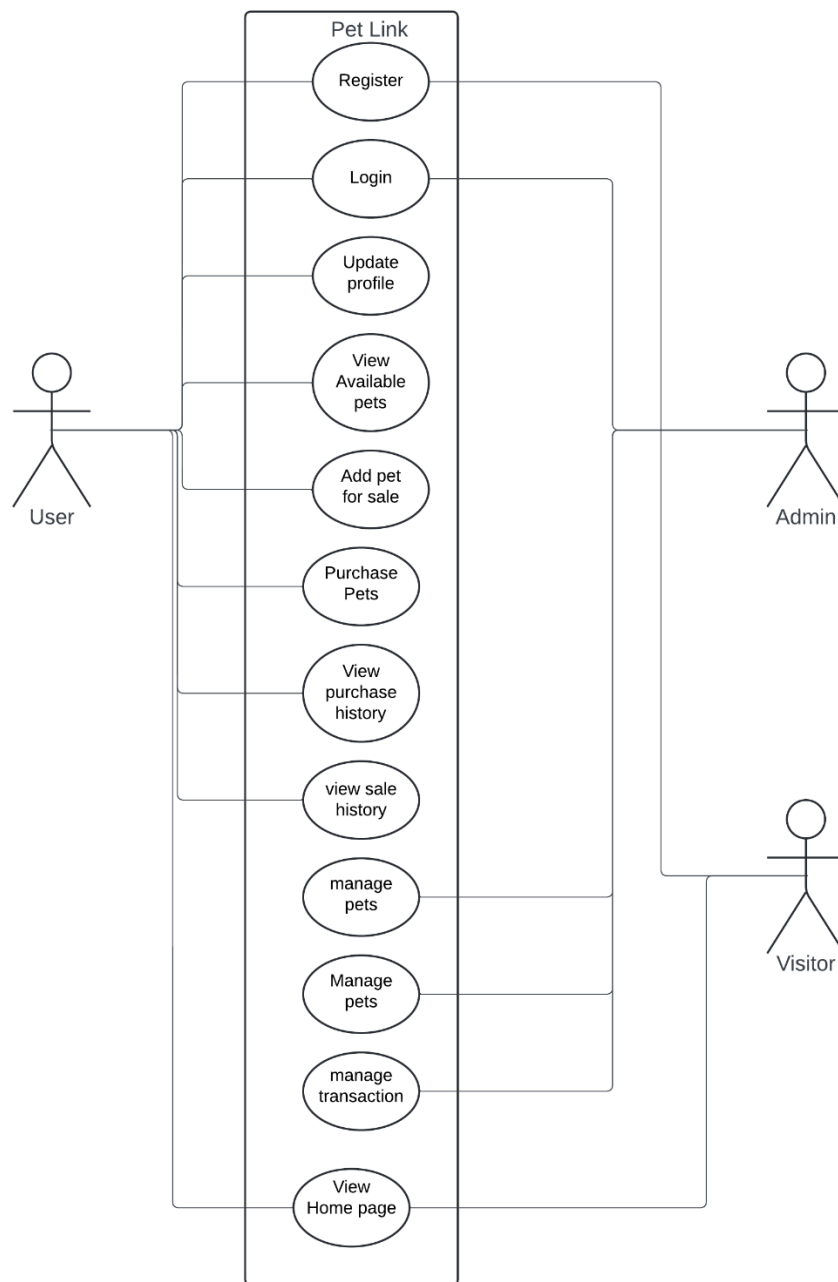


Figure 3.3 Use Case Diagram

System flow chart

For Admin

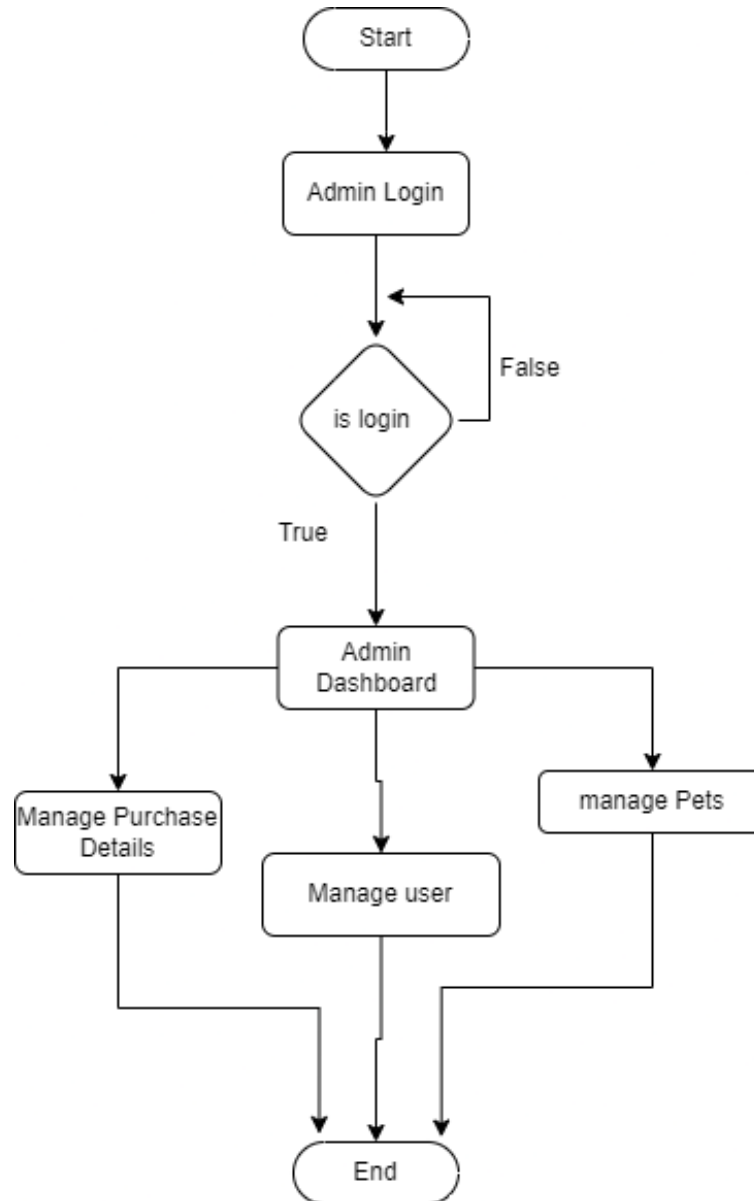


Figure 3.4 Flow Chart For Admin

For User

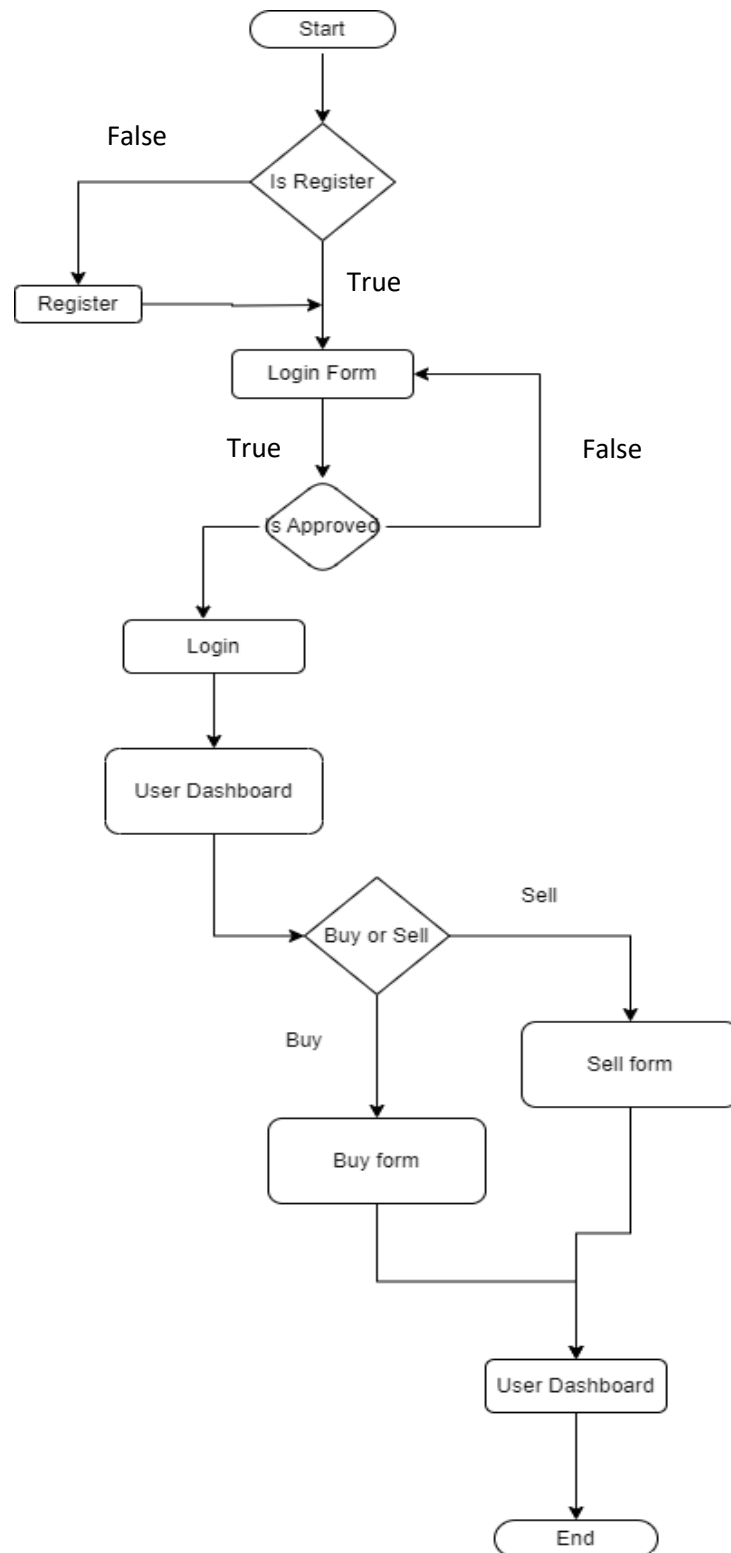


Figure 3.5 Flow Chart for User

The Pet Link and Management System involves two main actors: User and Admin. Users start by accessing the system and navigating to the dashboard, where they can either register or log in. Upon successful registration or login, users can view available pets and check their availability. If a desired pet is available, they can proceed to purchase the pet or add their own pets for sale. Users can also view their sale and purchase history. Admins, after logging in, can manage user details, pet profiles, and purchase listings by adding, editing, or deleting them. Additionally, admins can generate reports to analyze sales and user activity. The system streamlines the pet sale and purchase process, allowing users to manage their transactions and admins to efficiently oversee pet and user information.

3.2.2 Non-Functional Requirements

Performance Requirements

The system must respond to user requests within 2 seconds under normal load conditions.

It should be capable of handling up to 10,000 concurrent users without experiencing performance degradation.

During peak times, the system must process a minimum of 100 transactions per second to ensure efficient operation.

Reliability Requirements:

The system should maintain an uptime of 99.9%, ensuring minimal downtime.

It must provide clear and meaningful error messages while logging errors for administrative review.

Regular daily backups of data should be conducted, with the capability to restore data within one hour in the event of any failure.

Security Requirements

The system must ensure secure login and access controls, with roles defined for users and admins to manage authentication and authorization effectively.

Sensitive data, including user credentials and payment information, should be encrypted both during transmission and while stored within the system to enhance security.

Audit logs for all critical transactions and administrative actions should be maintained by the system to provide a traceable record of activities for accountability and security auditing purposes.

Usability Requirements

The system must feature an intuitive and user-friendly interface that minimizes the need for extensive training for new users.

It should adhere to accessibility standards to ensure usability by individuals with disabilities, promoting inclusivity.

The system should include comprehensive help documentation and customer support features, such as FAQs and contact forms, to assist users efficiently.

Maintainability Requirements

The system should be designed with modularity in mind, enabling easy updates and maintenance of individual components without disrupting the entire system.

Follow coding standards and best practices to maintain high code quality, ensuring that code is clean, well-documented, and easily comprehensible.

Implement automated testing for critical system components to ensure reliability and facilitate prompt detection and resolution of issues during development and maintenance phases.

Portability Requirements

The system must be compatible with major browsers (Chrome, Firefox, Safari, Edge) and operating systems (Windows, macOS, Linux) to ensure broad accessibility and usability.

It should be responsive and accessible on mobile devices, including smartphones and tablets, to accommodate users accessing the system from various devices.

The system should support seamless data migration from legacy systems or other platforms with minimal effort to facilitate smooth transitions and continuity of operations.

Compliance Requirements

The system must comply with data protection regulations such as GDPR, ensuring that user data is handled appropriately and securely.

It should adhere to PCI-DSS standards for securely handling payment information to protect sensitive financial data.

Ensure the system meets any industry-specific regulations and standards related to pet sales and adoption, maintaining compliance to uphold legal and ethical standards

3.3 Feasibility analysis

3.3.1 Operational Feasibility

Determine if the proposed system aligns with operational processes and organizational goals. Assess whether it can be effectively integrated into existing workflows, and if it meets user requirements and expectations. Consider factors like usability, training needs, and potential disruptions during implementation.

3.3.2 Technical Feasibility

Assess whether the technology required for your project, such as web development tools (PHP, MySQL), server capabilities, and database management, is readily available and feasible to implement. Consider factors like scalability, integration capabilities, and any technical challenges that may arise.

3.3.3 Economic Feasibility

By utilizing open-source technologies, the PET LINK minimizes additional software and hardware expenses. The primary costs associated with the project are limited to internet

connection, labor, and hosting charges, making the system economically feasible with minimal recurring expenses.

3.3.4 Schedule Feasibility

Evaluate the project timeline and deadlines. Determine if the project can be completed within the desired timeframe, considering development, testing, and deployment phases. Ensure that milestones are achievable and realistic based on available resources and potential challenges.

GANTT CHART

This allows us to see at a glance:

- What the various activities are
- When each activity begins and ends
- How long each activity is scheduled to last

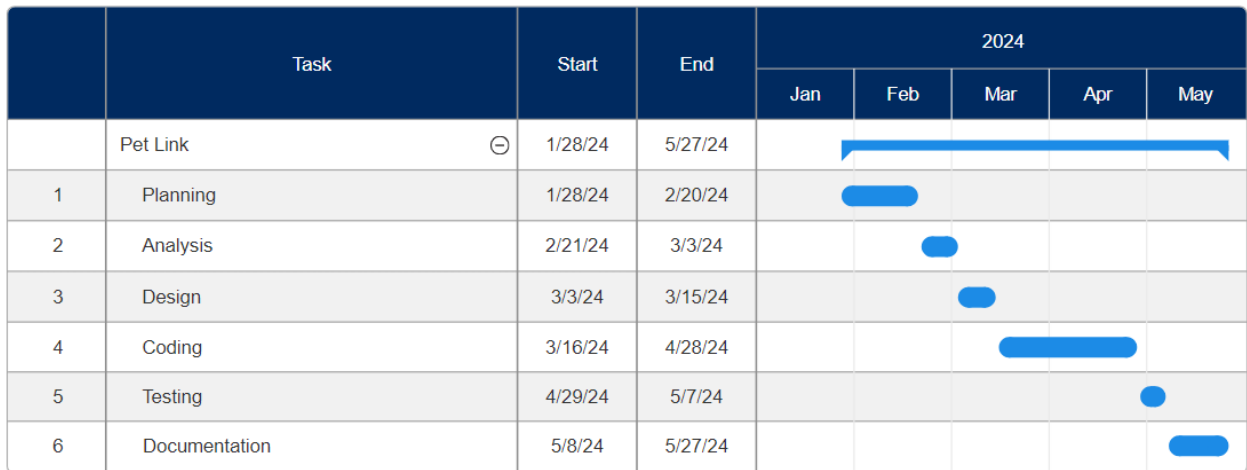


Figure 3.6 Gantt Chart for Pet Link

The "Pet Link" project spans from January 28, 2024, to May 27, 2024. To determine the total duration in days, one starts by counting the remaining days in January, which are 4 days (since January has 31 days). February, being a leap year in 2024, contributes 29 days. March adds another 31 days, followed by April with 30 days. Finally, 27 days are counted for May, from May 1 to May 27. Adding these together, the total is 4 days from January, 29 days from February, 31 days from March, 30 days from April, and 27 days from May, resulting in a total of 121 days. Thus, the entire duration for the completion of the "Pet Link" project is 121 days.

3.4. Data modeling (ER-diagram)

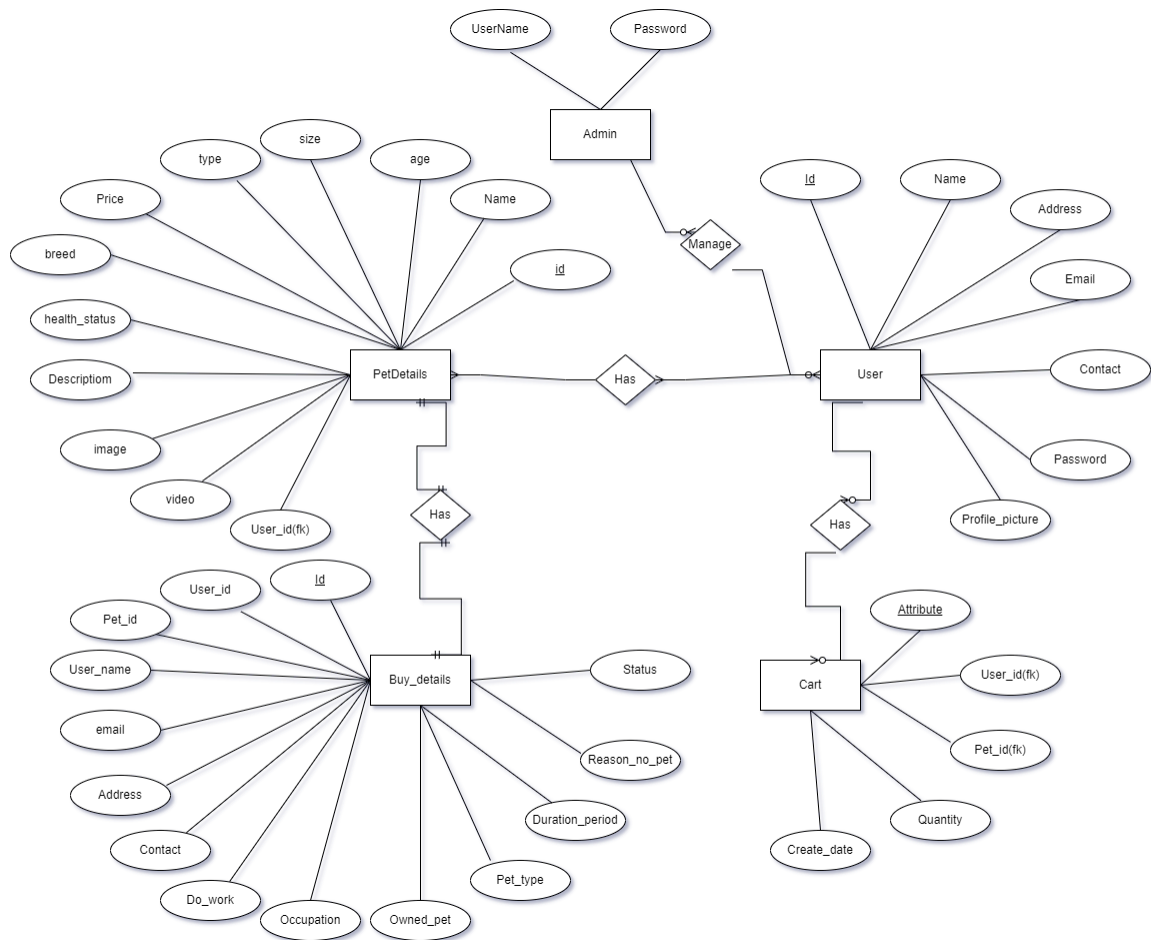


Figure 3.7 ER-Diagram for Pet Link

This ER diagram depicts a system managing pet details, users, and purchase information. The Admin manages pet details. The User entity contains personal information and can have associated carts and purchase details. PetDetails include attributes like type, size, and price, and link to Buy_details, which track purchase information and connect to both users and pets. The Cart entity holds user-selected pet items and links to users and pet details through foreign keys. The diagram illustrates how admins manage pet details, users interact with pets, and purchase details are tracked within the system.

3.5. PROCESS MODELING (DFD)

In our project PET LINK we have 2 DFD level 0 and level 2.

3.5.1 DFD Level 0

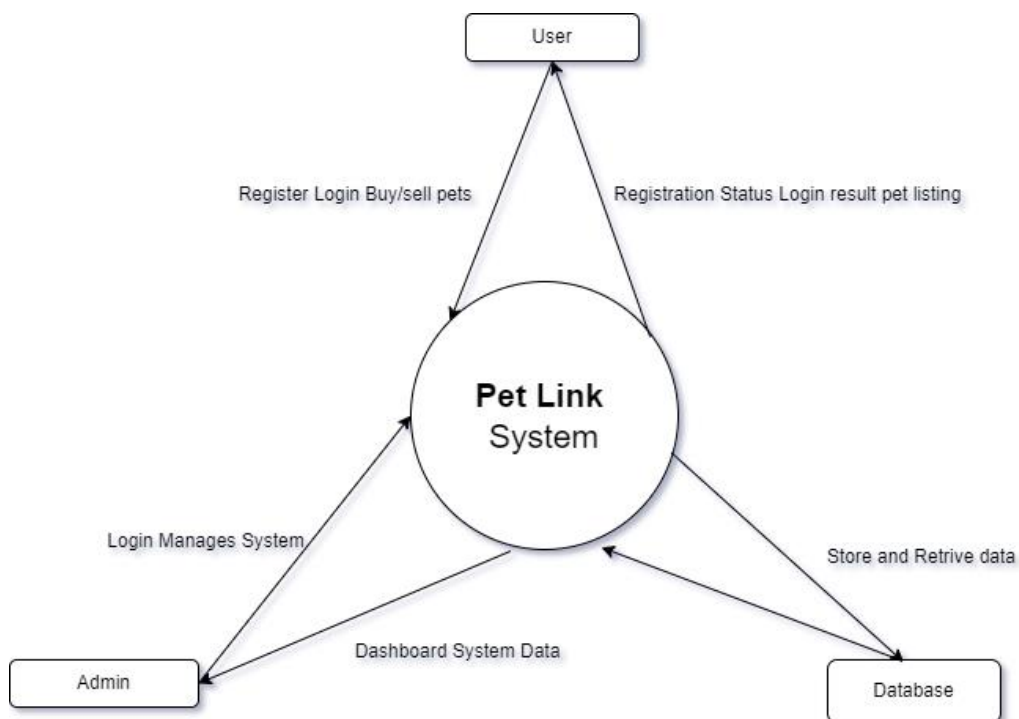


Figure 3.8 Level 0 Data Flow Diagram for Pet Link

3.5.2 DFD Level 1

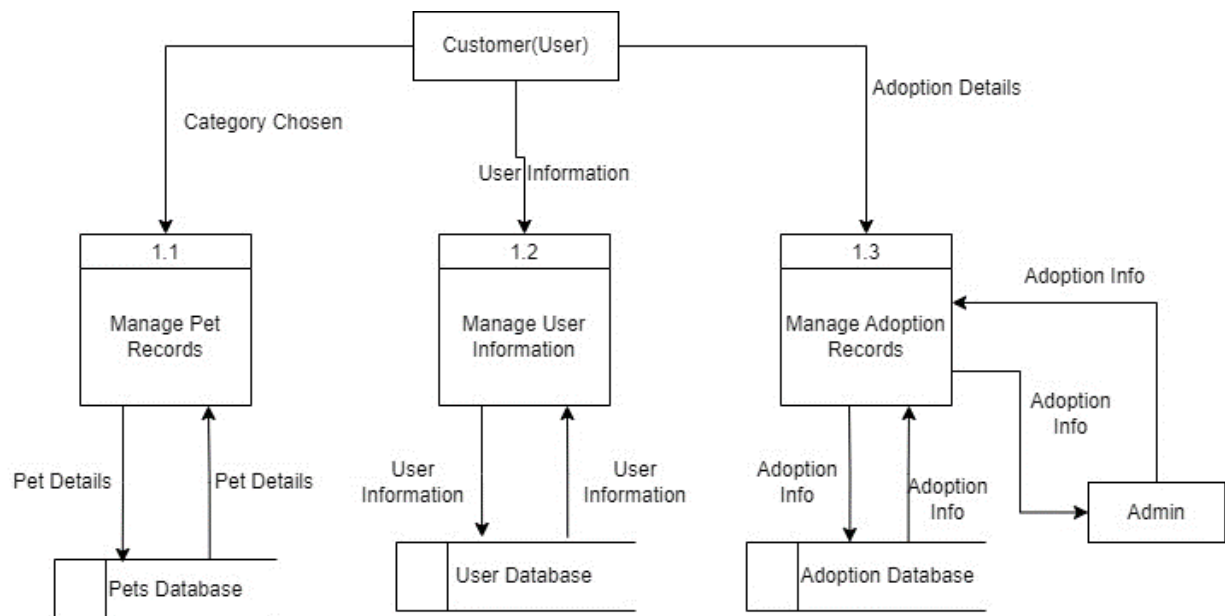


Figure 3.9 Level 1 Data Flow Diagram for Pet Link

3.5.3 Physical DFD for pet link

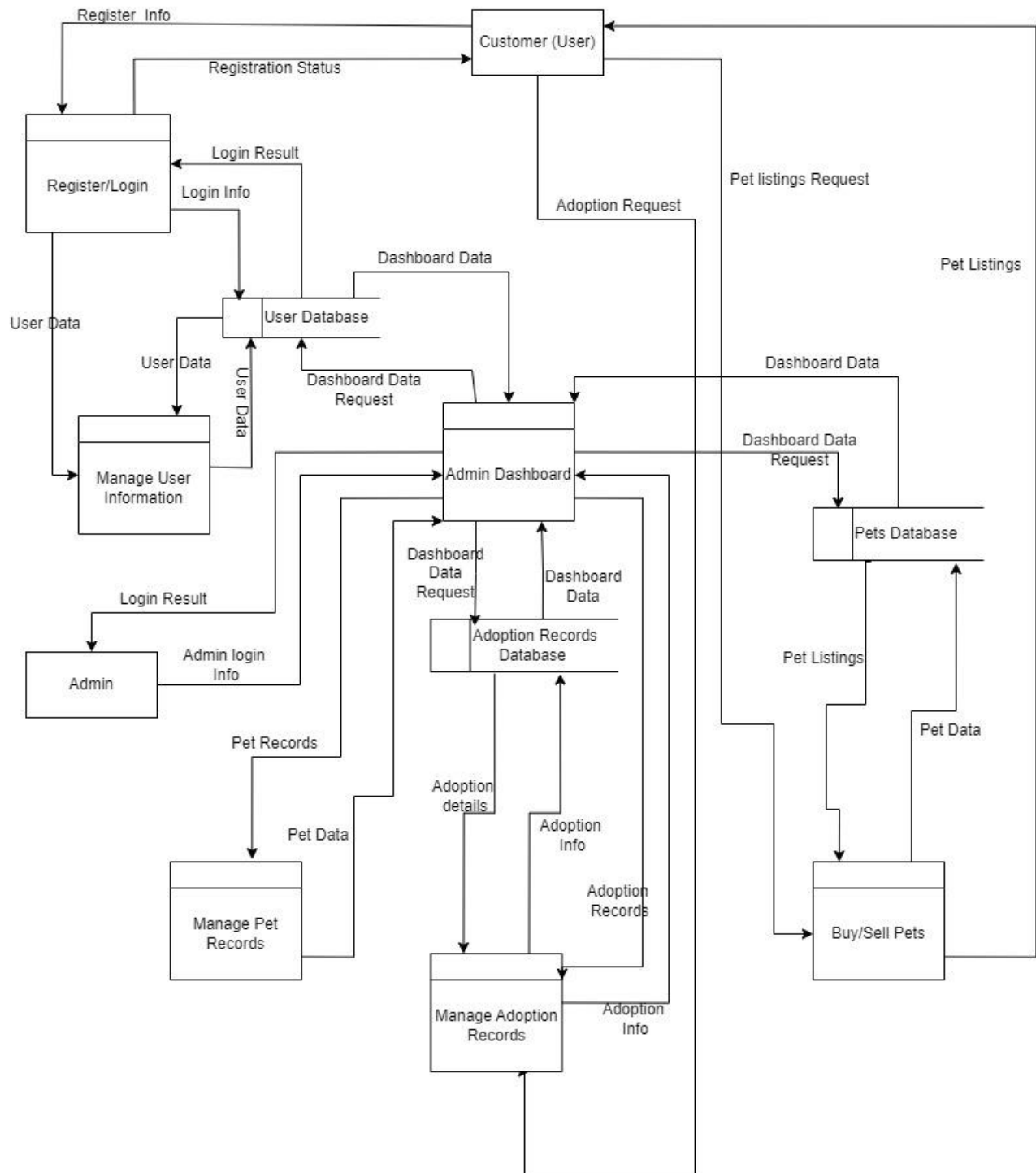


Figure 3.10 Physical Data flow Diagram (DFD) for pet Link

3.6. System design

In the System Designing stage, the architecture of the system, database schema, interface and the physical DFDs were designed. Each of those phases are explained below:

3.6.1 Architectural design

In data-centered architecture, the data is centralized and accessed frequently by other components which modify data. The main purpose of this style is to achieve integrality of data. Data-centered architecture consists of different components that communicate through shared data repositories. The components access a shared data structure and are relatively independent, in that they interact only through the data store.

Our system follows data-centered architecture. It stores all the data in the database and is accessed by all the parties involved with the system. The Front-end portion includes the GUI section which includes features like User Authentication, User Registration, Viewing Information and editing profiles. The Processing includes: Report Generation, Security Strengths and Forms.

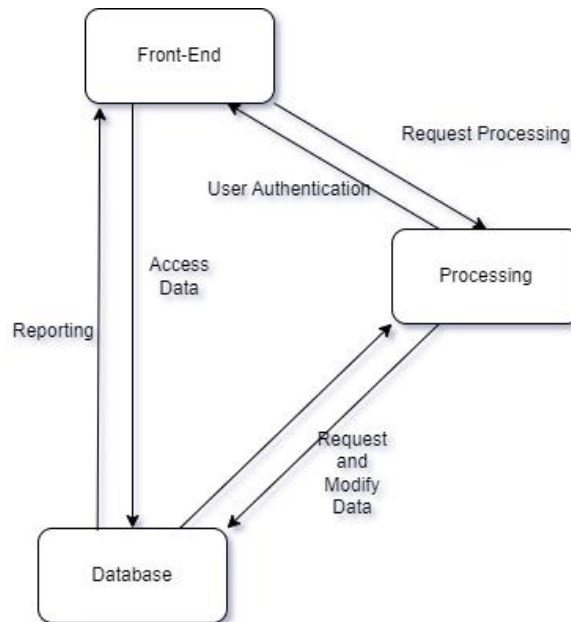


Figure 3.11 Architecture Design

3.6.2. Database schema design

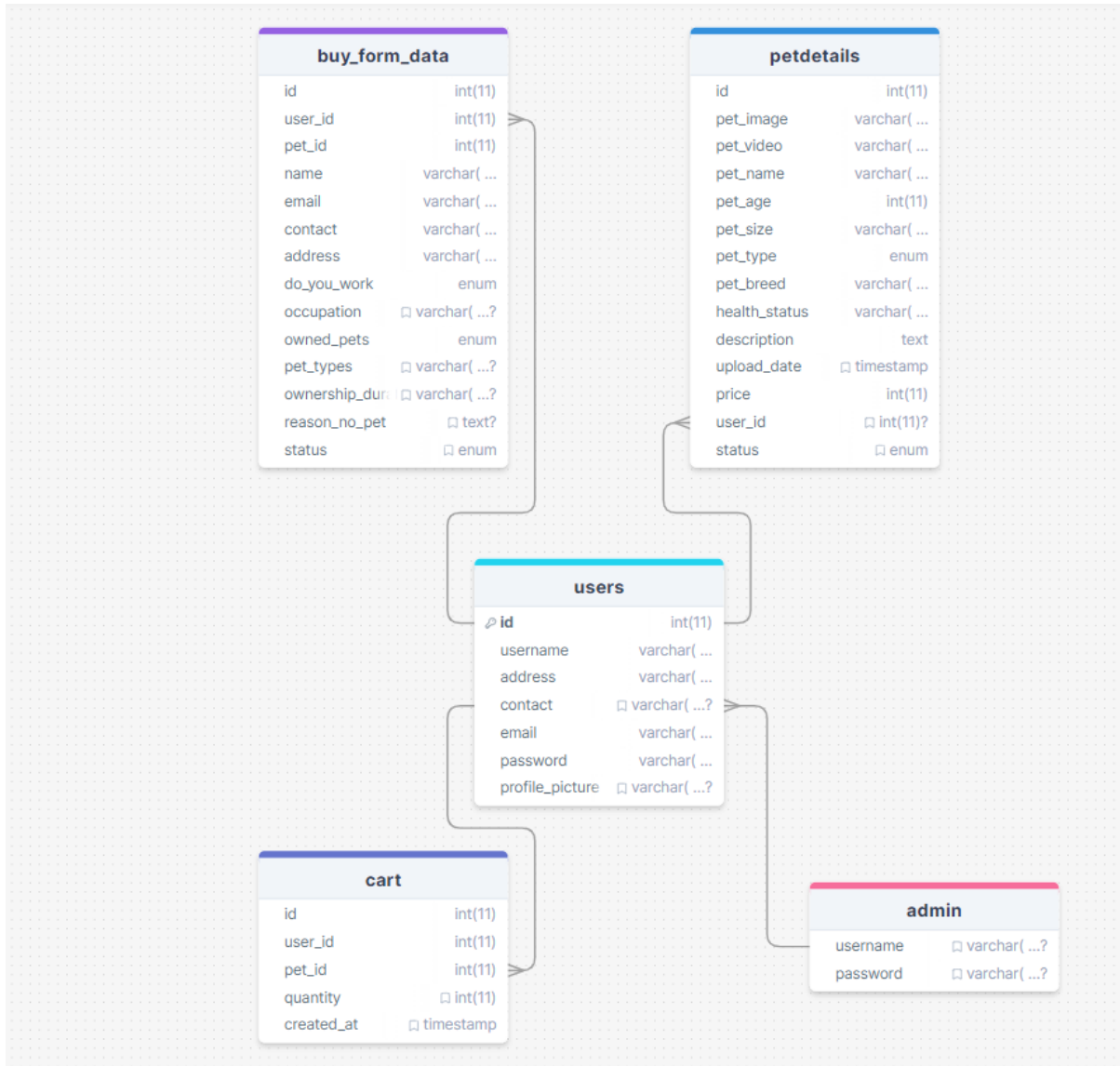
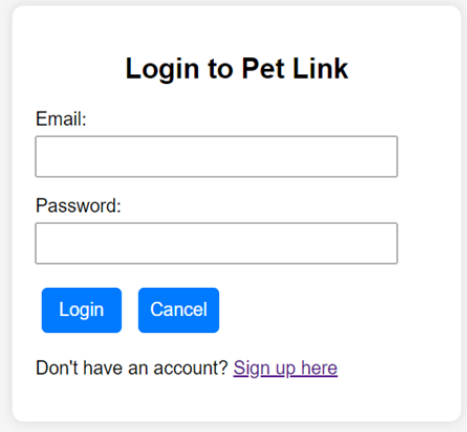


Figure 3.12 Database Schema for Pet Link

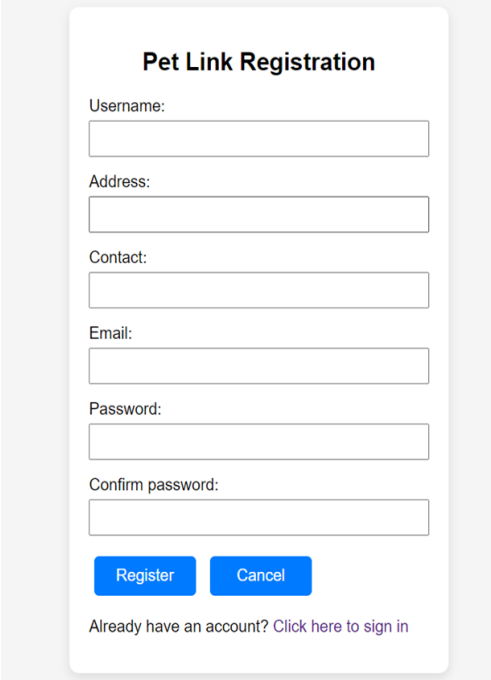
3.6.3. INTERFACE DESIGN

During Interface Design, frontend designs were created for the system. Various mock-ups designed for the interfaces of the PET LINK (PET LINK) are shown below:



The mockup shows a login form titled "Login to Pet Link". It contains two input fields: "Email:" and "Password:". Below the fields are two blue buttons: "Login" and "Cancel". At the bottom, there is a link: "Don't have an account? [Sign up here](#)".

Figure 3.13 Login Interface




The mockup shows a registration form titled "Pet Link Registration". It contains six input fields: "Username:", "Address:", "Contact:", "Email:", "Password:", and "Confirm password:". Below the fields are two blue buttons: "Register" and "Cancel". At the bottom, there is a link: "Already have an account? [Click here to sign in](#)".

Figure 3.14 Registration Page Interface

Edit Profile

Profile Picture:



Choose File

No file chosen

Username:

Jiban Neupane

Address:

kathmandu, Nepal

Contact:

9866586815

Email:

sms@gmail.com

New Password:

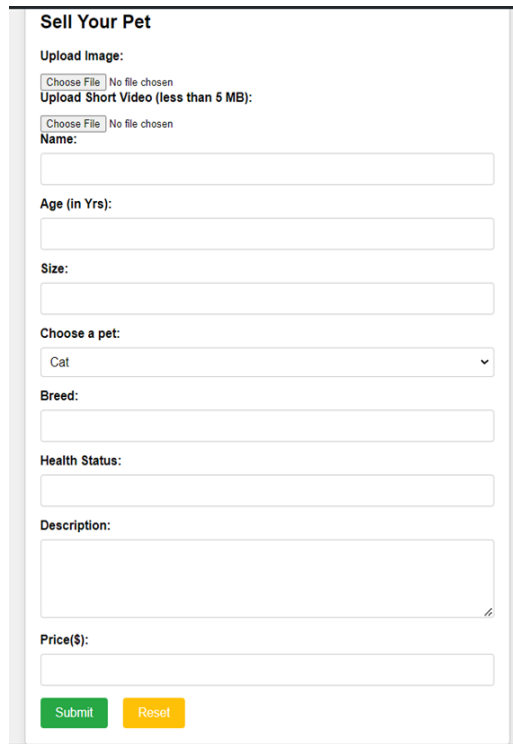
Confirm New Password:

Update Profile

Delete

Cancel

Figure 3.15 Edit Profile Page



Sell Your Pet

Upload Image:
 No file chosen

Upload Short Video (less than 5 MB):
 No file chosen

Name:

Age (in Yrs):

Size:

Choose a pet:

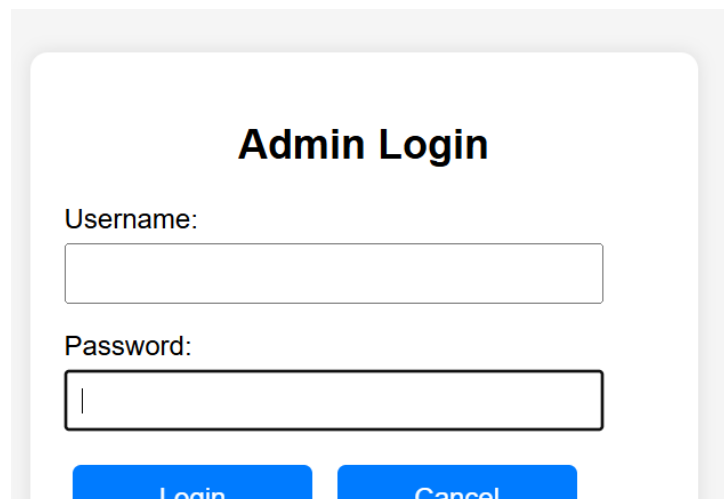
Breed:

Health Status:

Description:

Price(\$):

Figure 3.16 Sell pets Register Interface



Admin Login

Username:

Password:

Figure 3.17 Admin Login Page

Figure 3.18 Admin Login Page

CHAPTER 4

IMPLEMENTING AND TESTING

4.1 Implementation

The system has been implemented using the following programming languages. These include SQL for creating database and relation structures, PHP, bootstrap for creating codes that link the forms to the database, HTML and CSS for designing and styling the interfaces.

Visual Studio Code has been also used for the code editor for the system.

4.1.1 Tools Used

For our project the following are going to be used:

Technology [Front-End]: HTM, CSS, JAVASCRIPT, BOOTSTRAP Technology [Back-End] :
PHP

Database: MySQL

Code Editor: Visual studio code.

Server: Xampp apache Server

4.1.2. Implementation details

Registration Module

In the Registration module, users must register themselves to the system by providing personal information. This information is stored in the database for backend use. Upon registration, users receive a login ID and password, granting them access to the system.

Admin Module

The Admin module encompasses various administrative operations. Admins can add new pets, update pet information, and manage adoption listings. Admins can also view registered users and remove unwanted users from the system.

User Module

After successfully logging into the system, users can view and update their profiles, change their passwords, and manage their PET LINK requests. Users can search for available pets, fill out adoption applications, and track the status of their applications. They can also cancel their applications if needed.

4.2. Testing

Following tests of separate modules were done for our system:

4.2.1 Unit Testing

Unit testing involves testing individual components or units of the software in isolation. The goal is to ensure that each unit functions correctly. For the Pet Link project, unit tests would include:

Testing individual functions or methods in the codebase (e.g., functions for adding a pet, validating user input, calculating age).

Ensuring that each CRUD operation (Create, Read, Update, Delete) for entities like User, PetDetails, BuyFormDetails, and Cart performs correctly.

Verifying that validation logic (e.g., valid email format, required fields) works as expected.

4.2.2 Integration Testing

Integration testing focuses on verifying the interactions between different units or modules to ensure they work together as expected. For the Pet Link project, integration tests would include:

Testing the interaction between the user interface (front end) and the backend logic.

Verifying that data is correctly passed between the database and the application (e.g., retrieving pet details for display, saving user data).

Ensuring that workflows involving multiple components (e.g., user registration, pet adoption process) function seamlessly.

4.2.3 System Testing

System testing evaluates the entire system's compliance with the specified requirements. It involves testing the integrated system as a whole. For the Pet Link project, system tests would include:

Performing end-to-end testing of the entire application to ensure all components work together correctly.

Validating that the system meets all functional requirements (e.g., user can search for pets, admin can manage users, buy form submission process).

Testing non-functional requirements such as performance, scalability, and security.

4.2.4 Acceptance Testing

Acceptance testing determines whether the system meets the criteria for acceptance by the end users or stakeholders. It is usually the final phase of testing before deployment. For the Pet Link project, acceptance tests would include:

Conducting user acceptance testing (UAT) where actual users test the system to ensure it meets their needs and requirements.

Validating that the system behaves as expected in real-world scenarios.

Ensuring that all functionalities are user-friendly and intuitive for end-users (e.g., ease of navigation, clarity of information).

4.3 Test Cases

4.3.1 Test Case: Log In

Test Case 1: Log In with Invalid Credentials

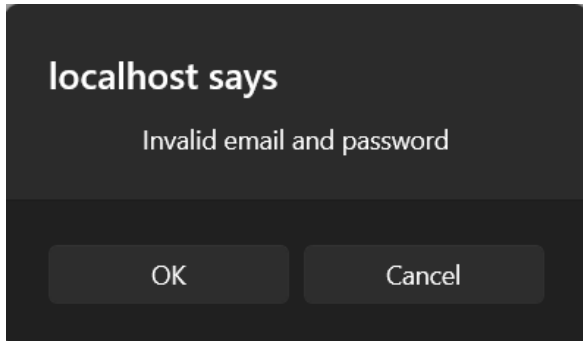
S.N.	Test Description	Expected Result	Test Outcome	Test Evidence
1	Used invalid login credentials to check login functionality	Invalid Email or Password	Invalid Email or Password	True

Description: Used invalid login credentials to check login functionality.

Expected Result: Invalid Email or Password

Actual Outcome: Invalid Email or Password

Test Evidence 1.1.



Screenshot showing error message for invalid login.

Test Case : Log In with Valid Credentials

S.N.	Test Description	Expected Result	Test Outcome	Test Evidence
1	Used valid login credentials to check login as user	Redirected to user panel dashboard	Redirected to user panel dashboard	

Description: Used valid login credentials to check login as user.

Expected Result: Redirected to user panel dashboard

Actual Outcome: Redirected to user panel dashboard

Test Evidence 1.2.

Login to Pet Link


Email:

Password:


[Login](#) [Cancel](#)

Don't have an account? [Sign up here](#)

[Pet Link](#)

Home Buy pet Sell Your pet Help & Support My Cart 

Your Profile



Username: Neuz Badkhah

Address: Nepal

Contact: 986658645

Email: jiban@gmail.com

[Edit Profile](#)

Your Pet Listings

Pet Image	Pet Image
<div><p>Lucy</p><p>Age: 2 years Size: medium Type: dog Breed: Husky Health Status: good Description: Friendly nature Price: 6000 Status: approved</p><div>Approved Delete</div></div>	<div><p>tomy</p><p>Age: 5 years Size: big Type: dog Breed: Dog Health Status: Good Description: jiban Price: 3000 Status: pending</p><div>Pending Delete</div></div>

Screenshot showing user panel dashboard after successful login.

4.3.2 Test Case: Registration

Test Case 3: Registration

S.N.	Test Description	Expected Result	Test Outcome	Test Evidence
1	Registered to the application	Registered	Registered	True

Description: Registered to the application.

Expected Result: Registered

Actual Outcome: Registered

Test Evidence 1.3.

Pet Link Registration

Username:

Address:

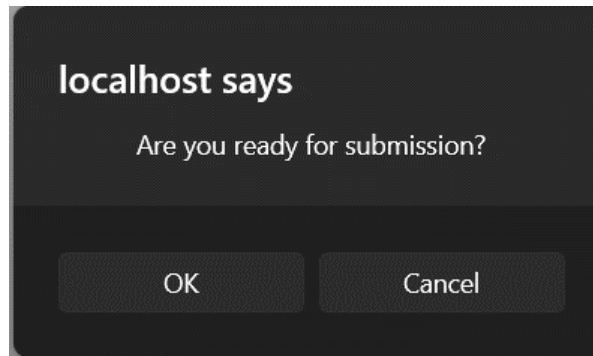
Contact:

Email:

Password:

Confirm password:

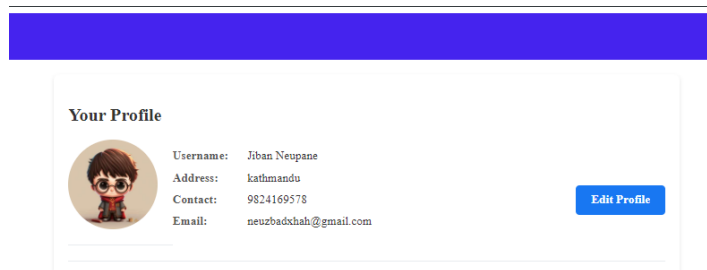
Already have an account? [Click here to sign in](#)



User Data

[Home](#)
[Log Out](#)

ID	Photo	Name	Address	Contact	Email	Actions
42		Neuz Baddshah	Nepal	986658645	jiban@gmail.com	Edit User Delete
43		Jiban Neupane	kathmandu	9824169578	neuzbaddshah@gmail.com	Edit User Delete



Screenshot showing successful registration confirmation.

4.3.3 Test Case 3: CRUD Operation

Test Case: sale CRUD Operation

S.N.	Test Description	Expected Result	Test Outcome	Test Evidence
1	CRUD functionality on sale applications	Create, Read, Update, and Delete	Create, Read, Update, and Delete	True

Description: CRUD functionality on sale applications.

Expected Result: Create, Read, Update, and Delete

Actual Outcome: Create, Read, Update, and Delete

Test Evidence 1.4.

Create and update

Sell Your Pet

Upload Image:
 trial image.jpg

Upload Short Video (less than 5 MB):
 No file chosen

Name:

Age (in Yrs):

Size:

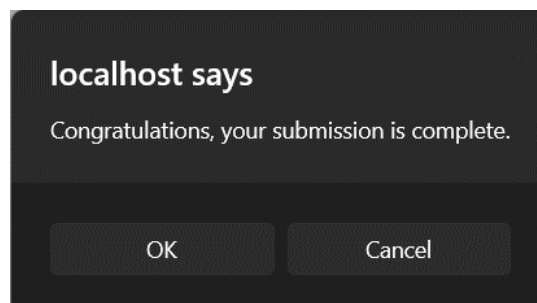
Choose a pet:

Breed:




Health Status:

Description:

Price(Rs):



Read

Pet Data											
Home		Log Out									
ID	Image	Name	Age(in yrs)	Size	Type	Breed	Health Status	Description	Price(\$)	Status	Actions
39		Lucy	2	medium	dog	Husky	good	Friendly nature	6000	approved	Approve Reject Delete
40		tomy	5	big	dog	Dog	Good	jiban	3000	pending	Approve Reject Delete
41		tomy	3	big	dog	Husky	Good	Vaccine 3 Time	3000	pending	Approve Reject Delete

Before delete

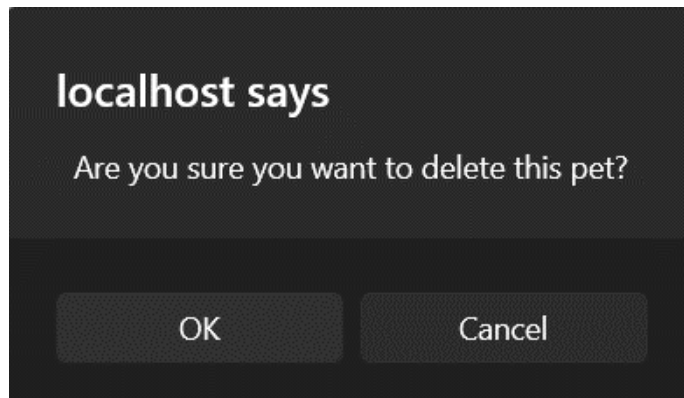
Buy Form Submissions

Home

Log Out

ID	User ID	Pet ID	Name	Email	Contact	Address	Occupation	Owned Pets	Pet Types	Ownership Duration	Reason No Pet	Status	Actions
30	42	39	Neuz Badkhah	jiban@gmail.com	986658645	Nepal		no				approved	<div>ApproveRejectDelete</div>
31	42	39	Neuz Badkhah	jiban@gmail.com	986658645	Nepal		no				rejected	<div>ApproveRejectDelete</div>
32	43	39	Jiban Neupane	neuzbadkhah@gmail.com	9824169578	kathmandu nepal		no				approved	<div>ApproveRejectDelete</div>
33	43	39	Jiban Neupane	neuzbadkhah@gmail.com	9824169578	kathmandu		no				pending	<div>ApproveRejectDelete</div>

After delete



Buy Form Submissions

Home

Log Out

ID	User ID	Pet ID	Name	Email	Contact	Address	Occupation	Owned Pets	Pet Types	Ownership Duration	Reason No Pet	Status	Actions
30	42	39	Neuz Badkhah	jiban@gmail.com	986658645	Nepal		no				approved	<div>ApproveRejectDelete</div>
31	42	39	Neuz Badkhah	jiban@gmail.com	986658645	Nepal		no				rejected	<div>ApproveRejectDelete</div>
32	43	39	Jiban Neupane	neuzbadkhah@gmail.com	9824169578	kathmandu nepal		no				approved	<div>ApproveRejectDelete</div>

Screenshot showing CRUD operations on sale.

4.3.4 Test Case 4: Accept and Cancel Request

Test Case: Cancel Sale

S.N.	Test Description	Expected Result	Test Outcome	Test Evidence
1	Tried approving selling request	Request approved	Request Approved	True
2	Tried canceling selling request	Request canceled	Request canceled	True

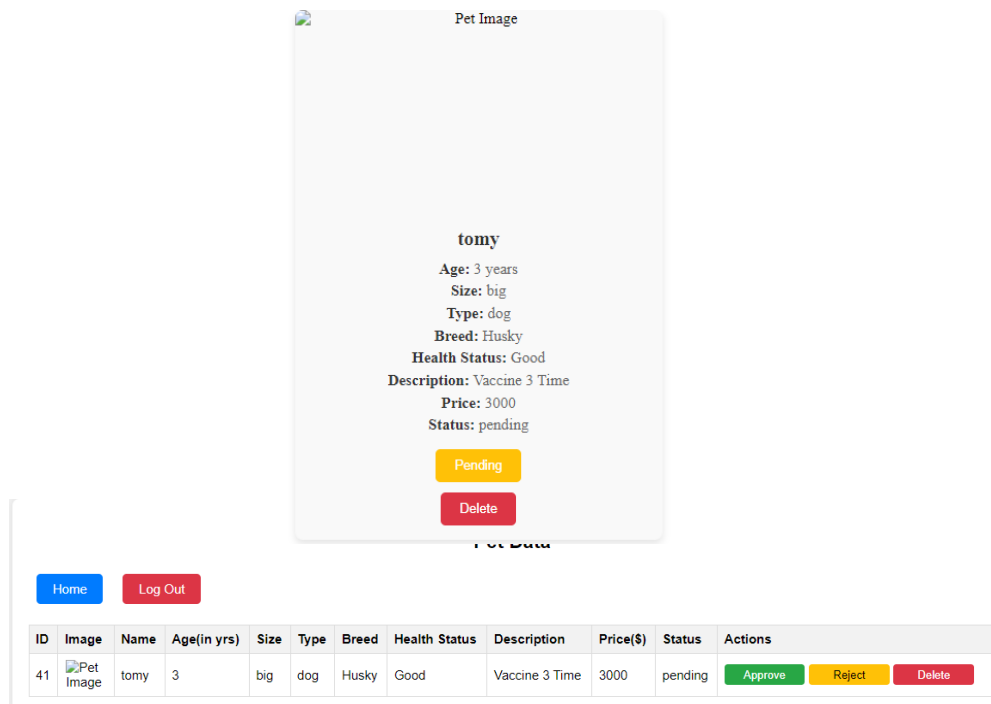
Description: Tried approve sale request.

Expected Result: Request approve

Actual Outcome: Request approve

Test Evidence 1.5.

Before canceling or approved the sale pet



Available Pets

[Profile](#)

Cats

No cats available at the moment.

Dogs

No dogs available at the moment.

Other Pets

No other pets available at the moment.


Test Evidence 1.5.1.

After Approve sale request

Pet Data

[Home](#)

[Log Out](#)

ID	Image	Name	Age(in yrs)	Size	Type	Breed	Health Status	Description	Price(\$)	Status	Actions
41		tomy	3	big	dog	Husky	Good	Vaccine 3 Time	3000	approved	Approve Reject Delete

Available Pets

[Profile](#)

Cats

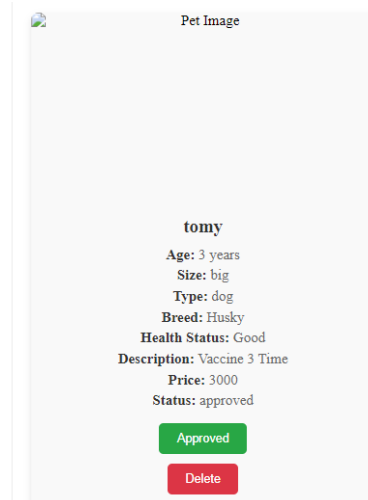
No cats available at the moment.

Dogs



Other Pets

No other pets available at the moment.



Test Evidence 1.5.2.

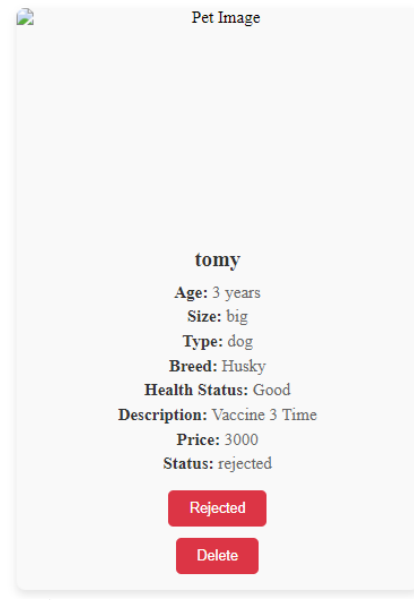
After canceling the sale request

Description: Tried cancel sale request.

Expected Result: Request cancel

Actual Outcome: Request rejected

Pet Data											
Home Log Out											
ID	Image	Name	Age(in yrs)	Size	Type	Breed	Health Status	Description	Price(\$)	Status	Actions
41		tomy	3	big	dog	Husky	Good	Vaccine 3 Time	3000	rejected	Approve Reject Delete



No other pets available at the moment.

Figure : Screenshot showing successful cancellation of request.

CHAPTER 5

CONCLUSION AND FUTURE RECOMMENDATIONS

5.1. Lesson learnt / outcome

During the development of the PET LINK, we gained valuable insights into project management and key software engineering principles. Working as a team taught us the importance of efficient cooperation and communication. Some of the key lessons learned include:

Time Management: Effectively planning and adhering to timelines.

System Modeling and Diagrams: Creating accurate and useful system models and diagrams.

Database Design: Developing and structuring databases to meet system requirements.

5.2. Conclusion

Through this project, we have designed and implemented a system that facilitates the adoption of pets online, providing an efficient and user-friendly alternative to traditional PET LINK methods. The PET LINK and Management System enables users to search for pets, submit adoption applications, and track their application status from anywhere at any time.

The initial requirements were well understood, and the features were clearly defined, focusing on streamlining and enhancing the PET LINK process. Given the clear requirements, fixed timeline, and constraints of cost and time, the Waterfall Model was the most appropriate approach for this project. During the implementation and coding phase, each module was developed as a standalone unit and subsequently integrated to form the final system.

5.3 Future Recommendations

The success of this system relies on its adoption by users. Future enhancements and modifications will be based on feedback and reviews from system users. Regular updates to databases and user interfaces, as well as technological advancements, will be prioritized. Potential future improvements include:

Payment Module: Integrating an electronic payment system such as e-Sewa, Khalti, etc., for direct payments through the system.

Back-end Upgrades and Maintenance: Ensuring the system remains robust and scalable.

User Interface Upgrades: Enhancing the user interface to improve user experience.

Performance Improvements: Continuously optimizing the system for better performance.

SMS Feature: Add an SMS feature to notify buyers and sellers in your Pet Link system

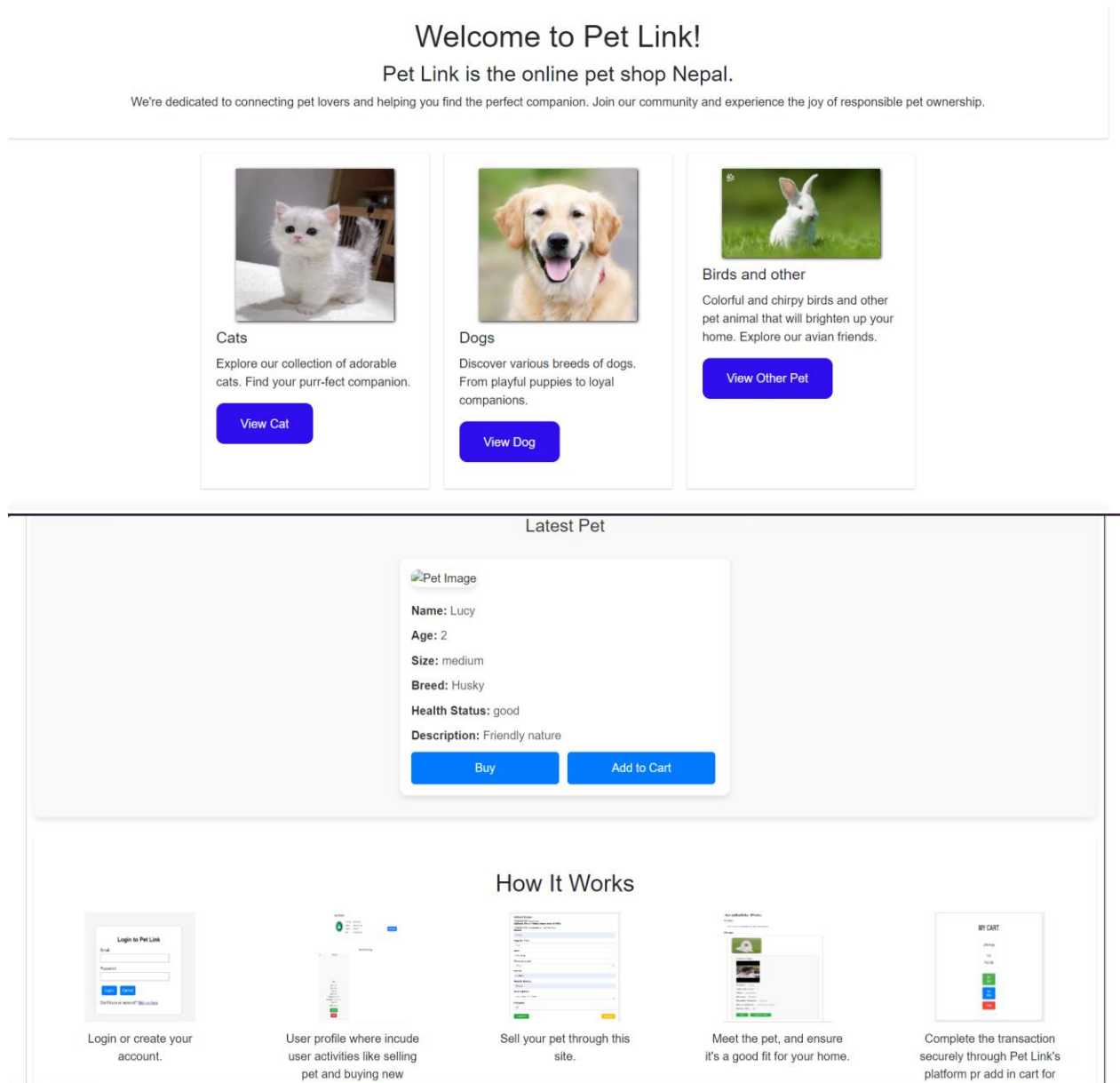
REFERENCES

- [1] Dog hostels in Nepal, “*Dog hostels in Nepal*,” in Premium Pet Store in Nepal Online Dog Shop in Nepal - Dog Foods | Dogs Clothes | Pet Hostel. [Online]. Available: <https://petxan.com/dog-hostels-in-nepal/>. [Accessed: Jan. 29, 2024].
- [2] Facebook, “*Facebook*,” in Social Media Platform. [Online]. Available: <https://www.facebook.com/petcarenepal/>. [Accessed: Jan. 29, 2024].
- [3] Nepal pet service, “*Nepal pet service – Nepal pet service*,” in Nepal Pet Service. [Online]. Available: <https://nepalpetservice.com/>. [Accessed: Jan. 29, 2024].
- [4] Pet mama Nepal, “*Pet mama Nepal – Nepal's most loved pet care company*,” in My Pet Mama. [Online]. Available: <https://mypetmama.com/>. [Accessed: Jan. 29, 2024].
- [5] PetBacker, “*Top Pet Sitters in Kathmandu with best prices on PetBacker*,” in PetBacker . [Online]. Available: <https://www.petbacker.com/s/pet-sitters/kathmandu--bagmati-zone--nepal>. [Accessed: Jan. 29, 2024].
- [6] Pet store Nepal, “*Pet store Nepal*,” in Pet Store Nepal. [Online]. Available: <https://www.petstorenepal.com/>. [Accessed: Jan. 29, 2024].
- [7] Google Drive, “*Project Report Format*,” in Google Drive. [Online]. Available: <https://drive.google.com/file/d/1ugIDahM9GluK54f3XbtJrlPnTXiq-U8Q/view>. [Accessed: Apr. 3, 2024].

APPENDICES

Screenshots

Front Dashboard



Login page for user

Login to Pet Link

Email:

Password:

LoginCancel

Don't have an account? [Sign up here](#)

Register new user

Pet Link Registration

Username:

Address:

Contact:

Email:

Password:

Confirm password:

RegisterCancel

Already have an account? [Click here to sign in](#)

User Dashboard

Your Profile



Username: Neuz Badxhah
Address: Nepal
Contact: 986658645
Email: jiban@gmail.com

[Edit Profile](#)

Your Pet Listings



Pet Image

Lucy

Age: 2 years
Size: medium
Type: dog
Breed: Husky
Health Status: good
Description: Friendly nature
Price: 6000
Status: approved

[Approved](#)[Delete](#)

Pet Image

tomy

Age: 5 years
Size: big
Type: dog
Breed: Dog
Health Status: Good
Description: jiban
Price: 3000
Status: pending

[Pending](#)[Delete](#)

User Profile

Your Profile




Username: Neuz Badxhah
Address: Nepal
Contact: 986658645
Email: jiban@gmail.com

[Edit Profile](#)

Edit User profile

Edit Profile

Profile Picture:



No file chosen

Username:

Address:

Contact:

Email:

New Password:

Confirm New Password:

Buy Pet

Available Pets

[Profile](#)

Cats

No cats available at the moment.

Dogs



Other Pets

No other pets available at the moment.

Dogs



Video Clip:



Name: Lucy

Age (in yrs): 2

Size: medium

Breed: Husky

Health Status: good

Description: Friendly nature

Price (Rs.): 6000

[Buy](#)

[Add to Cart](#)

Other Pets

Buy Form

Buy a Pet

User Information

Full Name

Neuz Badxhah

Email

jiban@gmail.com

Contact Number

986658645

Address

Nepal

Work Information

Do you work?

☐ Yes ☐ No

Past Pet History

Have you owned pets before?

☐ Yes ☐ No

SUBMIT

CANCEL

BACK

Add Cart

localhost says

Pet added to cart successfully.

OK

Cancel

localhost says

Pet is already in your cart.

OK

Cancel

My Cart

MY CART

 Pet Image

Lucy

Price:
\$6000

Buy
Now

See
More

Delete

Sell pet form

Sell Your Pet

Upload Image:
 No file chosen

Upload Short Video (less than 5 MB):
 No file chosen

Name:

Age (in Yrs):

Size:

Choose a pet:

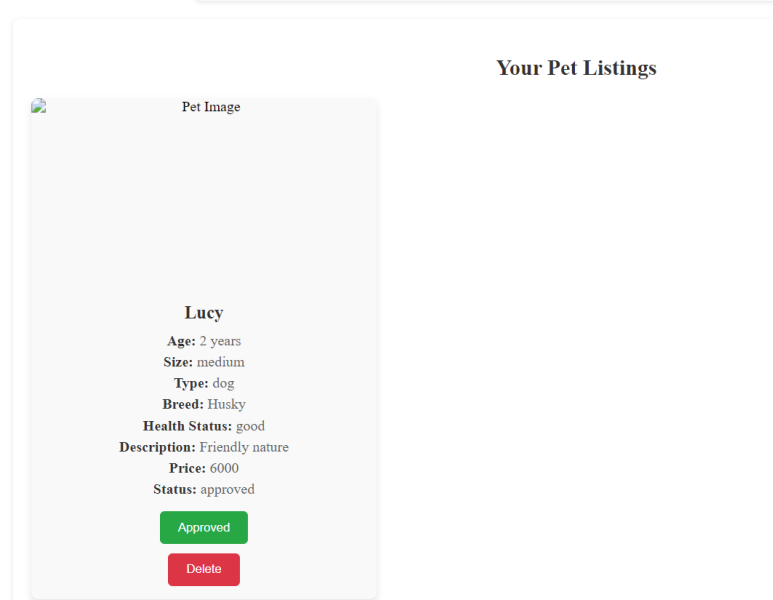
Breed:

Health Status:

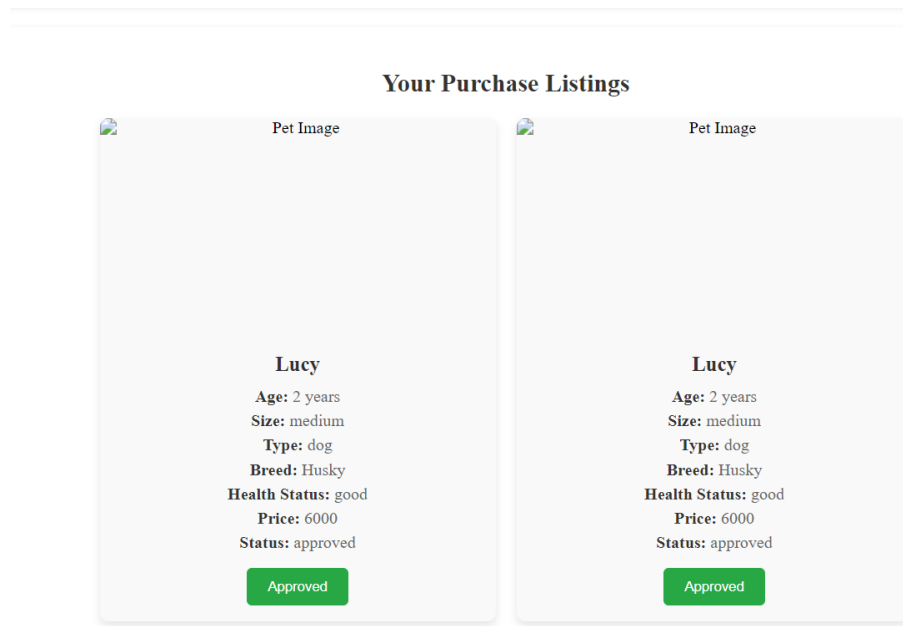
Description:

Price(Rs):

User Sale listing in user profile



User Purchase Listing







Help and Support

Connect with Us

Contact

Email:
admin@gmail.com
Phone: +977
98*****
Address: 123 xyz
ABC

Social Media



Quick Links

[Home](#)
[Pet](#)
[Become a Seller](#)
[About](#)
[Login](#)

▼

Direct Email Here

Your Name:

Your Email:

Subject:

Message:

Send Message

Admin Login

Admin Login

Username:

Password:

LoginCancel

Admin Dashboard

[Pet Details](#) [Buy Details](#) [Logout](#)

Welcome to the Pet Link Admin Panel


Hello, admin!

[User Details](#) [Pet Details](#) [Buy Details](#)

User Details in Admin

User Data


[Home](#) [Log Out](#)

ID	Photo	Name	Address	Contact	Email	Actions
42		Neuz Badkhah	Nepal	986658645	jiban@gmail.com	Edit User Delete

Pet Details in Admin

Pet Data

[Home](#) [Log Out](#)

ID	Image	Name	Age(in yrs)	Size	Type	Breed	Health Status	Description	Price(\$)	Status	Actions
39		Lucy	2	medium	dog	Husky	good	Friendly nature	6000	approved	Approve Reject Delete

Buy Details in Admin

Buy Form Submissions

[Home](#) [Log Out](#)

ID	User ID	Pet ID	Name	Email	Contact	Address	Occupation	Owned Pets	Pet Types	Ownership Duration	Reason No Pet	Status	Actions
30	42	39	Neuz Badkhah	jiban@gmail.com	986658645	Nepal		no				approved	Approve Reject Delete
31	42	39	Neuz Badkhah	jiban@gmail.com	986658645	Nepal		no				approved	Approve Reject Delete