A Minor Project Mid-term Report On

Paws Nepal

Submitted in Partial Fulfillment of the Requirements for the Degree of

Bachelor of Computer System and Information Technology

Under Pokhara University

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Abstract

Here's a project description similar in tone and structure to the QuizWiz example, but tailored for your pet adoption demo website, Paws Nepal:

Paws Nepal is a responsive, web-based pet adoption platform designed to streamline the process of connecting potential pet owners with dogs in need of loving homes. This application aims to modernize traditional adoption practices by offering an intuitive, interactive, and mobile-friendly interface that enables users to browse, filter, and learn about adoptable pets with ease.

Built entirely with front-end technologies including **HTML**, **CSS**, **JavaScript**, **jQuery**, and **AJAX**, Paws Nepal operates without a backend server, making it a lightweight, scalable, and deployable solution for small organizations or educational projects. Pet data is dynamically loaded from a local **JSON** file, allowing the platform to remain flexible and easily customizable without requiring server-side logic or database connectivity.

The application includes features such as real-time filtering by **breed**, **age**, and **size**, a **sortable dog listing**, a **visit scheduling form with jQuery UI datepicker**, and an **interactive cost calculator** to estimate monthly care expenses. These components are designed to provide immediate feedback and engagement, enhancing the user experience for both mobile and desktop users.

Paws Nepal emphasizes accessibility, simplicity, and performance. The site incorporates responsive design principles, ensuring smooth usability across various devices including smartphones and tablets. Additionally, visual components such as Font Awesome icons and step-by-step adoption process graphics help guide users through their journey of finding the perfect companion.

This project showcases how front-end technologies can be leveraged to build a dynamic and interactive web application without relying on complex backend systems. **Paws Nepal** serves as both a practical pet adoption tool and an educational demonstration of modern web development techniques.

Keywords: Paws Nepal, Pet Adoption, HTML, CSS, JavaScript, jQuery, AJAX,

Acknowledgements (For Final Defense)

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Abbreviations

Abbreviation	Full Form
UI	User Interface
JSON	JavaScript Object Notation
AJAX	Asynchronous JavaScript and XML
HTML	Hypertext Markup Language
CSS	Cascading Style Sheets
DOM	Document Object Model
UX	User Interface

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Chapter 1: Introduction

1.1Background of the Study

Paws Nepal is a user-friendly and interactive platform that helps people find and adopt dogs in a simple, enjoyable way. Users can view available dogs and filter them by breed, age, and size to find their perfect match. The site includes features like sortable listings, a visit scheduling form, and an adoption cost calculator. Dog data is loaded dynamically using JSON, and all actions are handled smoothly on the front end using HTML, CSS, JavaScript, and jQuery. The design is clean, responsive, and mobile-friendly, ensuring a seamless experience on any device. With no backend required, Paws Nepal is fast, lightweight, and easy to deploy—ideal for educational use or small-scale adoption services.

1.2Statement of the Problem

Traditional pet adoption methods, like using posters or visiting shelters in person, can be slow, limited, and not very user-friendly. People may find it hard to get details about the pets or contact the shelter easily. In today's digital world, more people are online, so there is a need for a simple, interactive website that helps connect pets with loving families. Many existing platforms are either too complex or need advanced systems and backend servers. This project solves that problem by creating a pet adoption website using only front-end tools like HTML, CSS, JavaScript, AJAX, and jQuery. The site loads dog information from a JSON file, lets users filter and sort pets, schedule visits, and even calculate care costs. The goal is to make adoption easier, faster, and more accessible for everyone.

1.3Objectives of the Study

To create an interactive pet adoption site where users can experience various features of web tech and adopt pets of their choice.

1.4 Scope of the Study

The Scope of this project are:

1. Displays adoptable dogs dynamically using data from a JSON file via AJAX.
2. Allows users to filter pets by breed, age, and size, and sort them by name, age, or weight.
3. Fully responsive and compatible across all modern browsers and devices (desktops, tablets, smartphones).
4. Includes interactive features like a visit scheduling form, adoption cost calculator, and step-by-step adoption guide.
5. Entirely front-end based—no backend or database required—making it lightweight and easy to manage.
6. Can be hosted on free static hosting platforms such as GitHub Pages or Netlify.
7. Ideal for animal shelters, educational demos, college projects, or awareness campaigns promoting pet adoption.

1.5 Limitations of the Study

1.The application is limited to frontend technologies only (no backend or database integration).

1. Pet data is not stored or updated dynamically — any changes require manual editing of the JSON file.
2. No authentication or login system is implemented in the current version.
3. Visit scheduling form does not persist data or send submissions to a server.
4. No admin dashboard or content management interface for adding, editing, or removing pet listings.
5. Limited accessibility features — does not yet fully support screen readers or keyboard-only navigation.

Chapter 2: Review of Literature

2.1 Description of Fundamental Theories and Terminologies

The development of **Paws Nepal** is based on basic web development ideas and user-friendly design principles. The website uses **HTML (Hypertext Markup Language)** to build the structure of the pages, **CSS (Cascading Style Sheets)** to style the layout, and **JavaScript** to make the site interactive and dynamic. **AJAX** is used to load dog data from a **JSON file** without refreshing the page, which helps the site run smoothly. **jQuery**, a JavaScript library, makes it easier to work with elements on the page, and **jQuery UI** is used to add features like the calendar for scheduling visits.

The website follows **responsive design** methods, so it works well on all screen sizes—mobile, tablet, and desktop. Concepts like **event-driven programming**, **client-side filtering**, and **smooth navigation** are used to create a simple and enjoyable experience for users looking to adopt a dog.

2.2 Review of Similar Projects

The development of **Paws Nepal** draws inspiration from existing pet adoption platforms and front-end web development tutorials. Well-known websites like **Petfinder** and **Adopt-a-Pet** offer advanced features such as real-time pet listings, location-based search, and user accounts. However, these platforms typically require complex backend systems, server hosting, and database integration, which may not be suitable for small-scale or demo projects. In contrast, **Paws Nepal** is designed as a lightweight, fully frontend solution that functions entirely within the browser, making it ideal for use in classrooms, portfolio projects, or low-resource organizations.

Tutorials from **W3Schools** [1] and **GeeksforGeeks** [2] were particularly useful during development. These sources demonstrate how to load data from a JSON file using **AJAX**, filter content dynamically with **JavaScript**, and manipulate the **DOM** using **jQuery**. Unlike most examples which use hardcoded content or require full-stack implementation, **Paws Nepal** takes a modular, reusable approach—storing pet data separately in a JSON file and using dropdown menus for real-time filtering based on breed, age, and size.

By combining concepts like **client-side rendering**, **responsive design**, and **event-driven programming**, Paws Nepal offers a more flexible and accessible solution for users interested in pet adoption, while staying simple and easy to deploy.

Chapter 3: System Analysis and Design

Methodology

We have planned to work on the following methodologies for the application of knowledge, skills, tools, and techniques to a wide range of activities and designs in order to meet the requirements of our project.

The process will repeat until we make our project a work product. The methodology we used is incremental methodology**.**

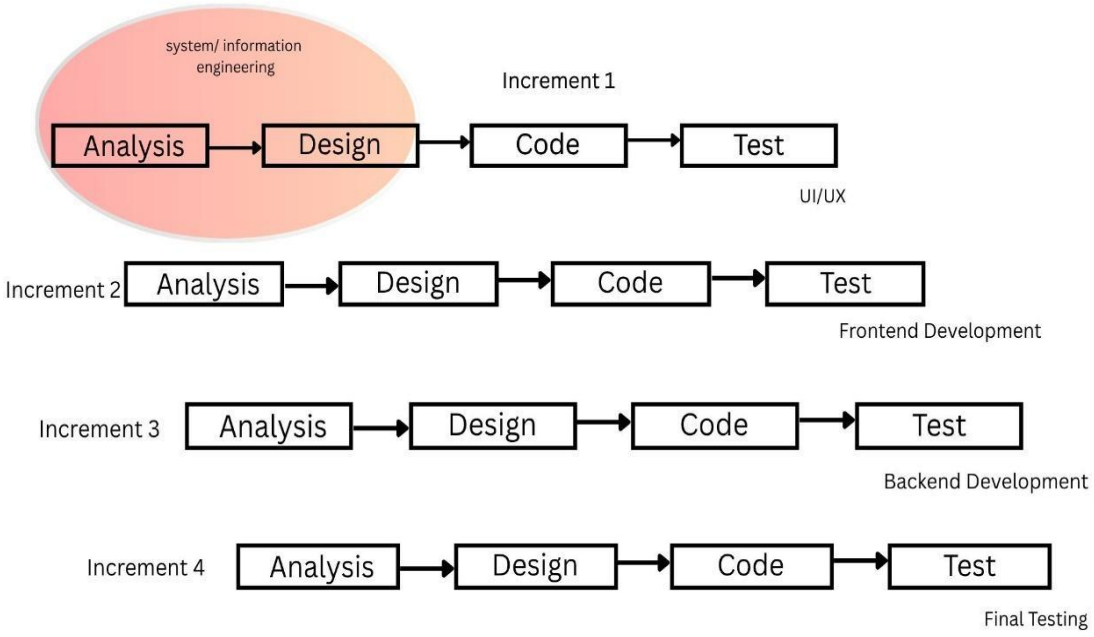


fig: Incremental mode

1. **Increment1:**UI/UX Develop a functional and visually appealing dog adoption website that allows users to browse available dogs with detailed profiles, search and filter based on preferences like breed, age, and size, and submit adoption applications through a user- friendly form, ensuring seamless navigation, responsive design, and basic administrative capabilities
2. **Increment2:** Frontend Development This phase focuses on building the user interface and user experience (UI/UX) aspects of the platform. It begins with analysis to determine the design requirements of the user-facing parts of the system. Then, the design phase defines the visual layout, interaction patterns, and usability features. After this, the coding stage involves implementing the frontend using technologies like HTML, CSS, JavaScript, and frameworks (e.g., React or Vue). Finally, testing ensures that all UI elements function correctly, are responsive, and meet the design specifications.
3. **Increment3**: Backend Development This increment addresses the server-side logic and database functionalities. The analysis [6] phase identifies the core backend features such as user authentication, dog listing [7] management, donation handling, etc. The design phase focuses on structuring the database, defining APIs, and planning how different components will interact. During the code stage, backend logic is implemented using server-side languages and frameworks (e.g., Node.js, Django, etc.). The test phase involves validating data flow, ensuring security, and confirming that APIs perform correctly.
4. **Increment 4:** Final Testing This is the final phase where the complete system is reviewed and tested as a whole. The analysis involves evaluating the integration of frontend and backend components and identifying potential issues. The design stage might include refining workflows or preparing for deployment. The code phase includes bug fixes and optimizations. Lastly, the test phase conducts comprehensive system testing, including performance, security, and user acceptance testing to ensure everything is ready for launch.

Advantages of Incremental Model:

- Generates working software quickly and early during the software life cycle.
- More flexible and less costly to change scope and requirements.
- Easier to test and debug during smaller iterations.
- Allows customer feedback on each build.
- Easier to manage risk as risky pieces are identified and handled during iterations.

System Analysis

3.1.1 Requirement Analysis

Based on user surveys, feedback from animal shelter staff, and research into adoption platforms, the key requirements for Paws Nepal are:

Functional Requirements:

- Dog Listings: Display adoptable dogs dynamically by loading data from a JSON file using AJAX.
- Filtering and Sorting: Allow users to filter dogs by breed, age, and size, and sort listings by name, age, or size.
- Visit Scheduling Form: Enable users to select a date and time to schedule shelter visits, using a datepicker for ease of use.
- Adoption Process Guide: Provide a clear step-by-step adoption process for users to understand requirements and next steps.
- Cost Calculator: Calculate and display estimated monthly costs for food, veterinary care, grooming, and other expenses based on dog size and age.
- Responsive Navigation: Include a mobile-friendly navigation menu with a hamburger icon for smaller screens.
- Responsive Design: Ensure the website adjusts smoothly for all screen sizes and devices.

Non-Functional Requirements:

- Performance: Pages should load quickly, with minimal delays (under 3 seconds).
- Usability: Interface must be easy to use for people of all ages, including those not tech-savvy.
- Compatibility: Support all major browsers (Chrome, Firefox, Safari, Edge) and work well on desktops, tablets, and smartphones.
- Reliability: Handle invalid user inputs gracefully, such as incorrect form submissions or unsupported filters.

3.1.1. Feasibility Analysis

Technical Feasibility

- Frontend technologies: HTML5, CSS3, and JavaScript
- Libraries: jQuery for DOM manipulation; jQuery UI for interactive sliders and date picker
- Development tools: Visual Studio Code for coding, testing, and debugging.
- Data format: JSON files to store and load quiz questions dynamically.

Operational Feasibility

- No backend or server-side programming needed, making deployment simple.
- The app runs on any modern browser and device (desktop, tablet, mobile).
- No complex server setup re configuration required.

Economic Feasibility

The development of **Paws Nepal** is very cost-effective, as it relies solely on free and open-source technologies such as HTML, CSS, JavaScript, jQuery, and AJAX. No paid software or backend services are needed, and the entire website can be hosted for free on platforms like GitHub Pages or Netlify. This makes it an affordable solution, especially suitable for small organizations, educational projects, or individuals wanting to create a functional pet adoption site without any financial burden..

Project Task and schedule

The Project Schedule is designed as per the requirements and constraints involved. This project has been completed in about 2.5 months. Requirement analysis and System design were given major emphasis. Research and database management were done at first.

Debugging and testing have been done prior to the completion of the project. The table shown below shows project scheduling for completing different aspects of the project.

Task and Time Schedule:

No.	Task	Approximation time (day)
1.	Requirement analysis and specification	8
2.	Design	10
3.	Development	18
4.	Testing	5
5.	Deployment	2
6.	Documentation	4

The project schedules are performed as per the requirements and time constraints.

3.1.3 Data Modeling

The dog adoption application uses a JSON-based data structure to store and manage dog profiles. Each dog entry contains essential information including name, breed, age, size, description, and image path. This standardized format ensures consistent data handling and seamless integration with frontend JavaScript components for displaying dog listings.

The JSON structure supports dynamic content loading and profile management through client-side operations. Sample JSON structures demonstrating the data model are provided in Appendix.

3.1.4 Process Modeling

User Browsing and Filtering Dogs

- Start: User visits the adoption page.
- Action: The system loads dog data dynamically from a JSON file using AJAX.
- Action: User applies filters (breed, age, size) and sorts listings (name, age, size).
- Result: The displayed dog cards update in real-time to match the user's preferences.

Scheduling a Shelter Visit

- Start: User fills out the shelter visit form.
- Action: User selects a date using a jQuery UI datepicker and chooses a time slot.
- Result: Form validates inputs and confirms scheduling (note: data is not stored due to lack of backend).

Using the Adoption Cost Calculator

- Start: User selects dog size and age from dropdowns.
- Action: Calculator computes estimated monthly costs for food, vet care, grooming, and other expenses based on selected options.
- Result: Results display instantly, helping users understand potential expenses.

Navigating the Adoption Process

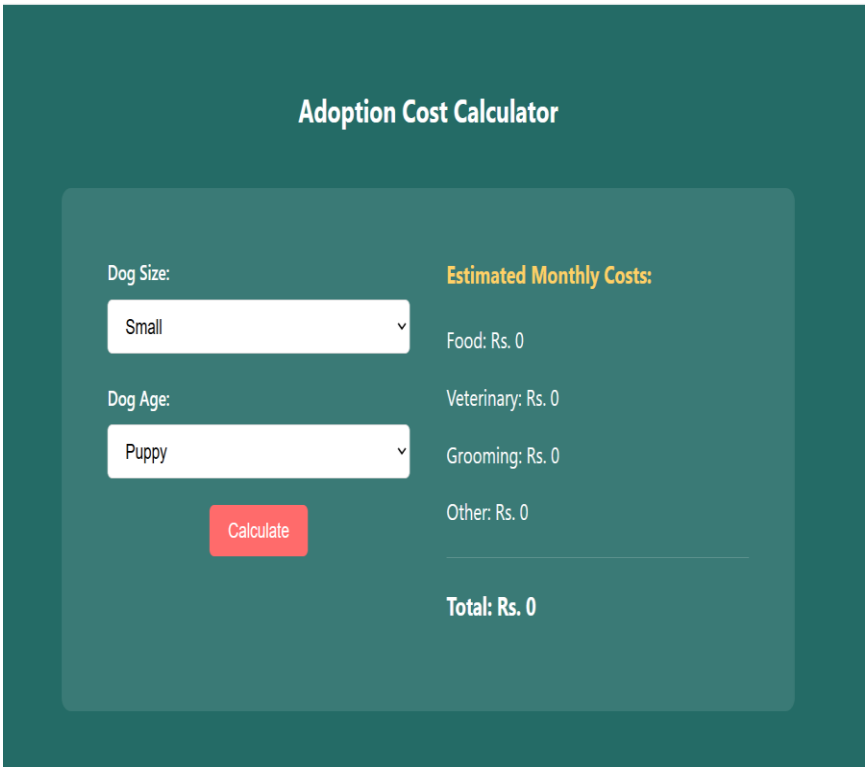
- Start: User views the adoption process section.
- Action: User reads through the step-by-step guide explaining application, home visit, meet & greet, and final adoption steps.

3.2System Design

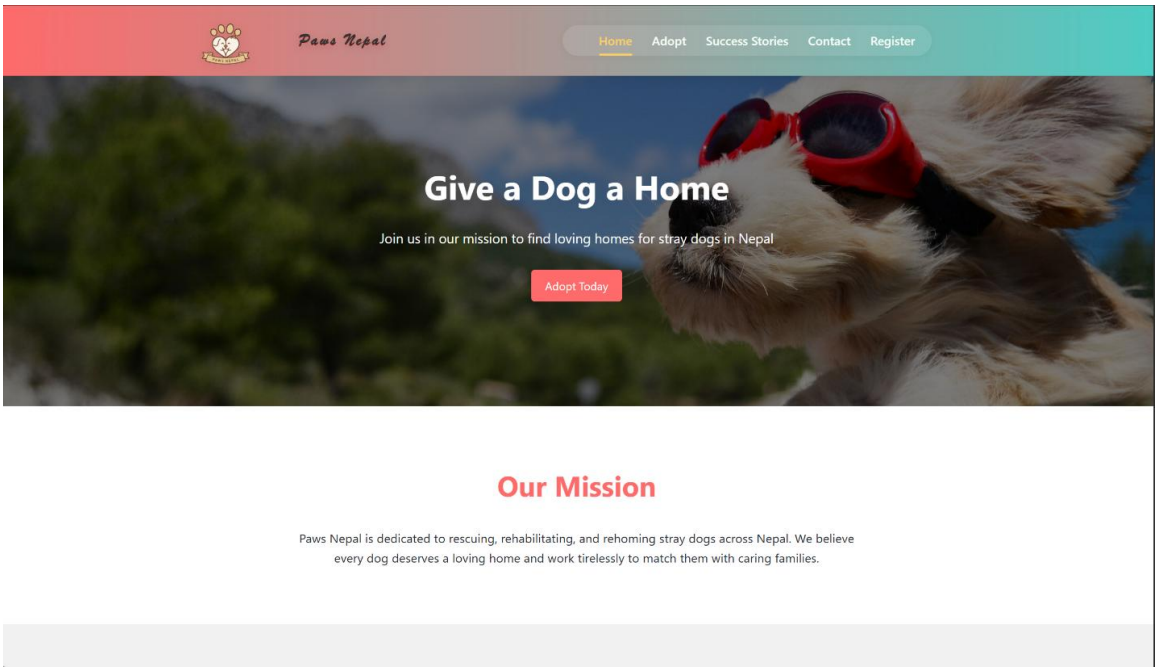
The system design of Paws Nepal focuses on creating a simple, efficient, and user-friendly pet adoption website using front-end technologies. It emphasizes modularity and responsiveness to ensure smooth interactions across all devices. Key components include dynamic data loading from JSON files, client-side filtering and sorting, interactive forms for scheduling visits, and a cost calculator—all handled within the browser without any backend or database. This approach makes the system lightweight, easy to maintain, and suitable for deployment on static hosting platforms.

3.2.1 Interface Design

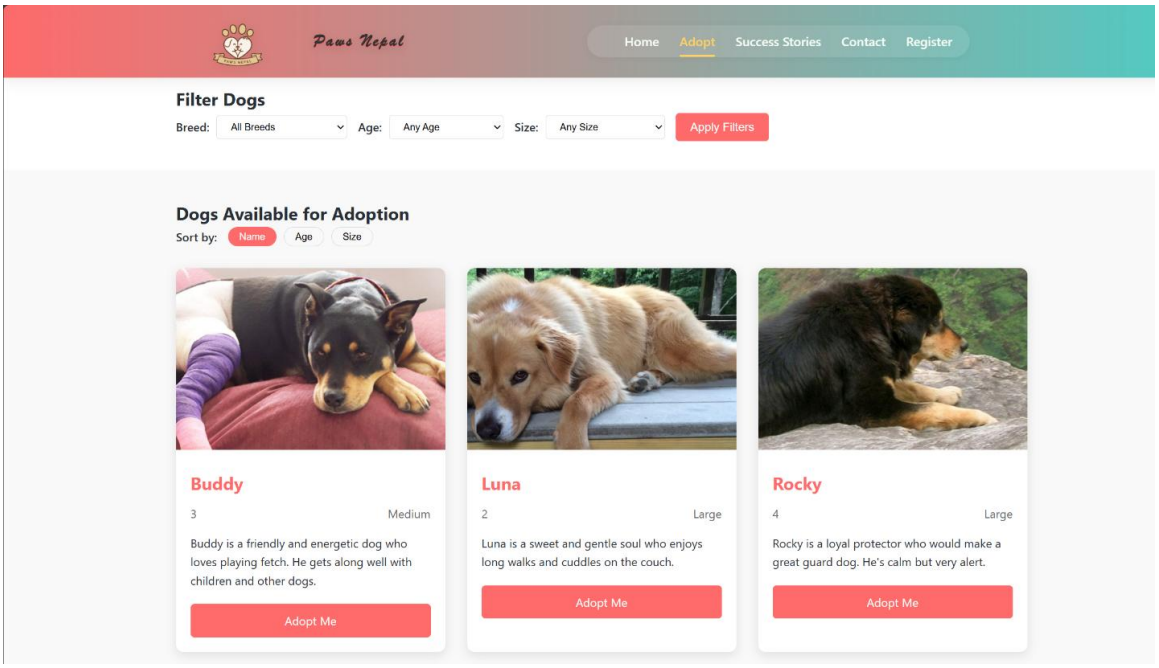
- Calculator Design



- Home Page



- Adopt Page



Chapter 4: Implementation and Testing

4.1 Implementation

4.1.1 Tools Used

- Languages: HTML, CSS, JavaScript
- Libraries: jQuery, jQuery UI
- Tools: Visual Studio Code

4.1.2 Module Descriptions

- **Home Module –** Provides a welcoming interface and navigation to all main pages of the website.
- **Adoption Listing Module –** Dynamically displays adoptable dogs with real-time filtering and sorting options.
- **Visit Scheduling Module –** Allows users to schedule shelter visits using a datepicker and time selector.
- **Cost Calculator Module –** Estimates monthly pet care costs based on selected dog size and age.
- **Adoption Process Guide Module –** Explains the step-by-step process involved in adopting a dog.
- **Gallery and Success Stories Module** – Showcases adopted dogs and highlights successful adoption stories.
- **Footer and Contact Module –** Displays contact information, quick links, and organizational details.

Team members and their roles:

Team Members and their roles/responsibilities are shown below:

Name	Role	Responsibilities
James Shrestha	HTML, documentation	Making doc files, html
Lujah Maharjan	JavaScript , CSS	DOM manipulation and minor css styling
Nujah Maharjan	CSS, HTML	User interface design and visual presentation

Task Done So Far :

• Home Page

• Calculator for adoption

• Register Page

• Contact Page

Tasks Remaining:

• Login Page

• Database

• Responsive and optimized in smaller devices

4.2 Testing

Testing for Paws Nepal focused on verifying the functionality, responsiveness, and user experience of the website. Each module was tested manually across different devices and browsers to ensure data loading, filtering, and interactive behavior. Since the project uses only front-end technologies, testing focused on verifying JSON data loading, AJAX functionality, date pickers, and calculators to ensure a bug-free user experience across all platforms

4.2.1 Unit Testing

Although the project is front-end only and does not use a testing framework, basic **unit testing** was performed manually on individual components:

- **Filter Logic:** Tested with different combinations of breed, age, and size to ensure accurate results.
- **JSON Data Loading:** Verified that data loads correctly via AJAX without refreshing the page.
- **Cost Calculator:** Confirmed that the monthly cost is correctly calculated based on selected dog size and age.
- **Form Validation:** Ensured that the visit scheduling form does not accept empty or invalid inputs.
- **Responsive Layouts:** Tested components independently across screen sizes to verify responsiveness.

Each function was tested in isolation to check if it produced the expected output when given specific input

Project Deliverable

- **Responsive Multi-Page Website**
  – A fully functional pet adoption website built using HTML, CSS, JavaScript, jQuery, and AJAX.
- **Dynamic Dog Listing with Filtering & Sorting**
  – JSON-based dog profiles that can be filtered by breed, age, and size, and sorted in real-time.
- **Visit Scheduling Form**
  – An interactive form with a date picker and time selector for booking shelter visits.
- **Adoption Cost Calculator**
  – A module that estimates monthly pet care costs based on selected parameters.

- **Adoption Process Guide Section**

  – A step-by-step explanation of the pet adoption process displayed clearly on the site.
- **Gallery and Success Stories Page**

  – A visual section showcasing previously adopted dogs and real-life success stories.
- **User Interface Enhancements**

  – Responsive design, smooth transitions, navigation menu, and mobile-friendly layout.
- **Static Hosting Deployment**

  – Hosted live on GitHub Pages for free public access.
- **Documentation Report**

  – A complete technical and project documentation detailing requirements, design, testing, and outcomes.
- **Source Code Package**

  – All website files (HTML, CSS, JS, JSON, images) packaged and ready for further ***use or improvement.***

Chapter 5: Conclusion and Future Recommendations

1.1 Lesson Learnt

- **Improved Understanding of Frontend Interactivity and Modularity**

One of the key lessons learned from developing the **Paws Nepal** website was gaining a deeper understanding of building interactive and modular front-end applications. The project involved managing dynamic content such as dog listings, implementing real-time filtering and sorting based on user input, and ensuring a smooth user experience through organized UI components. Developing the cost calculator, filter logic, and visit scheduling form improved the ability to manage state and interactivity entirely on the client side. This enhanced understanding of JavaScript and jQuery made it easier to create responsive, user-driven features without the need for backend integration.

- **Hands-On Experience with Responsive Design and User-Centered Layouts**

Another important takeaway from the Paws Nepal project was learning how to implement and test responsive design effectively. Ensuring the website worked well across a range of devices—from smartphones to large desktops—involved using flexible layouts, relative units, and CSS media queries. The design needed to maintain both functionality and visual appeal regardless of screen size, which required consistent testing and refinement. Additionally, building an intuitive UI taught valuable lessons in structuring content, improving readability, and optimizing user flow. This experience reinforced the importance of user-centered design in web development and provided practical skills in creating clean, accessible, and mobile-friendly website

1.2 Conclusion

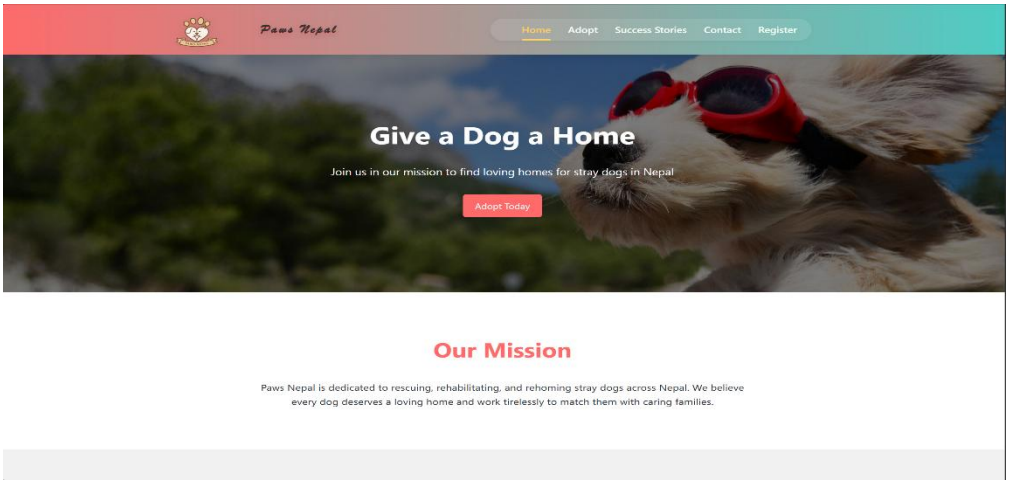
The development of the **Paws Nepal** pet adoption website has been a valuable learning experience in front-end web development, user interface design, and responsive layout implementation. By using only HTML, CSS, JavaScript, and jQuery, the project successfully demonstrates how a fully functional and interactive web application can be built without relying on backend technologies. Key features such as dynamic dog listings, real-time filtering, a visit scheduling form, and an adoption cost calculator were designed to enhance user engagement and provide a smooth, intuitive experience.

This project not only helped apply core web development concepts but also emphasized the importance of accessibility, performance, and user-friendly design. The use of modular code structure, real-time interactivity, and responsive design principles resulted in a clean and maintainable application suitable for educational or non-commercial use.

Overall, **Paws Nepal** serves as a practical demonstration of how technology can support social causes like animal adoption, and it highlights the potential of front-end tools in building impactful, user-centered web solutions.

Appendices

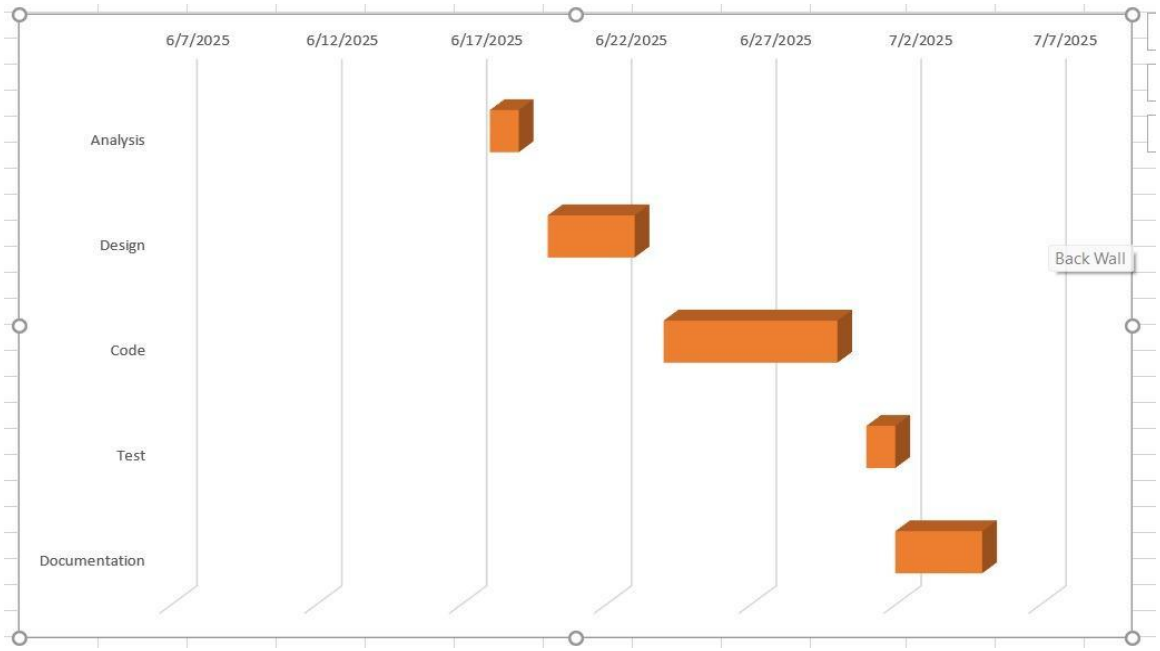
- Screenshots of Interface



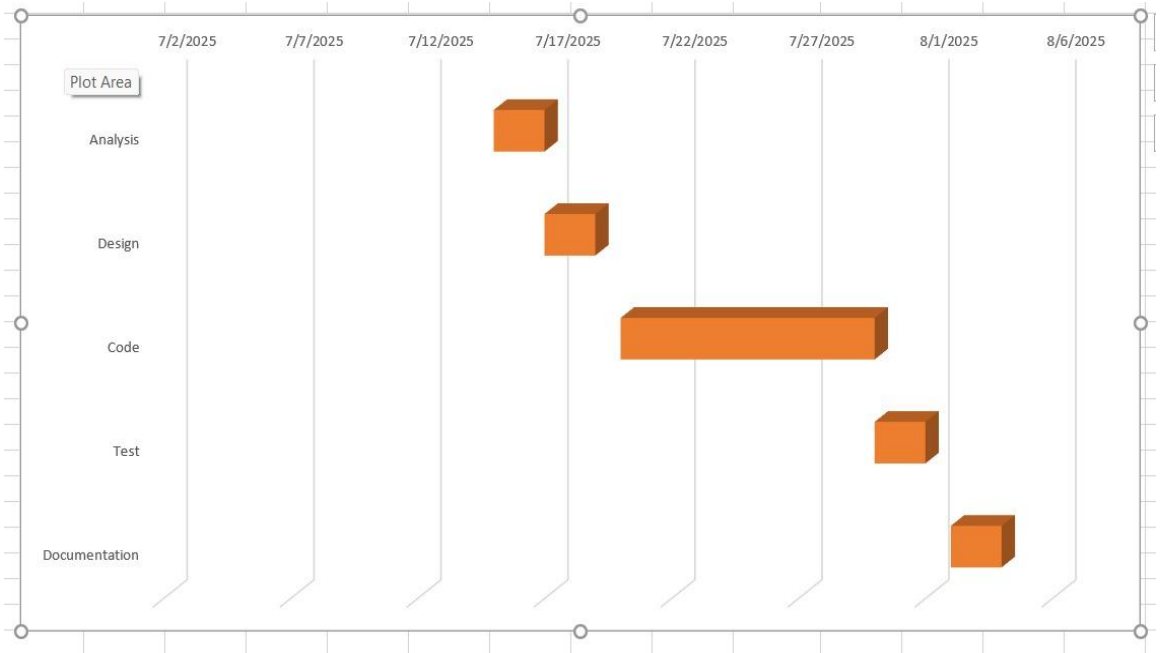
- Sample JSON File

- Gantt Chart

Increment 1:UI/UX



Increment 2: Frontend



Increment 3: Backend

Increment 4: Final testing

- Source Code

  HTML:

```
</head>
<body>
    <header>
        <div class="container">
            <div class="logo">
                <img src="images/logos/paws-nepal-logo.svg" alt="Paws Nepal Logo">

                <h1>Paws Nepal</h1>

            <nav>
                <div class="hamburger">
                    <i class="fas fa-bars"></i>
                </div>
                <ul class="nav-links">
                    <li class="active"><a href="index.html">Home</a></li>
                    <li><a href="adopt.html">Adopt</a></li>
                    <li><a href="gallery.html">Success Stories</a></li>
                    <li><a href="contact.html">Contact</a></li>
                    <li><a href="register.html">Register</a></li>
                </ul>
            </nav>
        </div>
    </header>

    <!-- Loading Section -->
        <section class="hero">
            <div class="hero-content">
                <h2>Because Every Stray Deserves a Place to Stay</h2>
                <p>Join us in our mission to find loving homes for stray dogs in Nepal</p>
                <a href="adopt.html" class="btn">Adopt Today</a>
            </div>
        </section>
```

CSS:

```css
/* Global Styles */
:root {
    --primary-color: #ff6b6b;
    --secondary-color: #4ecdc4;
    --dark-color: #292f36;
    --light-color: #f7fff7;
    --accent-color: #ffd166;
}

* {
    margin: 0;
    padding: 0;
    box-sizing: border-box;
}

body {
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
    line-height: 1.6;
    color: var(--dark-color);
    background-color: #f9f9f9;
}

.container {
    width: 90%;
    max-width: 1200px;
    margin: 0 auto;
    padding: 0 15px;
}

.btn {
    display: inline-block;
    background: var(--primary-color);
    color: white;
    padding: 12px 22px;
    border: none;
    border-radius: 16px;
    cursor: pointer;
    text-decoration: none;
    font-size: 1rem;
    transition: all 0.3s ease;
}
```

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