



**Department of Computer Technology
Daffodil Institute Of IT, Chattogram**
Daffodil Tower, 94 Sheikh Mujib Rd

Project Report

Online Pet Food and Accessories Selling Website with Additional
Pet Care Services

Submitted To
Md Badiuzzaman Biplob
Instructor
Department of Computer Technology
Daffodil Institute of IT, Chattogram

Submitted By
Innovative Thinkers Solutions Group
Batch:15th
Daffodil Institute of IT, Chattogram
Daffodil Tower, 94 Sheikh Mujib Rd

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Group Profile

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SL. No.	Name	ID
1	Al Mohaimin Farabi	590924
2	Rahela Begum	590948
3	Imran Ali Nishat	590976

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INTRODUCTION

The "Pet Club" platform was created in response to the increased desire for pet owners to have easy online purchase alternatives. The website seeks to deliver a hassle-free and joyful purchasing experience with its user-friendly design and vast product variety. Our major purpose is to provide authentic, inexpensive, high-quality pet food.

Aside from viewing and purchasing things, the website has a powerful search engine that allows visitors to rapidly identify certain products by name or category. Users may establish accounts, preserve personal information, and speed up subsequent checkouts by using Firebase for a secure login system.

Notably, the platform features an admin-level access function, allowing store staff to manage the product database from a protected dashboard. This guarantees that the product catalog is accurate and up to date, improving the overall dependability of the purchasing experience for clients.

More information on the project, including the tools and processes used to develop the "Pet Club" platform, will be provided in following sections of this report.

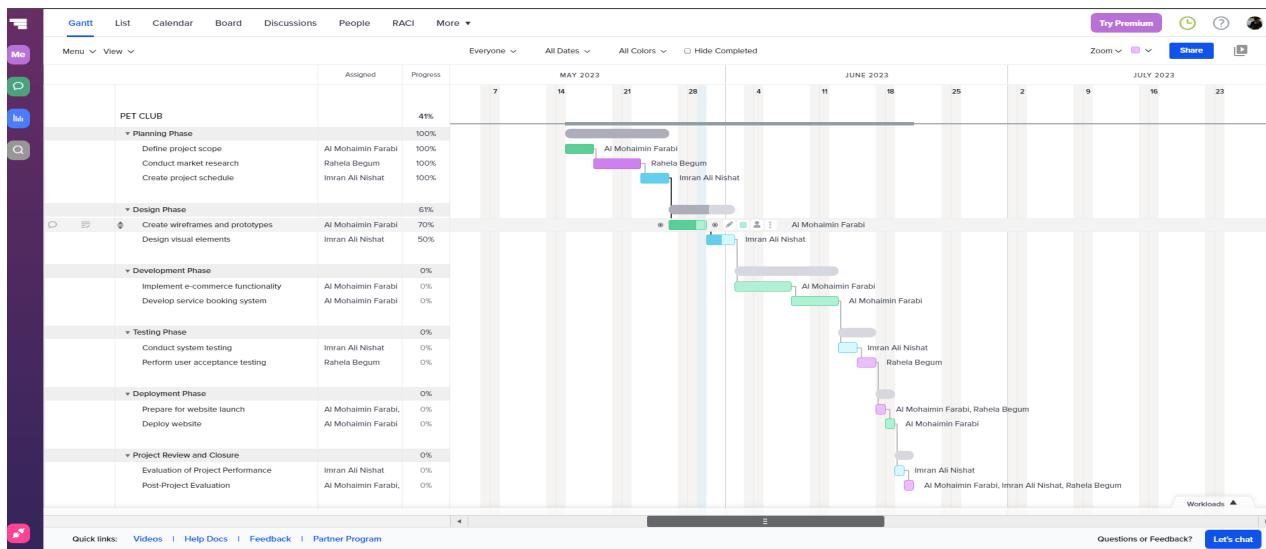
Overall, the "Pet Club" effort has been a huge success, and we expect the website to be a helpful resource for pet owners looking for simple online purchase choices.

METHODOLOGY

2.1 Planning Phase

Because of its sequential structure and adaptability for projects with well-defined criteria, the "Waterfall Model" was chosen for the creation of the Pet Club platform. This method enabled a methodical and structured development process, ensuring that each step was completed before proceeding to the next. It reduced the danger of scope creep, offered a clear roadmap, and made project management more efficient. The project team engaged in the following activities during this phase:

- Conducted meetings and discussions with stakeholders to gather project requirements.
- Analyzed the target audience, goals, and objectives of the website.
- Defined the project scope, deliverables, and milestones.
- Established a detailed project timeline and allocated resources accordingly.



-project gantt chart

2.2 Requirements Gathering and Analysis

The requirements for the "Pet Club" website were gathered and analyzed during the first phase of the project. Meetings and conversations with stakeholders, such as pet owners, were held to better understand their needs and expectations. To establish the scope of the project, the needs were recorded and prioritized.

2.3 Design Phase

The "Pet Club" website was rigorously designed and constructed throughout the system design phase utilizing the MERN (MongoDB, Express.js, React, Node.js) stack. The system design concentrated on developing a thorough strategy for the website, which included architecture, database structure, user interface, and other system components. Wireframes and prototypes were used to depict the website's layout and navigation flow. The following is a summary of the resultant system design:

2.3.1 Architecture and Technology Stack

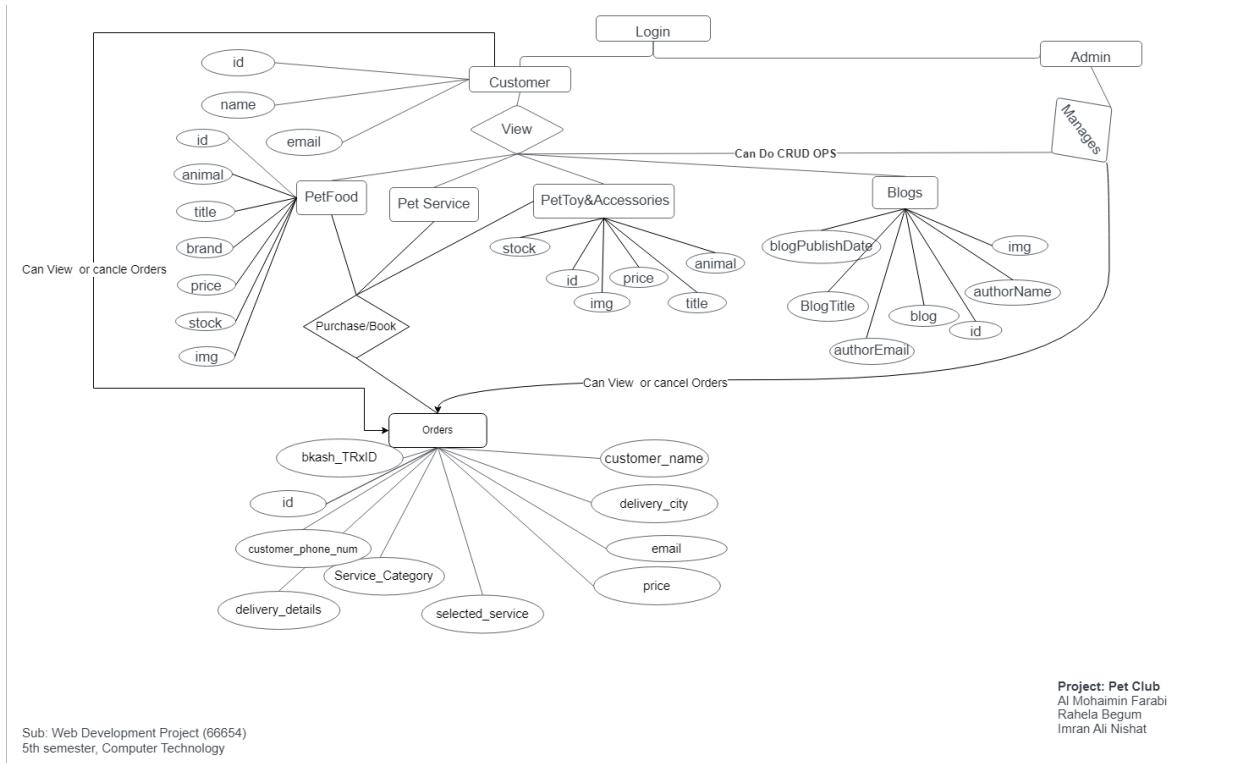
The website is built on a client-server architecture, including React on the client side allowing dynamic and interactive user interfaces. The server is developed with Node.js and Express.js, resulting in a stable and fast server environment. MongoDB, a NoSQL database, was chosen for its scalability and flexibility in managing numerous data entities.

2.3.2 User Interface

React was used in the user interface design, enabling for the construction of responsive and engaging user experiences. The interface was modularized using React components, ensuring reusability and simplicity of maintenance. CSS libraries and frameworks, such as Bootstrap, were used to improve the website's aesthetic appearance and responsiveness.

2.3.3 Database Design

The MongoDB database was chosen for its ability to effectively store and handle data. The database was designed without a schema, allowing for simple growth and alteration of data structures as needed. This adaptability allows for the easy incorporation of new features and future improvements.



-project ER Diagram

2.3.4 Wireframes and Prototypes

Wireframes and prototypes were built to depict the website's layout and navigation flow. These graphic representations acted as blueprints for the development team, ensuring that the anticipated user interface and interactions were apparent. The system design of the "Pet Club" website, created using the MERN stack, offers a stable basis for the web application's scalable and efficient operation. MongoDB, Express.js, React,

and Node.js work together to provide excellent data management, dynamic user interfaces, and seamless client-server communication.

2.4 Implementation & Coding

The "Pet Club" website project's implementation phase included the actual creation and coding of the many components and capabilities. During this phase, the system design was developed into a fully working website. The following is a summary of the implementation process:

2.4.1 Front-End Development

The front-end development team concentrated on executing the user interface design and producing the website's aesthetic aspects. To provide the interactive features and functionality, React components were built in JavaScript. To organize the web pages and style the elements according to the design standards, HTML and CSS were used. Front-end development also entailed integrating third-party libraries, such as Bootstrap 5 and Material-UI, to improve the user experience and add features such as sliders and carousels.

2.4.2 Back-End Development:

Back-end development was in charge of building server-side logic and managing the "Pet Club" website's business procedures. The server-side framework was built using Node.js and Express.js. Back-end development entailed building APIs (application programming interfaces) to handle user authentication, product inventory management, order processing, and database interaction. To protect the integrity and confidentiality of user data, server-side validation and security mechanisms were deployed.

2.4.3 Database Integration

The MongoDB database was connected with the back-end system during the implementation phase. To efficiently store and retrieve data, the

requisite data models and schemas were built. The back-end APIs connected with the database to manage user accounts, product details, and order information using CRUD (Create, Read, Update, Delete) activities. Database connectivity was critical for data permanence and delivering a consistent user experience.

2.4.4 Third-Party Library Integration

During the implementation phase, three important third-party libraries, React Router, React Alice Carousel, and Firebase Authentication, were implemented into the "Pet Club" website.

Client-side routing and navigation were provided via React Router across the website. To provide a pleasant browsing experience, it controlled the dynamic display of different sites based on the URL.

The React Alice Carousel module was used to build a responsive and visually appealing photo carousel. It allowed the "Pet Club" website to promote featured products or promotional items in a dynamic and interesting way, enhancing the overall user experience.

Firebase Authentication: Firebase Authentication was used to manage user authentication and authorization. It offered secure and trustworthy authentication services, allowing users to create accounts, log in, and protect sensitive information during the checkout process.

The adoption of these third-party frameworks, which comprised React Router, React Alice Carousel, and Firebase Authentication, improved the usability, aesthetic appeal, and security of the "Pet Club" website for users.

2.5 Testing Phase

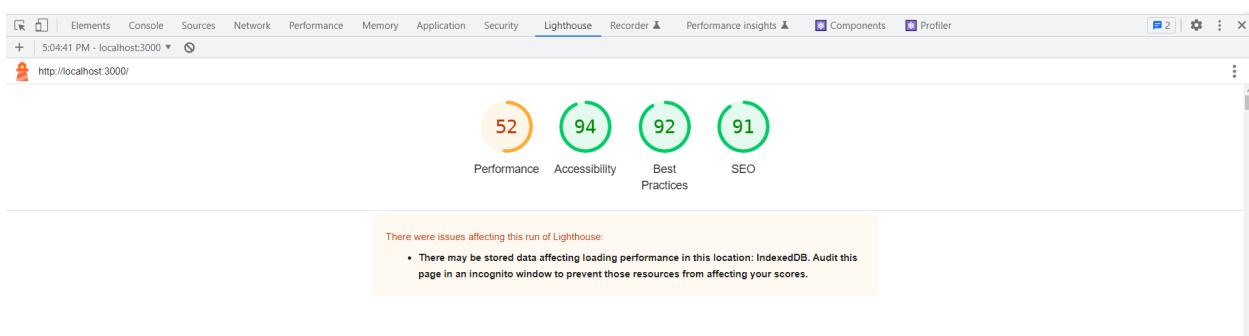
A variety of tests were performed to ensure the proper operation, functionality, and user experience of the "Pet Club" website. The following testing procedures have been completed:

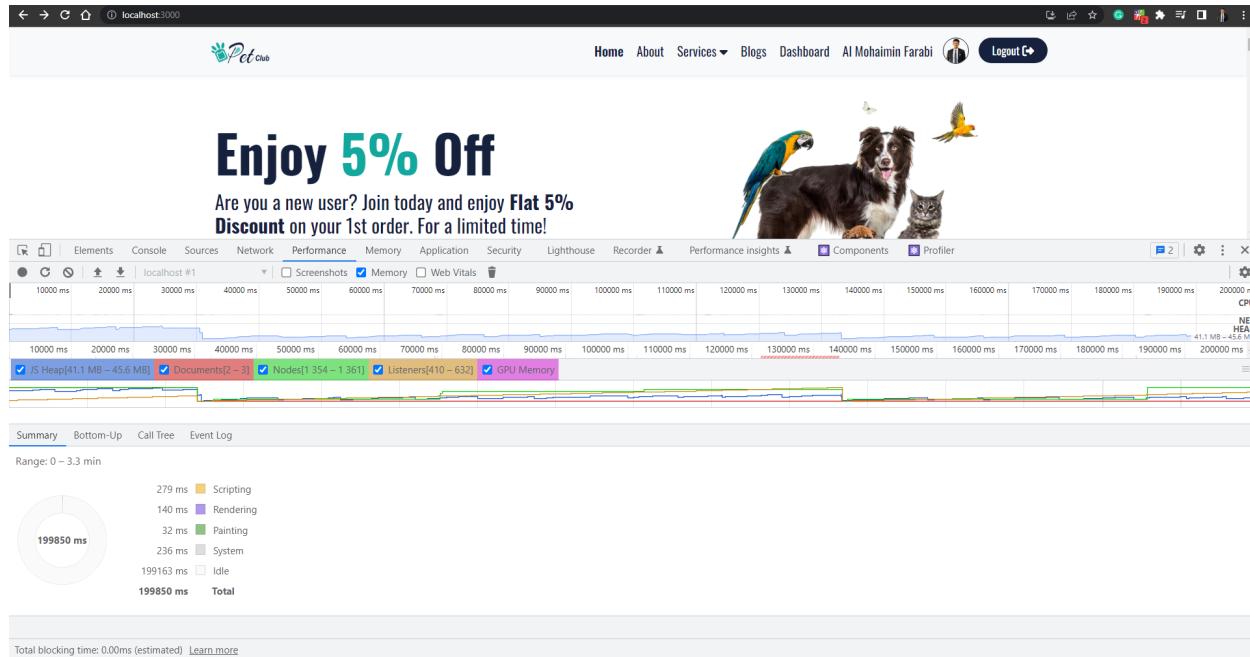
Experiment with a Chrome Lighthouse:

A testing tool called Chrome Lighthouse was used to evaluate the website's performance, accessibility, best practices, and search engine optimization (SEO) components. The application provided important information and recommendations for improving the performance of the website and guaranteeing compliance with industry norms and guidelines.

Performance Testing:

Performance testing was performed to assess the responsiveness and stability of the website under various load levels. Technologies such as Apache JMeter or analogous load testing tools were used to simulate significant user traffic and measure performance factors such as response time, throughput, and resource usage. Performance testing discovered any bottlenecks and enabled necessary changes to improve the website's speed and scalability.





-Performance test

2.6 Deployment Phase

The produced website files were uploaded to the hosting server, and the appropriate server configurations were set up during the deployment phase of the "Pet Club" website. To enable a safe connection, security measures such as SSL certificates were applied. Thorough testing was carried out to guarantee correct operation, and ongoing monitoring and maintenance were put in place to maintain optimal performance and resolve any future changes or difficulties.

2.7 Maintenance

Ongoing maintenance is necessary to ensure that the "Pet Club" website runs smoothly, securely, and efficiently. The following are some of the most critical maintenance operations:

Software updates, security fixes, and feature additions are applied on a regular basis to maintain the website up to current and safe.

Material management entails making frequent modifications and additions to the website's material in order to maintain it fresh and entertaining for users.

Monitoring & Performance Optimization: Constantly monitoring and improving the website's performance for maximum speed and responsiveness.

Security measures include executing regular security audits, putting in protections, and backing up data to prevent against data breaches.

User Support include responding to user enquiries and feedback in a timely manner, fixing technological difficulties, and enhancing the user experience.

Analyzing website performance data to obtain insights and make data-driven decisions for improvement is what analytics and reporting are all about.

Scalability and Growth: Taking steps to handle growing traffic and user demand as the website grows in size.

In addition, a one-week maintenance time was set aside to handle any urgent difficulties, execute essential upgrades, and thoroughly test the website before it was launched.

The "Pet Club" website's functionality, security, and user happiness are all maintained on a regular basis.

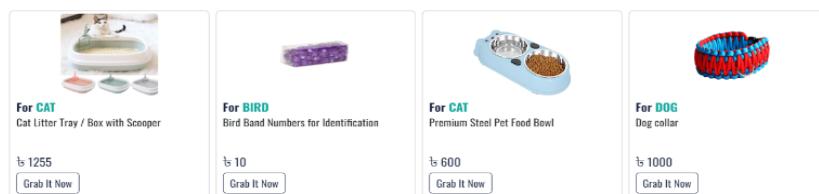
PET CLUB E-COMMERCE & SERVICE WEB APPLICATION

3.1 Home Page

We tried to design a very minimal UI so that users could navigate anywhere easily. Users can view our most popular products from the home page. If they liked something from our popular product section, they could directly go to the purchase page by clicking the product card button. If the user is not logged in, he or she will be redirected to the authentication page. After completing authentication, he or she will be redirected to the desired page.

The screenshot shows the homepage of the Pet Club website. At the top, there is a navigation bar with links for Home, About, Services, Blogs, Dashboard, Admin Farabi, and Logout. The main header features a teal-colored "Enjoy 5% Off" offer and a subtext: "Are you a new user? Join today and enjoy Flat 5% Discount on your 1st order. For a limited time!". Below this is a "Signup Now" button. To the right of the text is a collage of various pets including a dog, a parrot, a cat, and several smaller animals. The main content area has a heading "Our Services" followed by three service cards: "Pet Care" (with a heart icon), "Pet Food" (with a bowl and bone icon), and "Pet Toy & Accessories" (with a bone and ball icon). Each card contains a brief description and a "Pet Care", "Pet Food", or "Pet Toy & Accessories" button. Below this is a section titled "Our Most Popular Pet Food" featuring five product cards: "Kiwi Cat Dewormer Chewable Tablets 1pcs" (price ₦ 120, "Grab It Now" button), "Drool's Real Chicken Sausage for dogs" (price ₦ 120, "Grab It Now" button), "Drools Adult Dog Food Chicken And Egg 3kg(700 gm)" (price ₦ 990, "Grab It Now" button), "Versele-Laga Prestige Loco Parque Ara Parrot 2kg" (price ₦ 1300, "Grab It Now" button), and "Quik Premium Rabbit Food 750gm" (price ₦ 275, "Grab It Now" button). A horizontal ellipsis "..." is centered at the bottom of the product grid.

Our Most Popular Pet Toy & Accessories



From Our Blog



Health Benefits of Human-Animal Interactions

Rahela Begum October 27, 2022

Nothing compares to the joy of coming home to a loyal companion. The unconditional love of a pet can do more than keep you company. Pets may also decrease stress, improve heart health, and even help children with their emotional and social skills... [read full article](#)



Dog Training: Obedience Training for Dogs

AI Mohaimin Farbi November 30, 2022

There are two common methods of training a dog. The first is the aversive-based method. The second is the reward-based method. Aversive-based (discipline) training is when you use positive punishment and negative reinforcement techniques with your dog. Reward-based methods use rewards only for the behaviors that you want your dog to follow. Aversive-based training uses techniques like loud, unpleasant noises, physical corrections, and harsh scoldings to get your dog to act the way you want. On the other hand, reward-based training uses rewards whenever your dog does something you want it to do... [read full article](#)

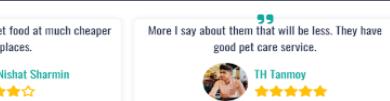


How to take care of your pet rabbits

Mili Akhter December 12, 2022

Rabbits are a social species and should not be kept alone, or without at least one other rabbit with whom they are compatible. Generally rabbits should live as part of a bonded pair of rabbits: this is a process that takes some time and patience but, if successful... [read full article](#)

Happy Clients & Feedbacks



NewsLetter.

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Frequently Asked Question

How To Train Your Dog ?
If you're wondering how to train a dog with a specific behavior, one of the most effective methods is to give them treats, praise, or affection. Most importantly, the best reward to give them is the one that they want the most. If they are food motivated, treats might work better than praise.
How To Mange Your Pets ?
What do pets teach us ?
Why are pets so loyal ?
Do pets recognize their owners ?



Pet Club is an online pet shop based in Chittagong providing your loving pets with their favourite foods and other accessories. We home deliver your pet food so you can receive from your doorstep.

GET SOCIAL!

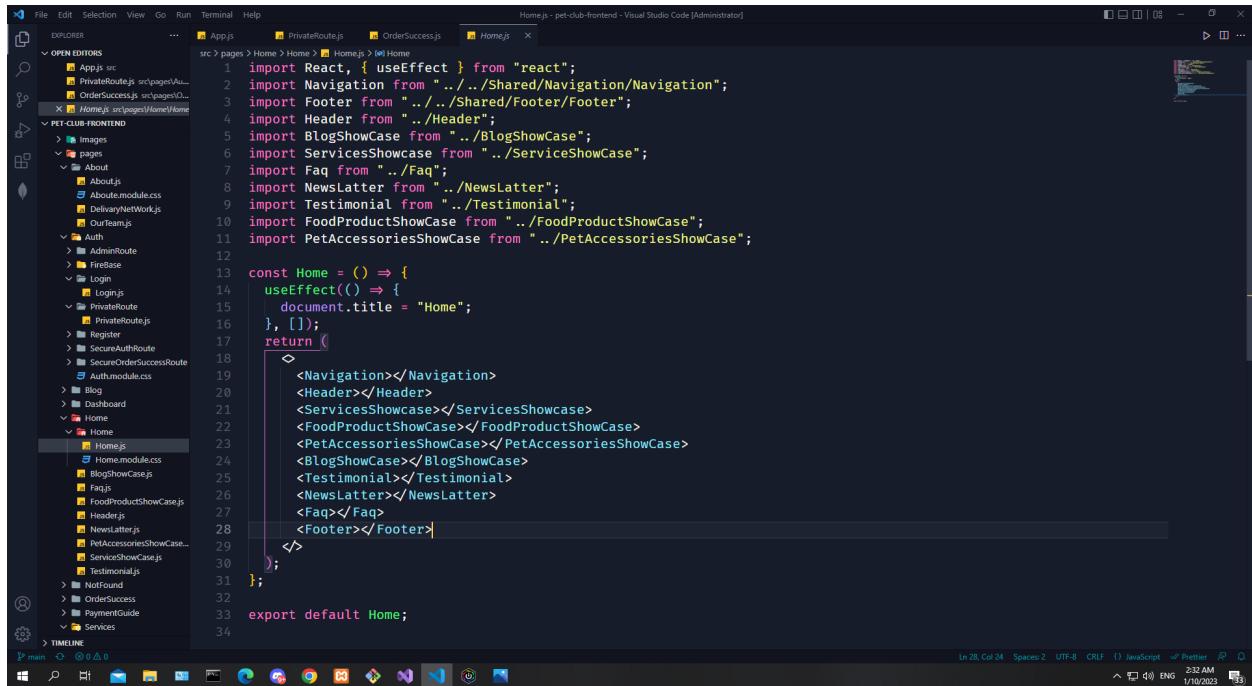


CONTACT INFO

Address: 7 No. West Shosholohor Ward Chattogram
Phone: 01720867938
Email: petclub.contact@petclub.com
Working Hours: Always Open

VISIT US IN PERSON!





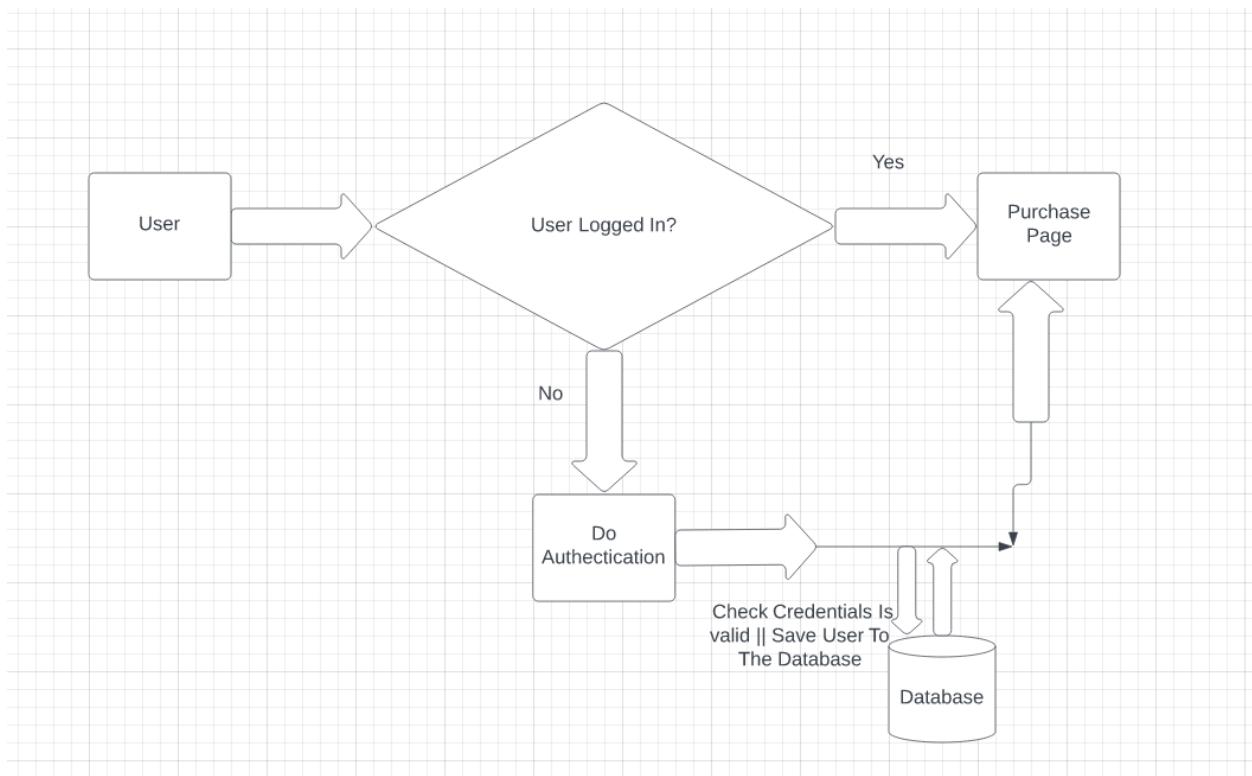
```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS
PET-CLUB-FRONTEND
src > pages > Home > Home.js
1 import React, { useEffect } from "react";
2 import Navigation from "../Shared/Navigation/Navigation";
3 import Footer from "../Shared/Footer/Footer";
4 import Header from "../Header";
5 import BlogShowCase from "../BlogShowCase";
6 import ServicesShowcase from "../ServiceShowCase";
7 import Faq from "../Faq";
8 import Newsletter from "../Newsletter";
9 import Testimonial from "../Testimonial";
10 import FoodProductShowCase from "../FoodProductShowCase";
11 import PetAccessoriesShowCase from "../PetAccessoriesShowCase";
12
13 const Home = () => {
14   useEffect(() => {
15     document.title = "Home";
16   }, []);
17   return (
18     <Navigation></Navigation>
19     <Header></Header>
20     <ServicesShowcase></ServicesShowcase>
21     <FoodProductShowCase></FoodProductShowCase>
22     <PetAccessoriesShowCase></PetAccessoriesShowCase>
23     <BlogShowCase></BlogShowCase>
24     <Testimonial></Testimonial>
25     <FAQ></FAQ>
26     <Footer></Footer>
27   );
28 };
29
30
31
32
33
34 export default Home;

```

-Layout component of the Home page

We have used React Router library for redirection.



-Flow Chart

```

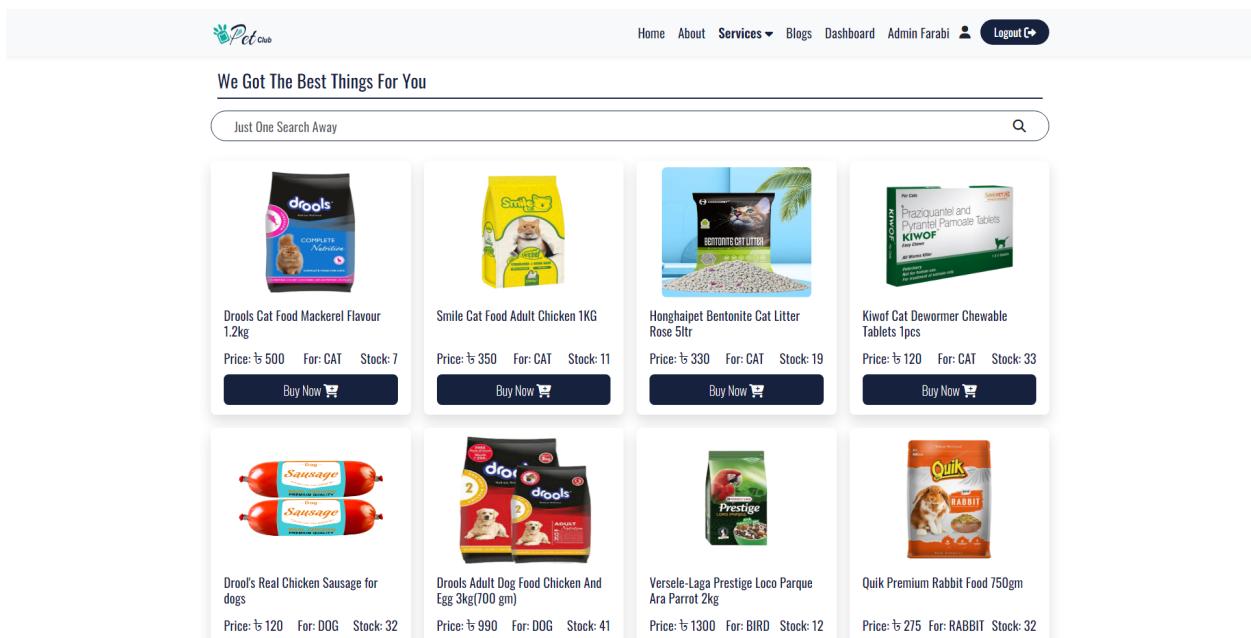
const PrivateRoute = ({ children }) => {
  const { user, isLoading } = useAuth();
  const location = useLocation();
  if (isLoading)
    return (
      <Navigation></Navigation>
      <div className="w-100 text-center mt-5">
        <div
          className="spinner-grow text-secondary text-center"
          role="status"
        >
          <span className="visually-hidden">Loading ...</span>
        </div>
      </div>
    );
  if (user.email) return children;
  return <Navigate to="/login" state={{ from: location }} />;
};

export default PrivateRoute;

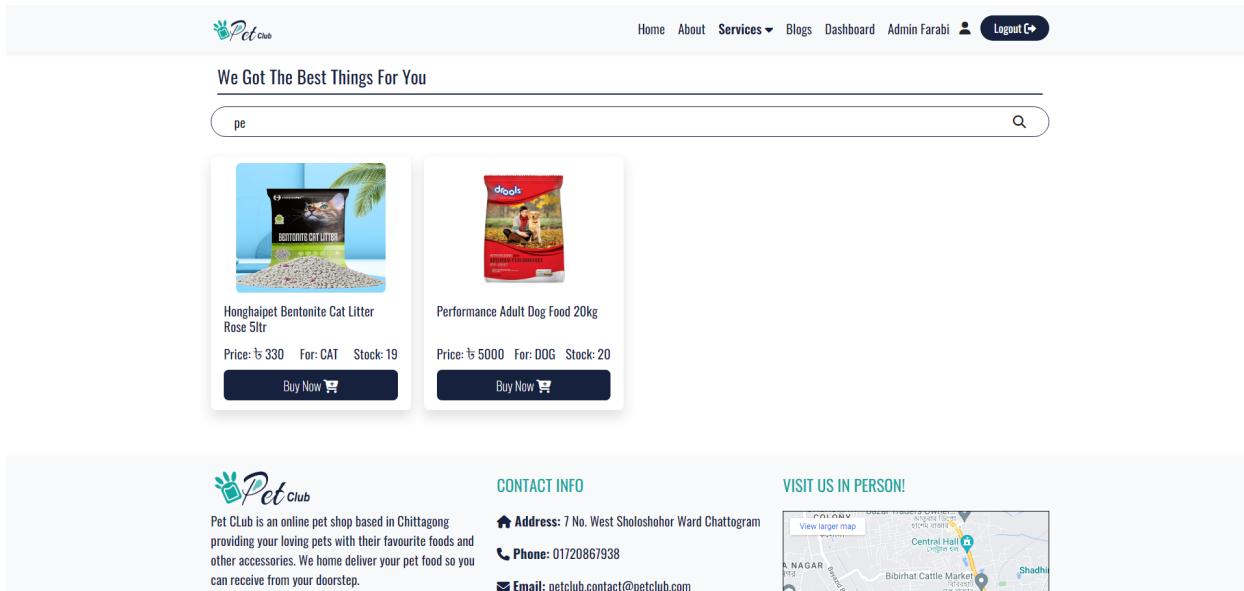
```

-Logic Of the Redirection Process

3.2 Product Page



We have a live search feature



```
File Edit Selection View Go Run Terminal Help PetFood.js - pet-club-frontend - Visual Studio Code [Administrator]
src > Pages > Services > PetFood.js > PetFood.js > OrderSuccess.js > PetFood.js > PetFood.js

src
1 import React, { useState, useEffect } from 'react';
2 import useFetch from './..../hooks/useFetch';
3 import { useNavigate } from 'react-router-dom';
4 import { Grid, Container, Row, Col, Skeleton } from 'react-bootstrap';
5 import Products from './..../Shared/Products/Products';
6 import resultNotFound from './..../Images/cant-find-search-result.gif';
7 import Footer from './..../Shared/Footer/Footer';
8 import Skeleton from './..../Shared/Skeleton/Skeleton';
9
10 const PetFood = () => {
11   const [searchedText, setSearchText] = useState('');
12   const [data, isLoading] = useFetch('http://localhost:5000/petfood');
13   const [displayData, setDisplayData] = useState([]);
14
15   useEffect(() => {
16     const handleSearch = (e) => {
17       const searchedText = e.target.value;
18       const filteredData = data.filter(
19         (singleData) => singleData.animal.toLowerCase().includes(searchedText.toLowerCase())
20       );
21       const displayData = filteredData.length === 0 ? [resultNotFound] : filteredData;
22       setDisplayData(displayData);
23     };
24     document.addEventListener('input', handleSearch);
25   }, [searchedText]);
26
27   return (
28     <div>
29       <div>
30         <input type="text" value={searchedText} onChange={handleSearch} />
31         <button>Search</button>
32       </div>
33       <div>
34         <div>
35           <h3>Pet Food</h3>
36           <ul>
37             <li><a href="#">Cat</a></li>
38             <li><a href="#">Dog</a></li>
39             <li><a href="#">Bird</a></li>
40             <li><a href="#">Small Animal</a></li>
41             <li><a href="#">Reptile</a></li>
42           </ul>
43         </div>
44         <div>
45           <h3>PetCare</h3>
46           <ul>
47             <li><a href="#">Pet Accessories</a></li>
48             <li><a href="#">Petcare</a></li>
49           </ul>
50         </div>
51       </div>
52       <div>
53         <h3>Our Team</h3>
54         <ul>
55           <li><a href="#">John Doe</a></li>
56           <li><a href="#">Jane Smith</a></li>
57           <li><a href="#">Mike Johnson</a></li>
58           <li><a href="#">Sarah Lee</a></li>
59           <li><a href="#">David Wilson</a></li>
60           <li><a href="#">Emily Davis</a></li>
61           <li><a href="#">Robert Green</a></li>
62           <li><a href="#">Sarah Lee</a></li>
63           <li><a href="#">David Wilson</a></li>
64           <li><a href="#">Emily Davis</a></li>
65           <li><a href="#">Robert Green</a></li>
66           <li><a href="#">Sarah Lee</a></li>
67           <li><a href="#">David Wilson</a></li>
68           <li><a href="#">Emily Davis</a></li>
69           <li><a href="#">Robert Green</a></li>
70         </ul>
71       </div>
72     </div>
73   );
74 }
75
76 export default PetFood;
```

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows the project structure under "PET CLUB FRONTEND".
- Editor:** Displays the code for `Products.js` located in the `Products` folder.
- Code:** The code is a component named `Products` that takes `data` and `from` as props. It maps over `data` to create a list of cards. Each card has a placeholder image with `lazyload="true"`, a title, and a footer with a "Buy Now" button and a cart icon.
- Terminal:** Shows the command `npm start`.
- Status Bar:** Shows the current file is `Products.js - pet-club-frontend - Visual Studio Code [Administrator]`, line 34, column 53, and the date `1/10/2023`.

-Code of the live search

3.3 Service Page

We have three different kinds of Services. Users can only book service if they are logged in. If they are logged in service booking form will be prefilled.

[Home](#) [About](#) [Services](#) [Blogs](#) [Dashboard](#) [Admin Farabi](#) [Logout](#)

Pet Care Services

At PetClub, we serve pets of every type, age, and phase of life because we truly love animals. We show it with every belly rub, long walk, scratch behind the ear, and treat we give. We'd love to be your trusted sidekick for a healthy and happy pet because we know we can deliver trusted, quality care and a professional, stress-free experience for you.

We Provide Three Kind Of Pet Care Service

*all of our services has the same price tag is 500



Puppy Sitting
You love your new puppy with all your heart...but you're less fond of stained carpets, clawed up shoes, and sleddery clothing. Thankfully, you don't have to go through the process of transforming your little rascal into a good boy or girl all by yourself. Our local sitters can help you customize the perfect feeding, exercise, and potty schedule for your pup while helping them learn the proper way to behave in your home.



Medical Administration
If your pet has a strict schedule for taking prescribed medication, enlisting a little help is never a bad idea. Our medical administrators are experienced with pills, shots, injections, and fluids and can ensure that your pet is getting the right medication at the right time. In their experienced hands, your pet will feel calm and comfortable.



Dog Walking
Most dogs can't wait to laser W-A-L-K, but it isn't always easy to find time for their favorite activity. We can help you give them their daily dose of fun-filled exercise with a 30, 45, or 60-minute walk that includes any feeding, watering, or potty breaks they need.

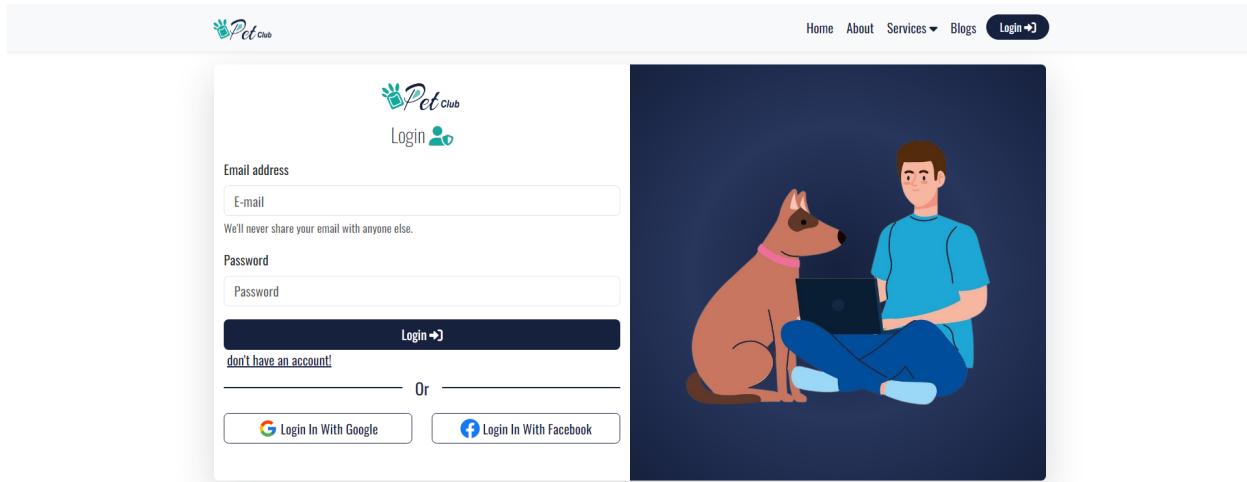
Please Fill Up This Form To Book A Service

Name <input type="text" value="Admin Farabi"/>	Email address <input type="text" value="adminfarabi@petclub.com"/>	
Select Service <input type="text" value="Select Service"/>	Service Category <input type="text" value="Pet Care"/>	Price <input type="text" value="500"/>
BKash Transaction ID <input type="text"/>		
ORDER How To Pay		

3.4 Authentication System

Authentication systems are an important security measure, as they prevent unauthorized users from gaining access to sensitive systems or data. We have used Firebase authentication to manage the user login and signup process for our online platform.

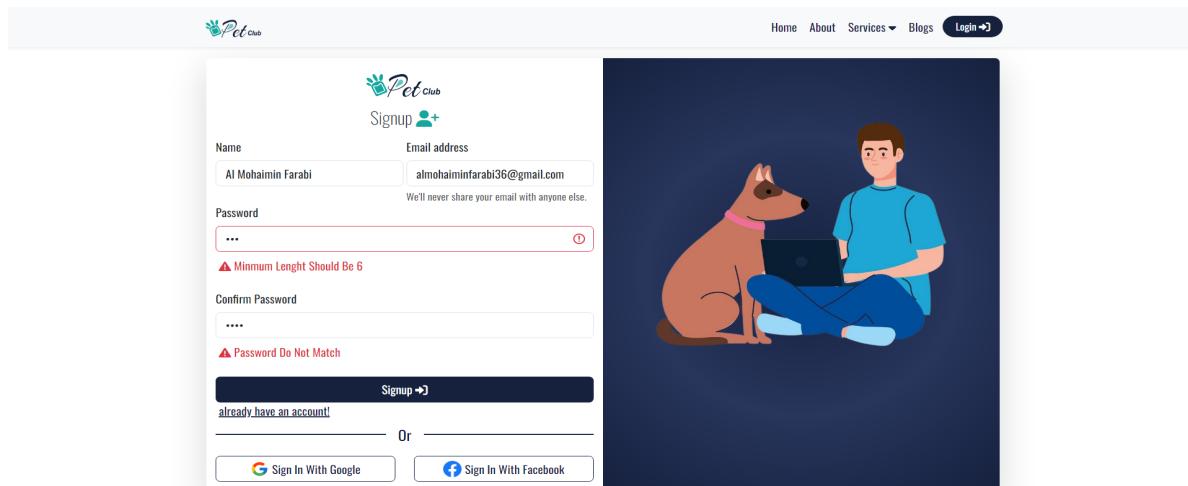
3.4.1 Login



The screenshot shows the Pet Club login page. At the top right, there are navigation links: Home, About, Services, Blogs, and a prominent 'Login' button with a right-pointing arrow. The main area features the Pet Club logo and a 'Login' button with a user icon. Below it is a form with fields for 'Email address' (labeled 'E-mail') and 'Password'. A note says 'We'll never share your email with anyone else.' Underneath the password field is a 'Login' button with a right-pointing arrow. Below the login buttons is a link 'don't have an account?'. A horizontal line separates this from social login options: 'Or' followed by 'Google' and 'Facebook' buttons with their respective logos. To the right of the form is a cartoon illustration of a man sitting cross-legged on the floor, working on a laptop, with a brown dog sitting next to him.

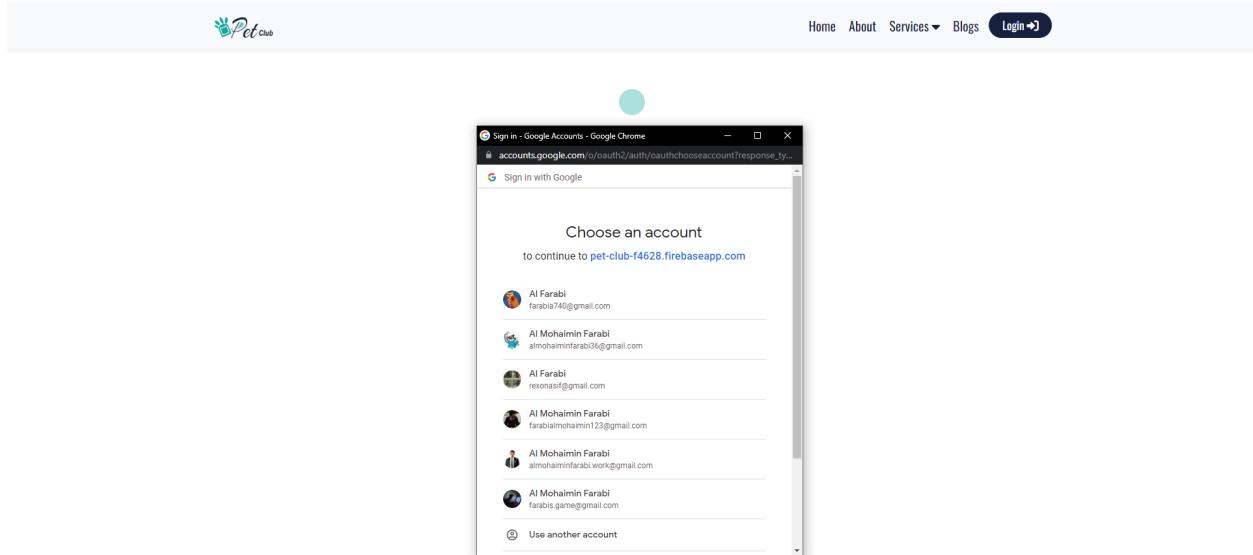
3.4.2 Signup

Validating User Signup Form



The screenshot shows the Pet Club signup page. At the top right, there are navigation links: Home, About, Services, Blogs, and a 'Login' button with a right-pointing arrow. The main area features the Pet Club logo and a 'Signup' button with a user icon. Below it is a form with fields for 'Name' (containing 'Al Mohaimin Farabi') and 'Email address' (containing 'almohaiminfarabi3@gmail.com'). A note says 'We'll never share your email with anyone else.' Below the email field is a password field with three dots. A red error message '▲ Minimum Length Should Be 6' appears above the password field. Below the password field is another password field with three dots. A red error message '▲ Password Do Not Match' appears above the second password field. Underneath the password fields is a 'Signup' button with a right-pointing arrow. Below the buttons is a link 'already have an account?'. A horizontal line separates this from social login options: 'Or' followed by 'Google' and 'Facebook' buttons with their respective logos. To the right of the form is a cartoon illustration of a man sitting cross-legged on the floor, working on a laptop, with a brown dog sitting next to him.

User Can also Signup using their Gmail account if they are so lazy to fill up this form



User Registration Successful

Enjoy 5% Off

Are you a new user? Join today and enjoy **Flat 5% Discount** on your 1st order. For a limited time!

[Signup Now](#)

User Name And Img here

-User In Our Firebase Console

_id	email	displayName	role
<code>ObjectId('63a75f5fbd1fc178e0f6f21b2')</code>	"almohaimifarabi36@gmail.com"	"Al Mohaimin Farabi"	"admin"
<code>ObjectId('63a75f5f77366034f1884afcb')</code>	"adminfarabi@petclub.com"	"Admin Farabi"	"admin"
<code>ObjectId('63a75f5fbd1fc178e0f6f21bf')</code>	"farabialmohaimin123@gmail.com"	"Al Mohaimin Farabi"	"admin"
<code>ObjectId('63a75f5fbd1fc178e0f6f21f5')</code>	"farabis.game@gmail.com"	"Al Mohaimin Farabi"	"admin"
<code>ObjectId('63a75f5fbd1fc178e0f6f21f9')</code>	"farabis.40@gmail.com"	"Al Farabi"	"admin"
<code>ObjectId('63b1fbcc34c3d7287f7fe')</code>	"almohaimifarabi16@gmail.com"	"Al Mohaimin Farabi"	"admin"

-User In Our DataBase

Purchase Page

Now users can purchase. Some fields of the purchase form will be prefilled from user credentials.

The screenshot shows a web browser window for 'Pet Club'. At the top, there's a navigation bar with links for Home, About, Services (with a dropdown arrow), Blogs, Dashboard, and a user profile for 'Al Mohaimin Farabi'. There's also a 'Logout' button. Below the navigation, a product card for 'Smile Cat Food Adult Chicken 1KG' is displayed, featuring an image of the bag and some text: 'For: CAT', 'Category: Pet Toy And Accessories', and 'Price: ₢ 350'. To the right of the product card is a form titled 'Please Fill Up This Form'. The form includes fields for Name (prefilled with 'Al Mohaimin Farabi'), Email address (prefilled with 'almohaiminfarabi36@gmail.com'), Product Name ('Smile Cat Food Adult Chicken 1KG'), Category ('Pet Toy & Accessories'), Price ('350'), Select City ('Select Delive'), Phone Number, Delivery Details, and BKash Transaction ID. At the bottom of the form are two buttons: 'ORDER' and 'How To Pay' with a question mark icon.

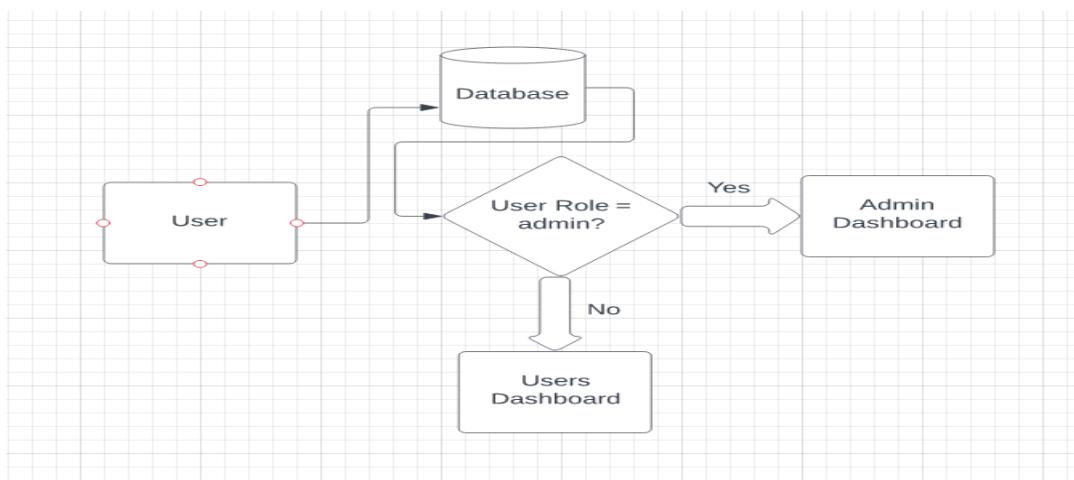
Order Success Page

The screenshot shows a 'Success' page from 'Pet Club'. The page features a large teal circle with a white checkmark icon in the center. Below the icon, the word 'Success' is written in white. Underneath 'Success', there is a message: 'We received your purchase/service request; You Will Recieve Your Order Shortly!'. At the top of the page, there's a navigation bar identical to the one on the purchase page, including links for Home, About, Services, Blogs, Dashboard, and a user profile for 'Al Farabi'. There's also a 'Logout' button. The status bar at the bottom of the screen shows system icons, the time '1:50 AM', and the date '1/10/2023'.

Dashboard

4.1 Dashboard

A dashboard is a central location that provides a summary of important information and data from various sources. It allows users to quickly and easily access and analyze relevant data, and make informed decisions based on that data.



-Dashboard access flow chart

```

const mongoose = require('mongoose');
const express = require('express');
const app = express();
const cors = require('cors');

// Connect to MongoDB
mongoose.connect('mongodb://localhost:27017/pet-club', { useNewUrlParser: true, useUnifiedTopology: true });

// Define schema
const userSchema = new mongoose.Schema({
  email: String,
  role: String
});

const User = mongoose.model('User', userSchema);

// Get all users
app.get('/users', async (req, res) => {
  const users = await User.find({});
  res.json(users);
});

// Create a new user
app.post('/users', async (req, res) => {
  const user = req.body;
  const result = await User.create(user);
  res.json(result);
});

// Update a user
app.put('/users/:id', async (req, res) => {
  const id = req.params.id;
  const user = req.body;
  const filter = { _id: id };
  const options = { upsert: true };
  const updateDoc = { $set: user };
  const result = await User.updateOne(filter, updateDoc, options);
  res.json(result);
});

// Server side verification before making someone admin
app.put('/users/admin', async (req, res) => {
  const user = req.body;
  const requesterAccount = user.requester;
  const email = user.email;

  if (user) {
    const checkRequesterAccount = await User.findOne({
      email: requesterAccount,
    });

    if (checkRequesterAccount.role === 'admin') {
      const filter = { email: email };
      const updateDoc = { $set: { role: 'admin' } };
      const result = await User.updateOne(filter, updateDoc);
      res.json(result);
    } else {
      res.status(403).json({ message: "You do not have access to make admin" });
    }
  }
});

// Checking role
app.get('/users/:email', async (req, res) => {
  const email = req.params.email;
  const query = { email: email };
  const user = await User.findOne(query);
  let isAdmin = false;
  if (user.role === 'admin') {
    isAdmin = true;
  }
  res.json({ isAdmin });
});
  
```

-Cheking User Role In Database

4.2 User Dashboard

User Can see his orders and if he or wants he/she can cancel orders

The screenshot shows the Pet Club User Dashboard. On the left sidebar, there are buttons for DASHBOARD, HOME, MY ORDERS, and Logout. The main content area displays a message: "You Have 1 Order's". Below this, a box contains details for an order: "Smile Cat Food Adult Chicken 1KG", "Category: Pet Toy & Accessories", "Price: ₢350", "Delivery City: Chittagong", and "Delivery Details: Chittagong". To the right of the order details is a red trash can icon with a white outline, used for canceling the order.

4.3 Admin Dashboard

The screenshot shows the Pet Club Admin Dashboard. On the left sidebar, there are buttons for DASHBOARD, HOME, MAKE ADMIN, ADD FOOD PRODUCT, ADD TOY & ACCESSORIES PRODUCT, MANAGE ALL ORDER, MANAGE ALL PRODUCT, and Logout. The main content area has a welcome message: "Welcome Al Mohaimin Farabi" and a note: "Your Admin DashBoard is Ready. Select option from the side-bar and go ahead." Below this, there are two dark blue boxes: "Pet Food Products Online" (You Have 20 Pet Food Products Online) and "Pet Toy And Accessories Products Online" (You Have 9 Pet Toy And Accessories Product Online). At the bottom, there is a dark box labeled "Orders" (You Have 5 Orders).

The admin dashboard welcome page will provide an overview number of pet food products, pet accessories, and toy products currently available online. The admin can also see the number of orders that have been placed on the website

Admin can make another user admin

The screenshot shows the Pet Club Admin Dashboard. On the left, there's a sidebar with several buttons: DASHBOARD, HOME, MAKE ADMIN (which is highlighted in red), ADD FOOD PRODUCT, ADD TOY & ACCESSORIES PRODUCT, MANAGE ALL ORDER, and MANAGE ALL PRODUCT. Below these is a Logout button. The main area has a header 'Pet Club' with links for Home, About, Services, Blogs, Dashboard, and a user profile. The dashboard itself is titled 'Make An Admin' and features a text input field labeled 'Enter email' and a 'MAKE ADMIN' button.

The screenshot shows a Visual Studio Code window with the file 'server.js' open. The code is as follows:

```

const user = req.body;
const filter = { email: user.email };
const options = { upsert: true };
const updateDoc = { $set: user };
const result = await usersCollection.updateOne(filter, updateDoc, options);
res.json(result);

// Server side verification before making someone admin

app.put("/users/admin", async (req, res) => {
  const user = req.body;
  const requesterAccount = user.requester;
  const email = user.email;

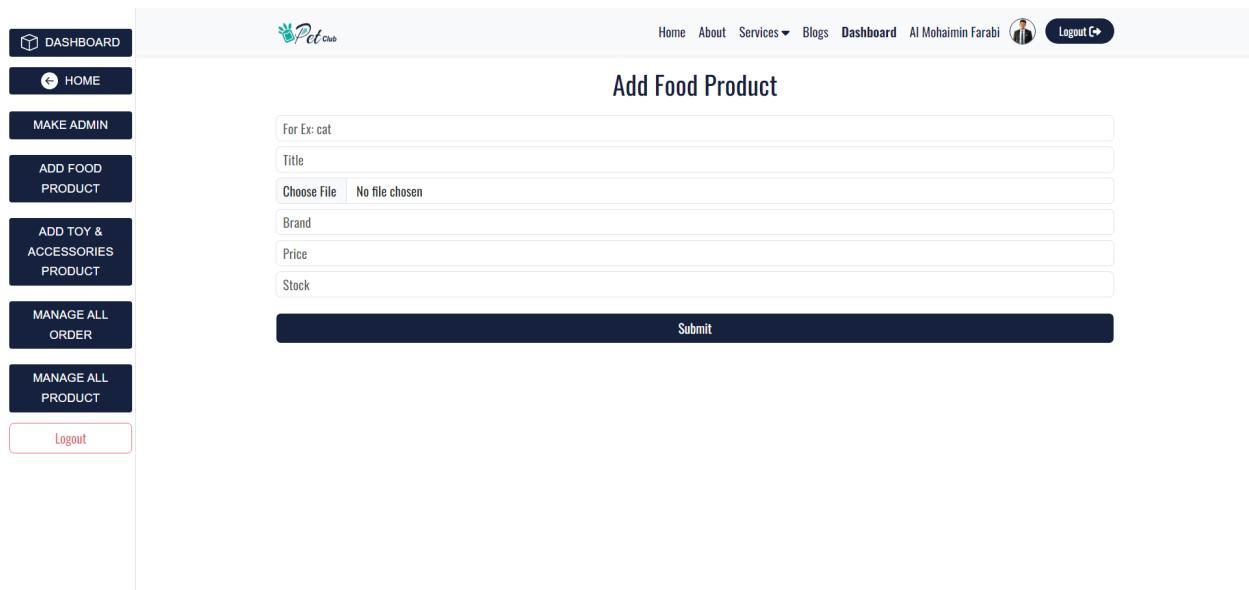
  if (user) {
    const checkRequesterAccount = await usersCollection.findOne({
      email: requesterAccount,
    });

    if (checkRequesterAccount.role === "admin") {
      const filter = { email: email };
      const updateDoc = { $set: { role: "admin" } };
      const result = await usersCollection.updateOne(filter, updateDoc);
      res.json(result);
    }
    else {
      res.status(403).json({ message: "You do not have access to make admin" });
    }
  }
  // checking role
  app.get("/users/:email", async (req, res) => {
    const email = req.params.email;
    const query = { email: email };
    const user = await usersCollection.findOne(query);
    let isAdmin = false;
    if (user.role === "admin") {
      isAdmin = true;
    }
  })
}

```

-Server side verification before making someone admin

Admin can add a new product to the database



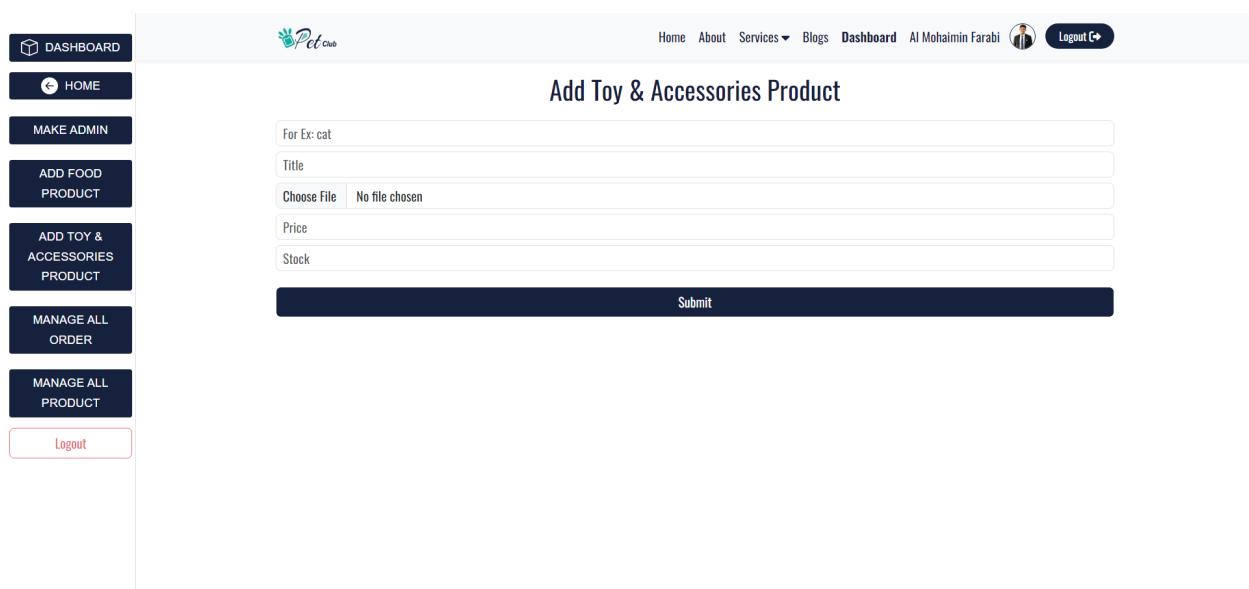
The screenshot shows the Pet Club Admin Dashboard. On the left, there is a sidebar with the following buttons:

- DASHBOARD
- HOME
- MAKE ADMIN
- ADD FOOD PRODUCT** (highlighted in red)
- ADD TOY & ACCESSORIES PRODUCT
- MANAGE ALL ORDER
- MANAGE ALL PRODUCT
- Logout

The main content area has the following fields:

- For Ex: cat
- Title:
- Choose File: No file chosen
- Brand:
- Price:
- Stock:

A large dark blue "Submit" button is at the bottom.



The screenshot shows the Pet Club Admin Dashboard. The sidebar is identical to the previous one, with the "ADD FOOD PRODUCT" button highlighted in red.

The main content area has the following fields:

- For Ex: cat
- Title:
- Choose File: No file chosen
- Price:
- Stock:

A large dark blue "Submit" button is at the bottom.

Admin can manage all orders

Medical Administration

Customer Name: Al Mohaimin Farabi
Customer Email: farabialmohaimin123@gmail.com
Category: Pet Care
Price: ₩500

Versele Laga Rabbit Crispy Crunchies Fruits 75gm

Customer Name: Al Mohaimin Farabi
Customer Email: farabialmohaimin123@gmail.com
Category: Pet Food
Price: ₩255
Delivery City: Chittagong
Delivery Details: chittagong

Dog collar

Customer Name: Al Mohaimin Farabi
Customer Email: farabialmohaimin123@gmail.com
Category: Pet Toy & Accessories

Admin can see al the products and if he/she wants he/she can edit or delete product

Pet Food Product
Total Product 20

	Drools Cat Food Flavour 1.2kg For: CAT Price: ₩500 Stock: 7 Brand: Drools	<input type="text" value="cat"/> <input type="file" value="Drools Cat Food Mackerel Flavour 1.2kg"/> <input type="button" value="Choose File"/> No file chosen <input type="text" value="Drools"/> <input type="text" value="500"/> <input type="text" value="7"/> <input type="button" value="Submit"/>
	Smile Cat Food 1KG For: CAT Price: ₩350 Stock: 11 Brand: Smile	

Pet Toy & Accessories Product
Total Product 9

	Honghaipet Bentonite Cat Litter Rose 5ltr For: CAT Price: ₩200 Stock: 19	
		<input type="text" value="Dog Adjustable Leash Harness Set Denim Collar"/> For: DOG Price: ₩900 Stock: 5 <input type="text" value="Pet Protection Cover Anti-Bite Scratching Wound Healing Ring for Cats & Dogs"/> For: DOG Price: ₩450 Stock: 9 <input type="text" value="Nutribird A18 Lori"/> For: BIRD Price: ₩4600 Stock: 19

CONCLUSION & FUTURE SCOPE

Future Scope

There are several areas for future improvement and expansion for the "Pet Club" project:

- Responsive design: We will improve the user interface (UI) to be responsive on all devices so that the website looks and functions well on desktop computers, tablets, and smartphones.
- Shopping cart: Currently, the shopping cart functionality does not save items for later. In the future, we plan to add a shopping cart feature using local storage, so that users can save items for later and complete their purchases in multiple sessions.
- Online Payment: Adding a payment gateway such as SSLCommerz and Stripe to allow for secure online transactions and payments.
- Mobile App: Develop a mobile app to give members easy access to the website and its features on the go. We are planning to make that app using react native.
- Virtual assistant: To further improve the user experience, we plan to add a virtual assistant that can answer questions and provide recommendations to users. This will help to make the shopping process more efficient and enjoyable.

CONCLUSION

In conclusion, the "Pet Club" project was a success. We were able to design and develop an online platform that allows users to browse and purchase pet food and accessories and that also provides a login system and admin-level access for managing the store's inventory.

We used the MERN stack (MongoDB, Express, React, and Node.js) to build the platform, and integrated Firebase for the login system. The platform includes a user-friendly interface and comprehensive product catalog, as well as a search feature and shopping cart functionality.

During the development process, we encountered several challenges and had to find creative solutions to overcome them. However, through hard work and collaboration, we were able to deliver a platform that meets the needs of our users and exceeds our initial goals.

Looking forward, we have identified several areas for future improvement, including adding a shopping cart using local storage, a virtual assistant, and a responsive design for all devices. We believe that these enhancements will help to make the "Pet Club" platform even more user-friendly and competitive in the online pet retail market.

Overall, we are proud of the "Pet Club" project and the value it brings to pet owners and the pet retail industry. We hope that it will continue to be a successful and valuable resource for many years to come.