COOPERS'PET SHOP

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ABSTRACT

Pets are important to all of us because they teach us valuable life lessons, trust, compassion, respect and patience. So, people have unconditional love for their pets. In Sri Lanka there are lots of pet shops with online websites. But those websites only have pet products in their websites and also have errors when ordering products through the website.

The purpose of this project is to develop an efficient website for coopers' pet shop owner to keep track of available pets, products and services on his website. An efficient website always includes products and services. By using this website customers can buy products, they can donate money for coopers' pet charity services, they can post their pet advertisements without any charge, they can register their pets for pet training programs and also this website includes pet E-channeling service. Customers can make free appointments from Petco clinic for their pets.

This website includes an admin panel. Pet owner can view/insert/delete/update pet products and services to the website by using admin panel. If a customer makes an order, the order details automatically saved in order details page in admin panel.

The system has developed by using PHP programming language and used MySQL database management with xampp server.

ACKOWLEDGEMENT

When developing this project, I had to take help and guidance from some special persons, who deserve my greatest gratitude. First of all, I would like to show my gratitude to Mr. Dhishan Dhammearatchi, module coordinator for teaches me this module. Secondly, I would like to show my gratitude to Ms. Sachini Gunasekara, project supervisor at CINEC campus for giving me best guidance for this project throughout the supervisor meetings.

And also, I would like to thanks my dear parents and my sister, friends and all the people who guided me to do this project successfully.

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CHAPTER 01 | INTRODUCTION

In Sri Lanka there are lots of pet shops with online websites.

But most websites are not user friendly for the customers. There are many websites only sell products. But an efficient website always includes products and services. Now a days in Sri Lanka most of people use the internet to do their day to day activities by using laptops, mobile phones etc.

After corona virus outbreaks people have to go through lockdown situations and also, they had to work from home. As a result of this many pet stores had to temporarily close their pet shops to keep their staff and customers safe. And also, people couldn't visit pet stores to buy pet products for their pets.

The aim of this project is to Develop an efficient website by using website features and Featuring a chatbot that help customers to ask questions and finding details, pet training, pet advertising and pet e-channeling efficiency.

This website will help customers during this Covid pandemic situation people can buy pet products and services by using this website.

1.1) Background

Sri Lanka is a developing country. In the past few years in Sri Lanka some cities had internet connections but not for the whole cities. In that situation, people do their works by using internet cafes.

But nowadays in Sri Lanka, the whole country has internet connection facilities and most people use the internet to do their day to day activities by using laptops, mobile phones, etc.

In our country there are lots of pet shops and also there are many people who buy products and services from those shops. But some pet shops already introduced websites for their customers.

I searched some pet shop websites in the Colombo area. There are lots of websites for pet shops. But all these websites have issues like websites don't have customer registration methods, some websites only sell products and some websites take orders from customers they don't deliver their order to their doorstep like, etc.

So, this system will solve all those issues because this website is going to develop using NetBeans with adding more website features. This web application is specially designed for a pet shop owner to keep track of the available pets, products, and also the services that he provides in his pet shop.

This website name called Coopers' pet shop. This system includes many features like a chatbot, pet services, quality pictures, well-written content and it includes pet E-channeling services. All the data is stored in a database system and it helps pet shop owners to manage their pet shop activities.

1.2) Aims of the project

Developing an efficient website by using website features and Featuring a chatbot that help customers to ask questions and, finding details, pet training, pet advertising and pet e-channeling efficiency.

1.3) Academic question and objectives

1.3.1 Academic question

How will be this web application helpful in this Covid 19- pandemic situation.

1.3.2 Objectives

- ✓ **Look over various chatbot methods regarding to website**:
  - There are many types of chatbot methods like support chatbot, skills chatbot and assistant chat bot so it is very important to think what is the best chatbot method for this system.
- ✓ **Implement website features (chatbot, well written content, quality pictures and services)**
  - Well written content includes search engines, headlines, subheadings, images and bulleted lists.
  - In online pet shop web application people expect to see photos of pets, pet products and services that pet owner serve. Quality photos are the great way to send trust signals to customers.
  - An effective web application includes services. This web application includes charity services, pet E channeling services, training programs etc.
- ✓ **Conduct secondary research methods**
  - Secondary research method helps to use existing data for this research. The secondary research method includes websites, surveys etc.
- ✓ **Analyze gathered information**
  - This includes analyzing the data gathered from existing sources to generate an initial list of problems and needs.

1.4) Scope

The scope of this project is to develop a website featuring a chatbot for the people who can easily get pet products, pet E- channeling services, pet training programs for their pets and also all people can post their pet advertisements and they can donate money for pets' charity programs by using this website.

1.5 Structure of the project

The chapter one includes about our project background and the academic question and the objectives of this project. According to the project background and project objectives nonfunctional and functional requirements were gathered. This website developed by using waterfall methodology according to this methodology we have to develop this project step by step. The requirements gathering phase we did feasibility studies for this project. The WBS was executed by me to accomplish our project objectives.

After designing system diagrams and architecture diagrams which represents flow of user login and admin login flow and after design interfaces of our project we start to unit test our project codes. After unit testing we done integration testing by using test cases. The integration testing includes how our admin panel and the coopers pet shop was integrated. After doing unit testing and integration testing we didn't find any errors between codes and modules. So, the system testing includes this system was ready for customer usage.

After testing stages, we discussed about our academic finding regarding to our project. it includes how is this website full fill project academic question. And finally, we discuss about project outcomes such as what are the benefits after using this website and also, we discussed our project limitations and project future work regarding to our coopers' pet shop.

CHAPTER 02 | LITERATURE REVIEW

2.1 Introduction

The main purpose of this study is to understand the important work of this project and the methods that used in previous projects and studies. The literature review is very important to improve more efficiency of the website. This research provides easy ways to find information and data to carry out the project by making ideas from previous projects and similar project in different references.

2.2 Similar projects

According to the authors A. Noraziah, Noor Naimal, M. Nasratan in university Malaysia they developed a pet shop management system (PSMS) that provides the management for the pet. The system includes pet services such as cleaning, scissoring, bathing, and blow drying.

The pet must be registered before having any services. This system provides automatically calculation service payment and it generates the payment receipt. This system is developed for the users of PSMS manager and for the staff members. And also, this system is developed by using visual basic language (VB) and Microsoft access as the database platform. **(Noraziah, Naimah and Nasratun, 2008).**

The authors Oleh Soleh, Ruruh Wuryani, Rivka Farizi take 50 respondents petshop in Tangerang, Banten covering 3 areas including Tangerang City, Tangerang District and the South Tangerang, Services available in Petshop is still a manual for the purchase of pet and service needs. Sometimes clients are difficult to get information about Petshop and the existence of the nearest location. To solve this problem, they decided to designed an application OPet's (Online Petshop). (**Soleh, Wuryani and Farizi, 2017)**

This is a research article published by Association for Computing Machinery. In this study families, keeping domesticated pets has been a practice around the world and also taking care of them is already part of humans' life. With the development of the technology taking good of pets can be done remotely. With the usage of microcontrollers and sensors, designed to connect in an internet. as a result of this people can monitor their pets through mobile application. As a result of this the researchers called Alexis Anne A. Luayon, Gio Francis Z. Tolentino, Van Keith B.

Almazan, Patrick Eugene S. Pascual, Mary Jane C. Samonte designed a remote activated smart pet door, defecation pad, food and water dispenser. Also, this system includes camera services, eating time schedule for pets. **(A. Luayon et al., 2019)**

The wang develops a system for pet owner to take care pf the pets remotely. There are lots of pet feeding devices that cannot meet requirements of remote control and real time monitoring. As a solution for this problem mini pet feeding was designed. This system based on sensing layer, network layer and application layers and internet of things architecture. The main feature of this system is on- off temperature adjustment method. It helps automatic adjustment of temperature in the case of no human intervention. **(Wang, 2019)**

This article based on the technology systems and the humanity. The importance of this article is, it includes interactions between devices and physical objects/ humans in the real world. So, the authors focused on the system and design it to monitor the pet's activities and to control pet eating time with (IOT). The main purpose of this system is to develop an advanced system to prove to meet pet owner's needs. **(Own et al., 2021)**

For this veterinary consultation the author decided to develop a chatbot with using artificial intelligence and big data technologies. The main purpose of this chatbot is to understand pet owners' behavioral intentions to utilize the chatbot for veterinary consultations. The author used surveys to collect data and partial least squares structural equation modeling for analysis. The result of this is to get idea about user satisfactions of veterinary consultations of the chatbot. And also, this journal includes various types of advantages of chatbot methods. **(Huang and Chueh, 2021)**

This system includes different types of services such as remote feeding, CCTV services and also mobile app that helps to control all above services by using mobile phone. This pet care system includes automatic feeding device, an automatic pooping pad, a camera with raspberry Pi, a mobile web and app for smart phone. The purpose of developing this system is help owners to monitor their homes and can monitor their pets and feed them when they are not in the home and also control its defecation pad through owner's smart phones. **(Kim1, 2016)**

CHAPTER 03 | METHODOLOGY

3.1) Planning

According to the software development life cycle (SDLC) the iterative waterfall model is chosen for this system. The waterfall methodology is a liner project management approach. In this methodology all the requirements are gathered at the beginning of the project. After that project plan is created to accommodate requirements.

The iterative waterfall model is very special more than other SDLC models. Because each phase of the project cascades into the next., following steadily down like a waterfall. But it allows us to get customer feedbacks between the phases.

Waterfall methodology includes six phases. In below I discuss how the particular phase is going to build.

1. Requirements gathering

The requirements gathering phase we describe each stage of our project and we write all the requirements for our project and gather information regarding to the project.

2. System design

The requirement specification from the first phase are studied in this phase. After studied the requirement specification, this stage used to plan what are the programming languages and databases we need to design this system. The system design phase helps us to specified what are the hardware and software requirements needs in this project.

Example: hardware requirements- Laptop/ Router

Example: software requirements- Visual studio/ Xampp server

3. Implementation

In this phase, system is first developed in small programs called units. These units are integrated to the next phase. This phase used to test each unit with its functionality.

4. Integration and testing

After testing of each unit in the implementation phase, all the tested units are integrated into the system. In this phase all the units and modules are tested to find out flaws and errors.

5. Deployment

After functional and non-functional testing this website will released to the customer.

6. Maintenance

This phase includes modification of the system. the modification is come from the clients, we have to make changes as per customer request.

3.1.1 Identifying Business Values

Let's discuss what are the business values of this project. This is a web application which is specially designed for pet shop owner to keep track of available pet products and services that he/she provide in his/her pet shop. This website name called coopers pet shop.

Now a days we all know lots of people do their day to day activities by using laptops and mobile phones. With the growth of the internet facilities people are willing to buy products and services from online websites.

We all know that pets hold a special place in our hearts. They offer their companionship, unconditional love, loyalty, protection and even health benefits. So, this website helps pet owners to shop any product or services with best website features. A successful website always user-friendly for any customer. This website is developed for the customers to buy any pet products or services using best and simple website features. So, customers can buy anything easily without any doubt.

Not for the customers but assume if any pet shop willing to buy this website. This website includes admin panel for the administrators. They can upload products services and also, they can handle all other information of this website. The main services of this website are it includes charity services, pet advertising, pet training programs and pet E-channeling services. Customers can directly post their pet advertisements, they can donate money for the coopers' pet shop charity service and also, they can get a certificate online for their donation. Comparing to other Sri Lankan pet websites, I think coopers pet shop website is more efficient. Because it includes services, products, quality pictures, well-written content and etc.

This website includes chatbot with the technology of text in AI. And another important thing is all data is stored in a database system and it helps pet shop owner to handle all the data without any data loss and he/she can manage his/her pet shop activities very easily.

3.1.2 feasibility Analysis

A feasibility study is an assessment of the practicality of proposed project. The feasibility studies help to analyze the viability of the project and it helps to understand whether the project is likely to successes or fail. Another important part in feasibility study, it helps to identify various issues and problems that could arise during the project. This study identifies the project key goals, time, budget, legal and also manpower requirements. We can get clear picture of our project needs.

These studies also provide many other benefits such as it increases our decision makings, it helps to clarify what are the needs of our project, it improves our focus on this project, it brings new opportunities that were not obvious from the project and etc.

The feasibility studies were conducted in few steps.

3.1.2.1 Technical feasibility

The project coopers pet shop is complete web-based application. In technical feasibility we decide what are the hardware and software resources that we need to implement this website. The main device that I required for this project is laptop device.

Below I mentioned what are the hardware and software components that I required for this project.

<u>Hardware components</u>

- Processor- Intel(R) Core (TM) i5-8250U CPU @ 1.60GHz 1.80 GHz
- Disk space-
- RAM- 4.00 GB
- Stable internet connection –SLT Telecom (Fiber connection)
- Laptop

<u>Software components</u>

- Operating system- Windows 8/9/10
- Visual Studio Code

- XAMPP Control Panel
- MySQL database

3.1.2.2 Financial Feasibility

The financial feasibility specially focuses on what are the financial aspects that we need for our project. It helps to understand the startup costs, operating expenses and the cash flow and also the future performances.

Table 1 Financial Feasibility

Title	Description	Amount
Cost for hardware components		
Laptop device	Dell Inspiration Intel Core i5 8th Gen Windows 10 Home	LKR 150,000.00
Cost for internet connection		
SLT Telecom (Fiber connection)	For one-month LKR 6000.00	LKR 6000.00 * 8 LKR 48000.00
Total Amount		**LKR 198,000.00**

3.1.2.3 Operational Feasibility

The operational feasibility helps to measures how a well-proposed system solves the problems, and also it helps to take advantages from the opportunities. This system is implemented as a solution for the academic question. This website includes different type of services and some features. These services and features help to increase more customers and also it solves problems and helps to make opportunities. These are the following features of this website.

- A website for customers | admin panel for the administrator.
- IOT based web application.
- Post pet advertisements

- Donate money for coopers' pet shop charity service.
- Chatbot assistant for contact customers.
- Registration for pet training programs.
- Pet E-channeling services. (schedule appointments online)

3.1.2.4 Scheduled Feasibility

Scheduled feasibility as known as the likelihood of a project being completed within the scheduled time frame. The scheduled feasibility is often showing in a Gantt chart. According to the project schedule project objectives are achieved step by step. This project starts 09. February 2021 and scheduled for 31 weeks. The project schedule is most important because it helps to achieve our goals and also it helps monitor and control our project activities.

Figure 1 Project Schedule

3.1.3) Work Plan

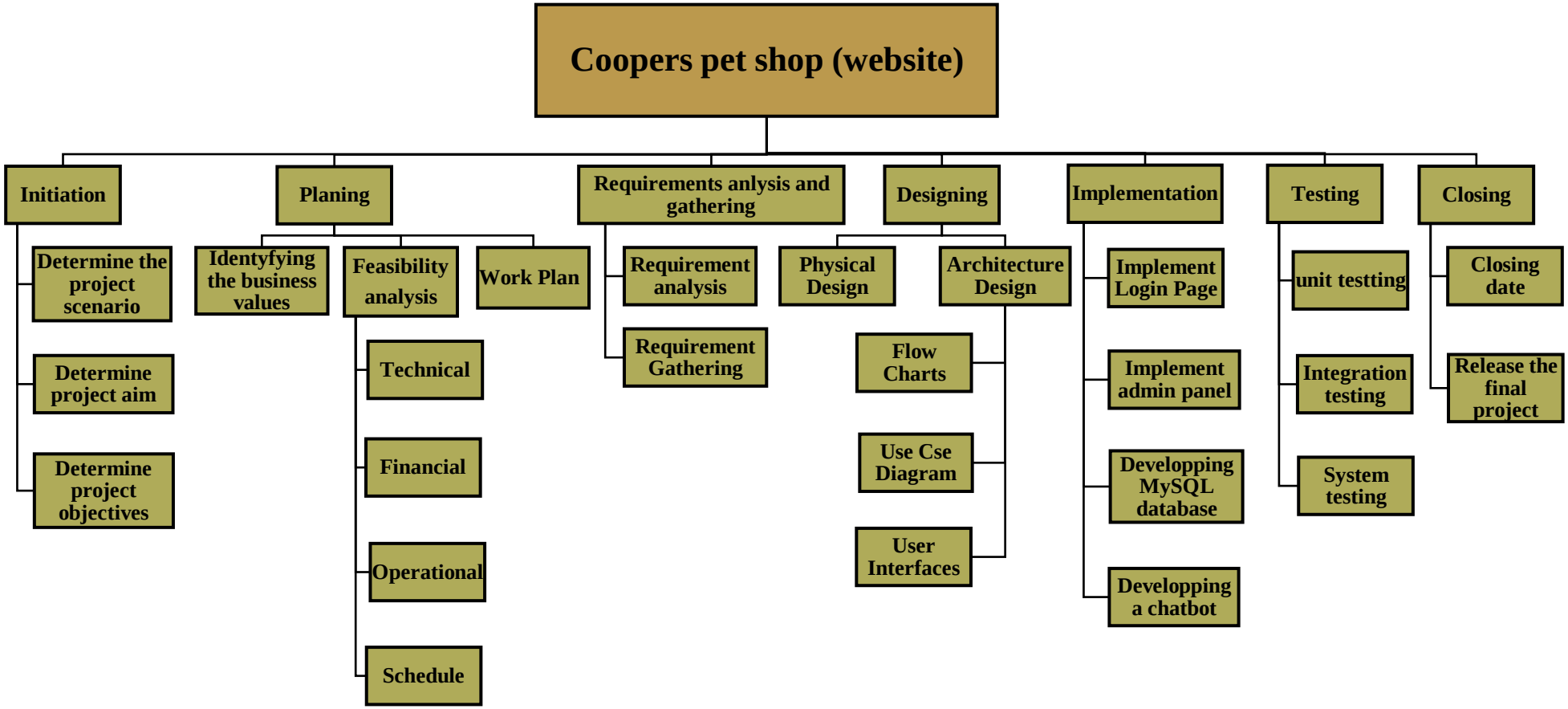


Figure 2 Project Work Breakdown Structure

The above designed work breakdown structure represents the hierarchical decomposition of the work to be executed by me to accomplish our project objectives. In above WBS each deliverable is assigned in to a task or series of tasks broken in to subtasks to meet the needs of the project.

3.2 Analysis and requirement gathering

3.2.1 Requirement Analysis

For this project requirements were conducted by using primary research. Google scholar, similar projects who has done by various authors and developers and other academic sites were used this project to done requirement analysis.

My project is to develop an online pet shop website for a pet shop named coopers pet shop. According to my project I have to research online pet shop websites in Sri Lanka. So, I found many online pet shop websites in Sri Lanka. After looking all these websites I found some errors and un-useful features.

Here are the following errors and inefficient things that I found in online pet shop websites in Sri Lanka.

- Not user-friendly for customers
- Payment issues
- Doesn't have clear interfaces
- Some websites only sell products
- Lack of quality pictures and etc.

Table 2 Pet shop websites in Sri Lanka

	Web application	Chatbot	Pet advertising	Pet training programs	Charity programs	Pet E-channeling services
The K9 pet shop - Nugegoda	Yes	No	No	No	No	No
Best care pet shop - Kollupitiya	Yes	No	No	No	No	No
Pet mart -Kotte	Yes	No	No	No	No	No
Catlitter.lk (Thibirigasyaya)	Yes	Yes	No	No	No	No
Coopers pet shop (My project)	Yes	Yes	Yes	Yes	Yes	Yes

After requirement analysis process I thought clear user interfaces are most suitable for this project, because it helps customers to get best user-friendly experience when using other features in this website.

According to these things this website should be developed with best features, quality pictures, well written content with including pet services and pet products.

3.2.2 Requirement gathering

Quantitative research for website

For gather information I have to conduct a quantitative research to get an idea about what are the things that people are expect from an online pet shop website. So, I created online survey to gather responses from people. This survey includes different type of questions and answers that people were responded.

Here are the graphical representations of the responses.

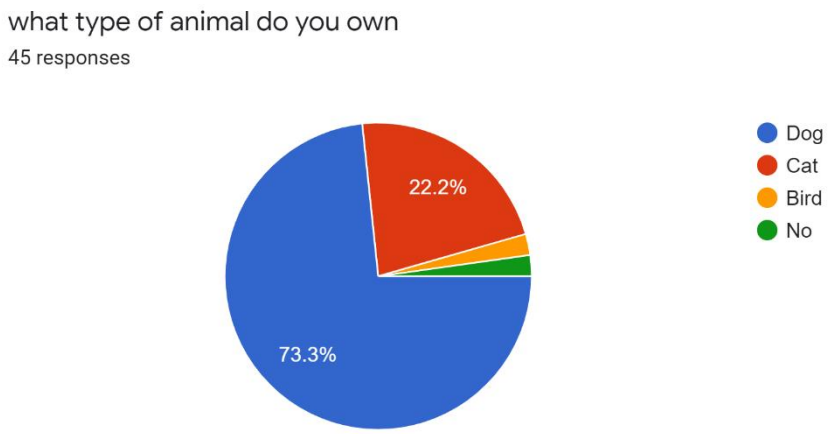


Figure 3 types of animal people own

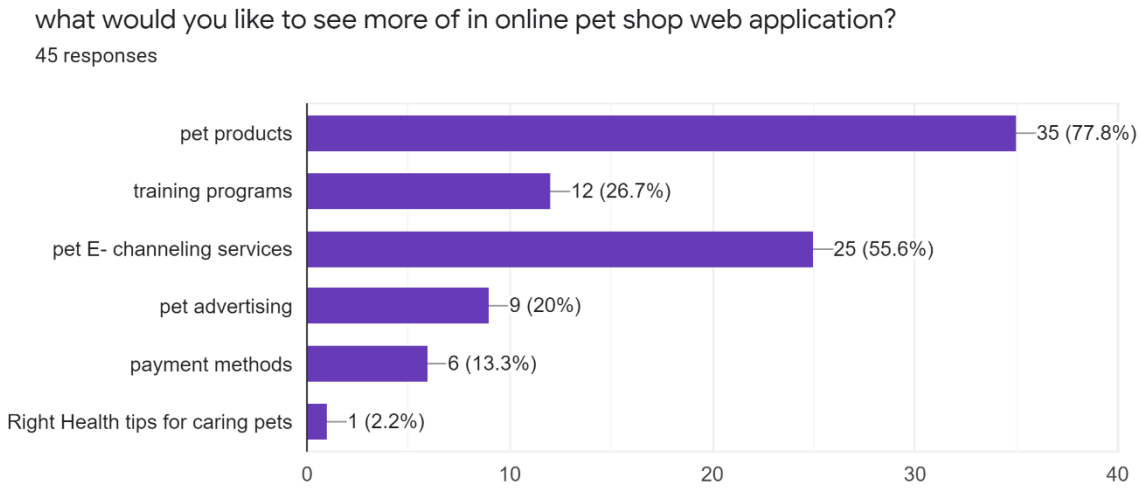


Figure 4 what people like to see more in a pet shop web application

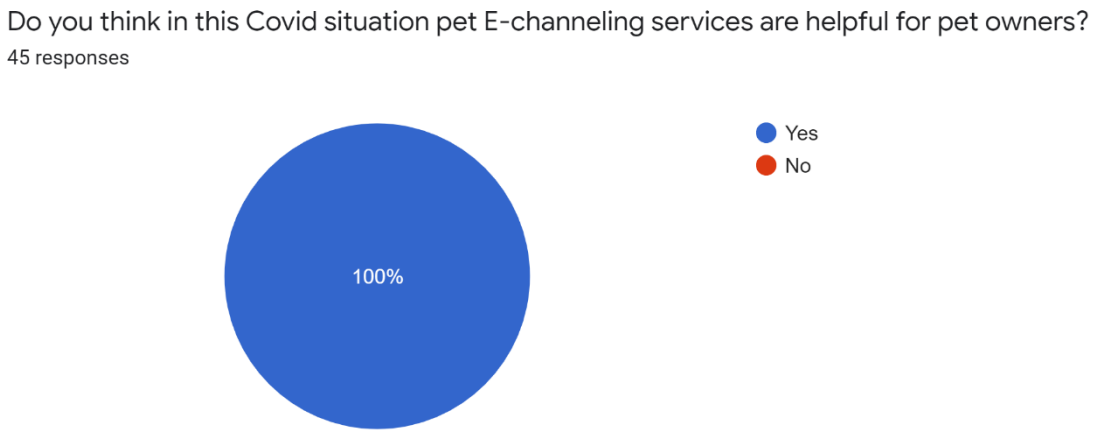


Figure 6 E-channeling services

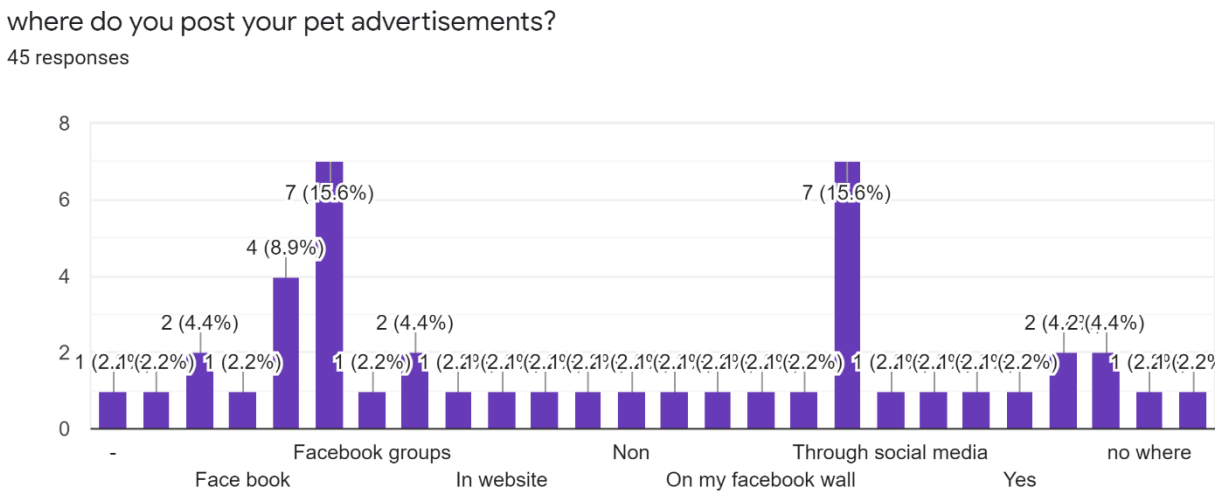


Figure 5 Post pet advertisements

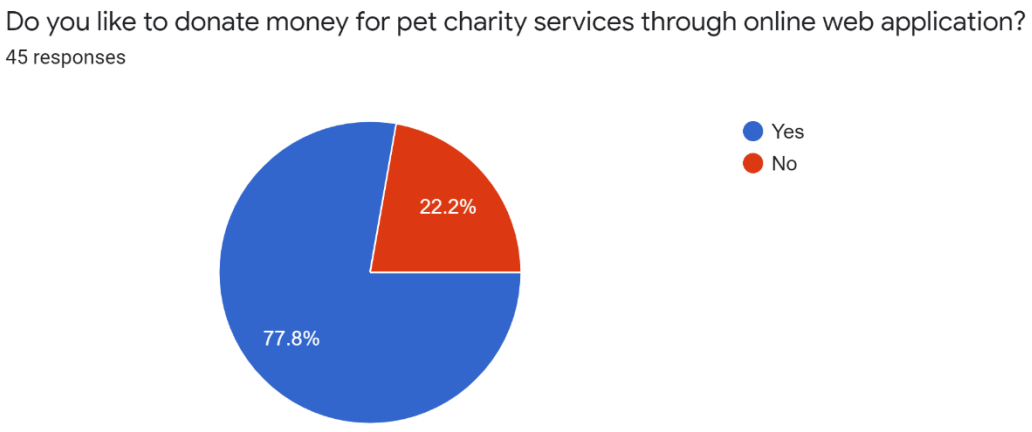


Figure 7 Pet charity services through online web application

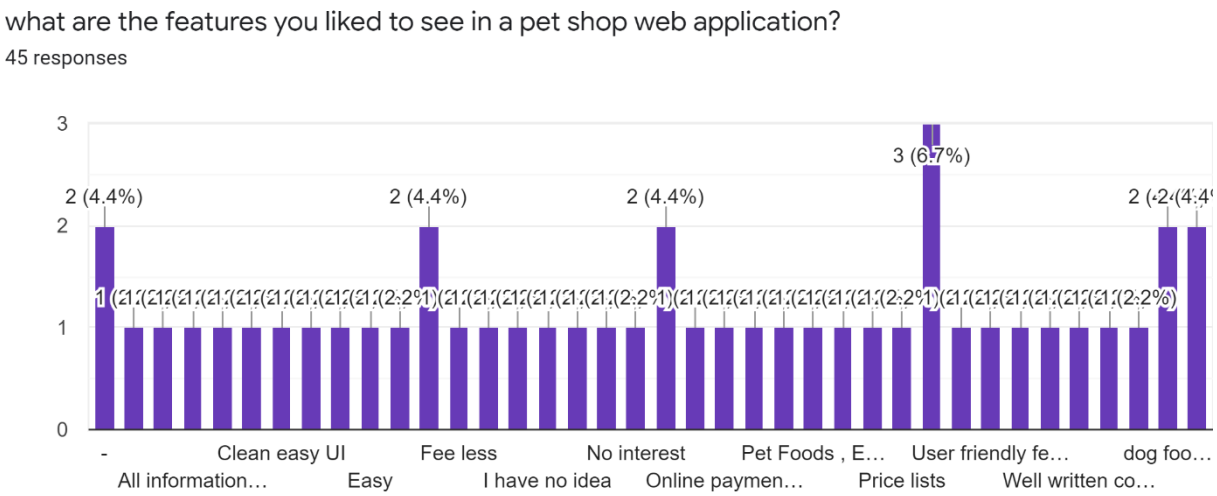


Figure 8 features people like to see in a pet shop

what are the potential benefits of chatbot in web application ?

45 responses

Get medications

It would be very helpfull for anyone to contact you

Time saving

Very useful. Once I tried.

Quick replay

Easy to get services

Easy

Resourceful

Get answers

Figure 9 benefits of a chatbot

3.3) Designing

3.3.1 physical designing

There are many diagrams have been designed to demonstrate about how this project is gone. First, we designed system diagram for our coopers' pet shop web application.

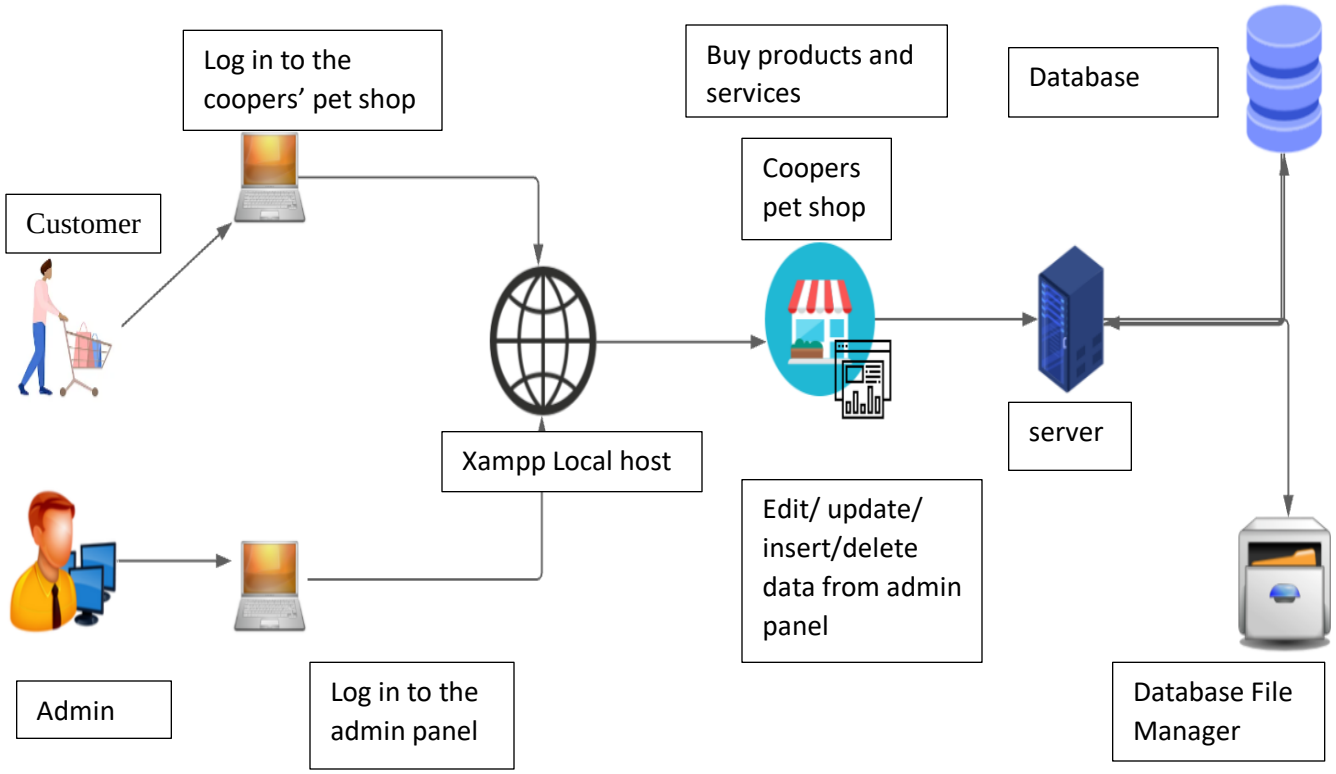


Figure 10 System diagram for customer and admin source by: 'Author'

3.3.2 Architecture Design

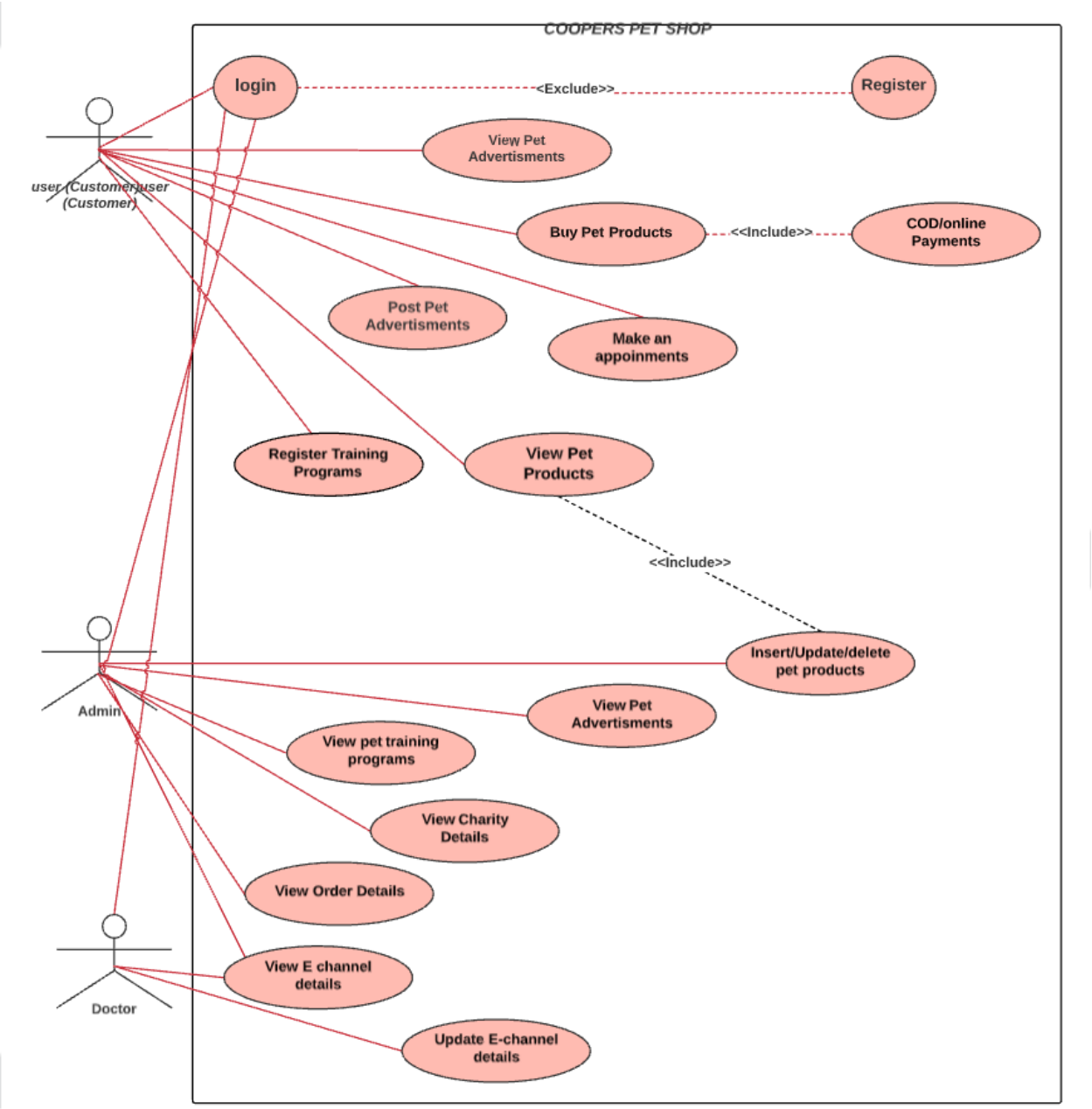


Figure 11 Use Case Diagram of coopers' pet shop

Table 3 Use Case Description for customer login

Use case name	Login	
Use case description	Customer log in to the system	
Actors	Customer	
Pre-condition	System must be connected to the network	
Post-condition	After a successful login customer will directed to the home page	
Main senario	Serial No	
User	1	Enter user name Enter password
	2	Validate username
	3	Allow access to the system
Extension	1a	Invalid username System shows error message
	1b	Invalid password System shows error message

Table 4 Use case description for pet advertising

Use case name		Pet Advertising
Use case description		Post pet advertisements by using pet advertising page.
Actors		Customer
Pre-condition		System must be connected to the network
Post condition		After successfully uploads pet advertisement user will directed to pet advertisements page.
Main scenario	Serial no	
Customer	1	Fill all the fields with correct data
	2	Validate all the fields
	3	Directing to pet advertisements page
Extension	1a	Empty fields and click on submit button System shows error message
	1b	Wrong data inserted System shows error message
	1c	Without image field click on submit button System shows error message

Table 5 use case diagram for dog food insert

Use case name		Check out process
Use case description	If a customer adds products to the cart, customer will be directing to the view cart page. After fill check out form and click on make a purchase button order will be placed	
Actors	Customer	
Pre-condition	System must be connected to the network	
Post-condition	After a successful order customer can view a message “order placed” and redirected to the home page	
Main scenario	Serial no	
Customer	1	Add products to the cart
	2	View cart details
	3	Fill check out form correctly
	4	Get order placed message and redirect to the home page
Extension	1a	Without add products to the cart Customer cannot view checkout form
	1b	Enter invalid data System shows error message

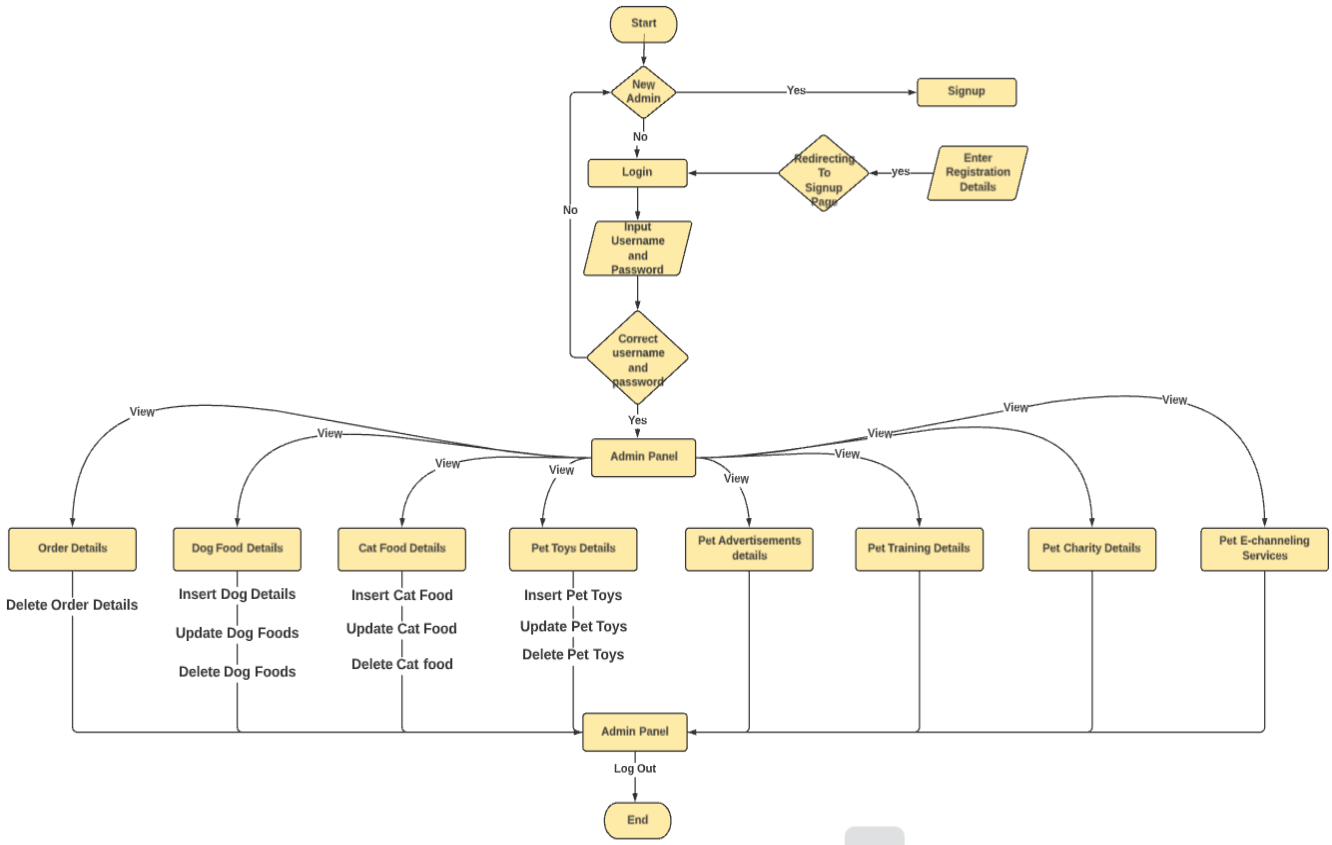


Figure 12 Flow chart for admin login

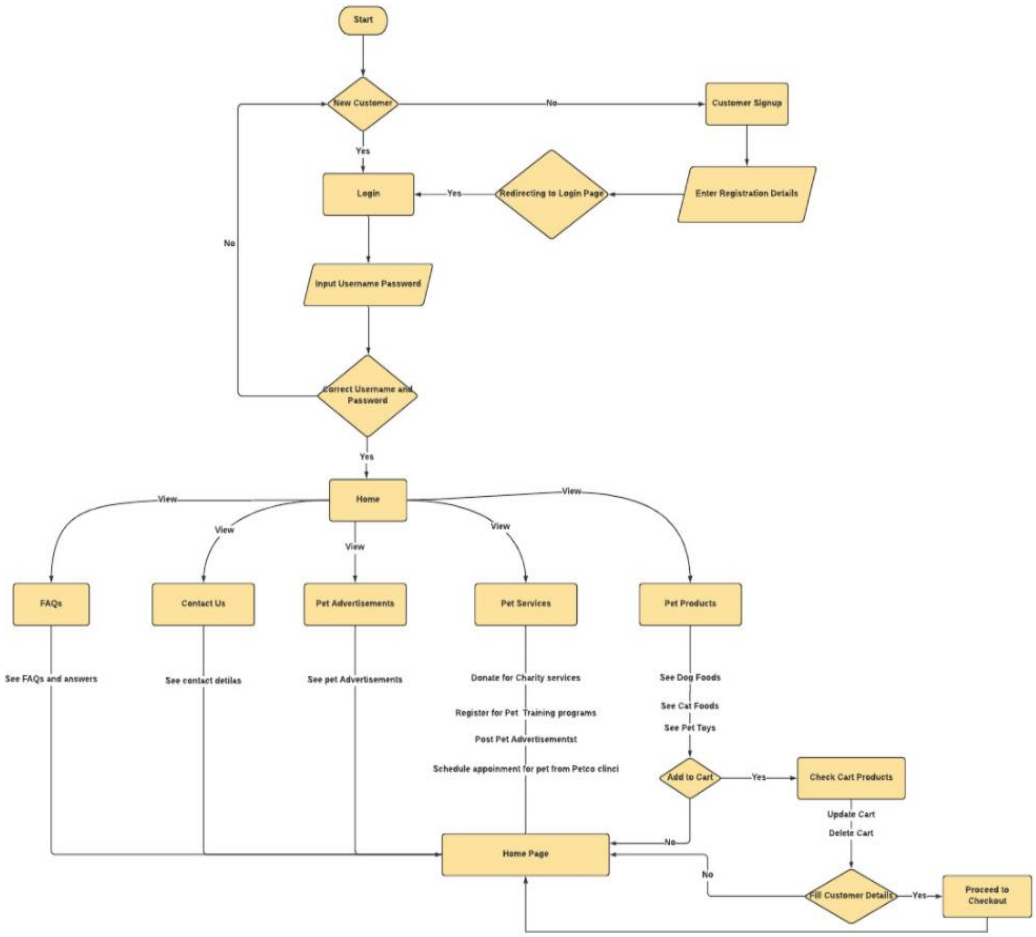


Figure 13 Flow chart for user login

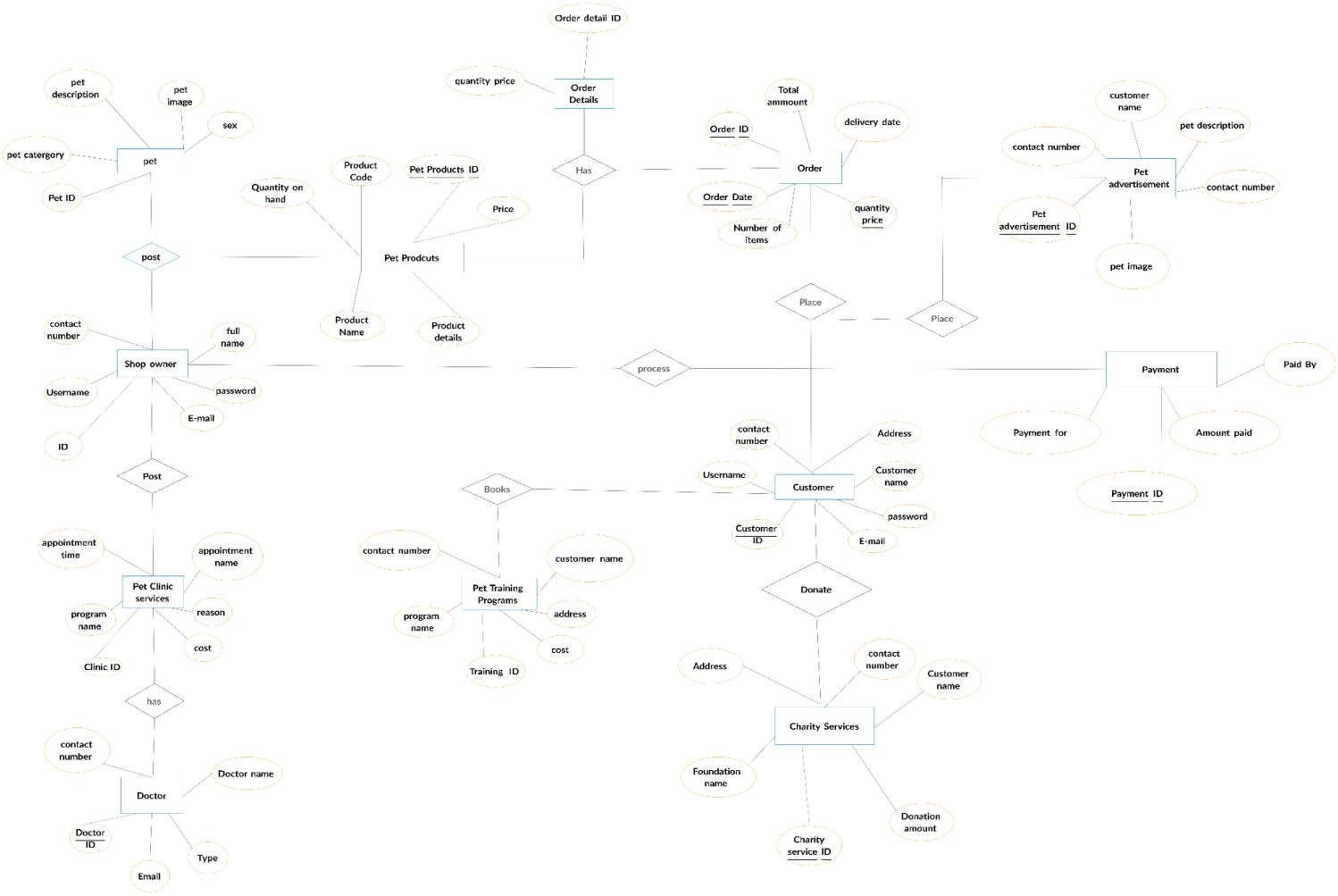


Figure 14 Coopers' pet shop ER diagram

3.3.3) Interface Design

We all know that good user interfaces are always important because it makes easier for our target audience to get an idea about what is our products/ services are. And also, it helps to keep visitor's attention and keep them on our site. Simply in coopers pet shop interface designs can turn potential visitors to buyers as it facilitates interaction between user and our website.

Before designing the user interfaces, I created online survey to collect information from people regarding to coopers' pet shop. As a result of it I understand user preferences are huge plus point when creating an interface. It helps to understand user preferences and also helps to fulfils those preferences.

This website specially designed for pet shop owner to keep track of the available pets, products and also the services that he provided in his pet shop. This website includes admin panel for pet shop owner to handle activities in his website.

We all know an interface is point where users interact with website they are using. A good user interface designs presents blend of visual designing, interaction design and also information architecture.

In below I included user interface designs that I designed for coopers' pet shop website.

Customer Login/ Register

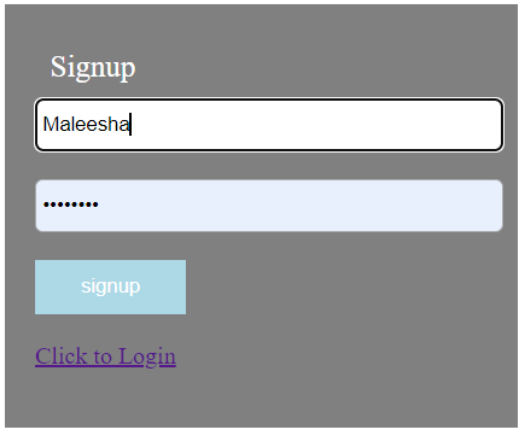


Figure 15 Customer Signup

Customer can register to the system by using signup form in coopers pet shop. After fill username password and click on signup button it will directed to login page.

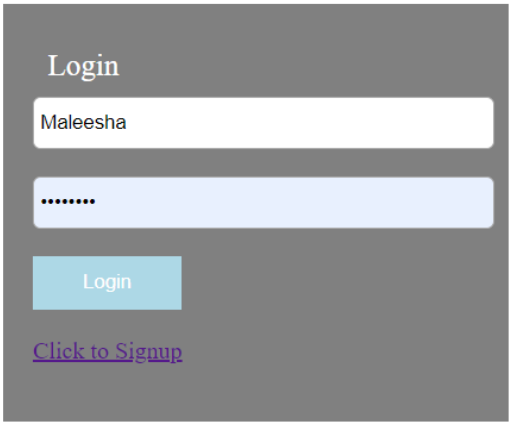


Figure 16 Customer Login

After submit signup form, customer can enter his/her username and password for logging to the coopers' pet shop. After entering correct user name password and click on login button it will directed to coopers' pet shop home page.

Home Page

Figure 17 Coopers pet shop home page

Questions page (Chatbot)

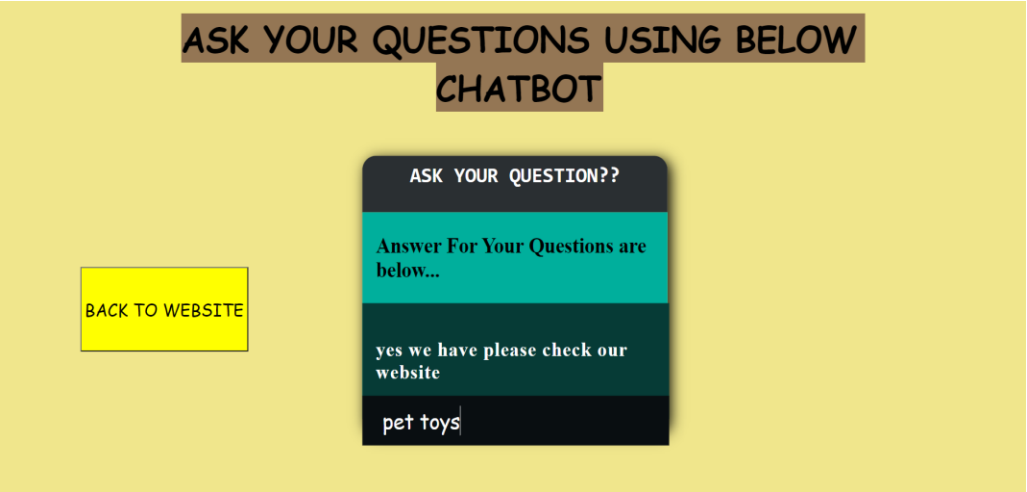


Figure 18 Chatbot

After clicked questions tab in navigation bar it will directing to a page which icludes a chatbot. So, the Customers can ask questions regarding to our website. After entering a question the chatbot repond to the customer with an answers. If the customer ask incomplete question the chatbot will automatically generate an answer like “sorry I didn’t understand”. In below image shows how this chatbot responds to incomplete questions.

Figure 19 chatbot with responds

FAQs Page

Figure 20 FAQs page

Charity Services page

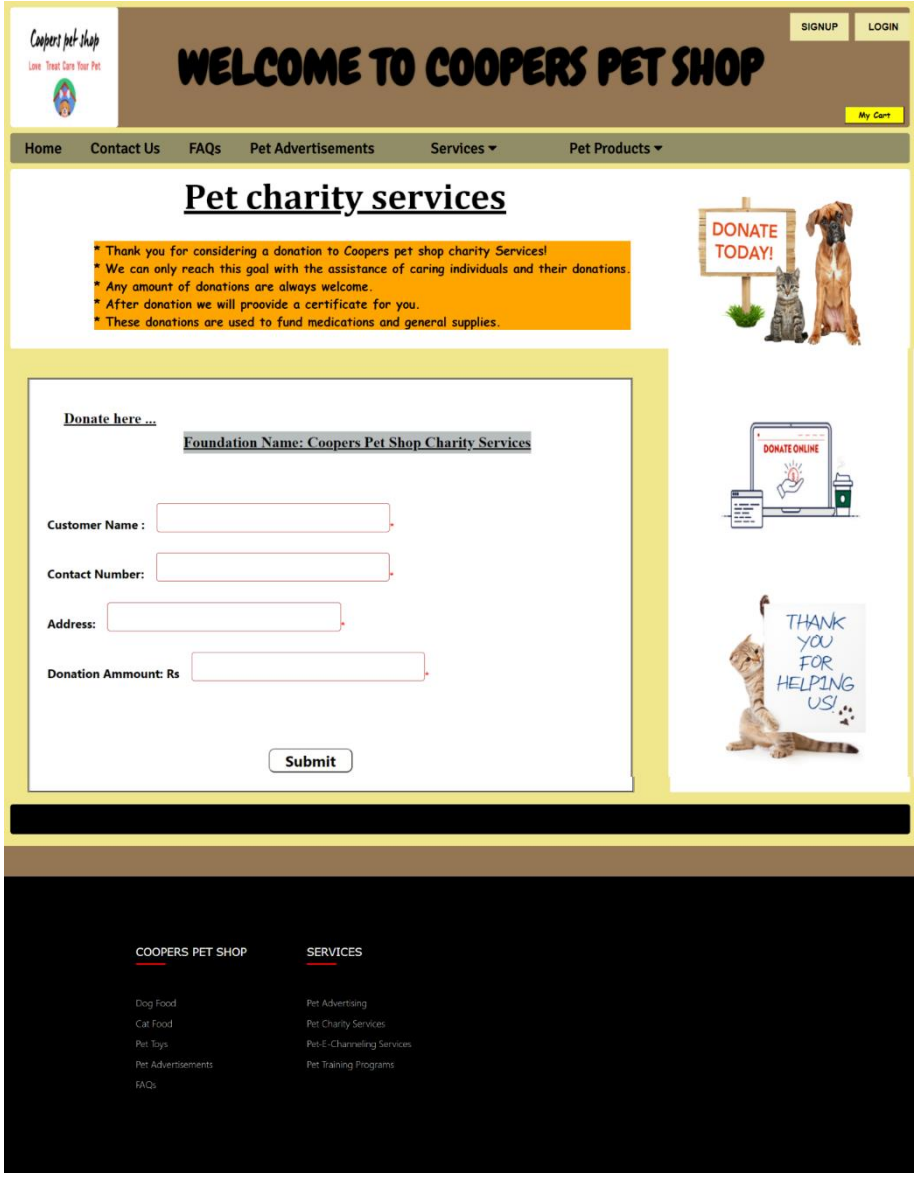


Figure 21 Charity service page

Pet Training Programs page

Figure 22 Pet training program interface

Pet Advertising page

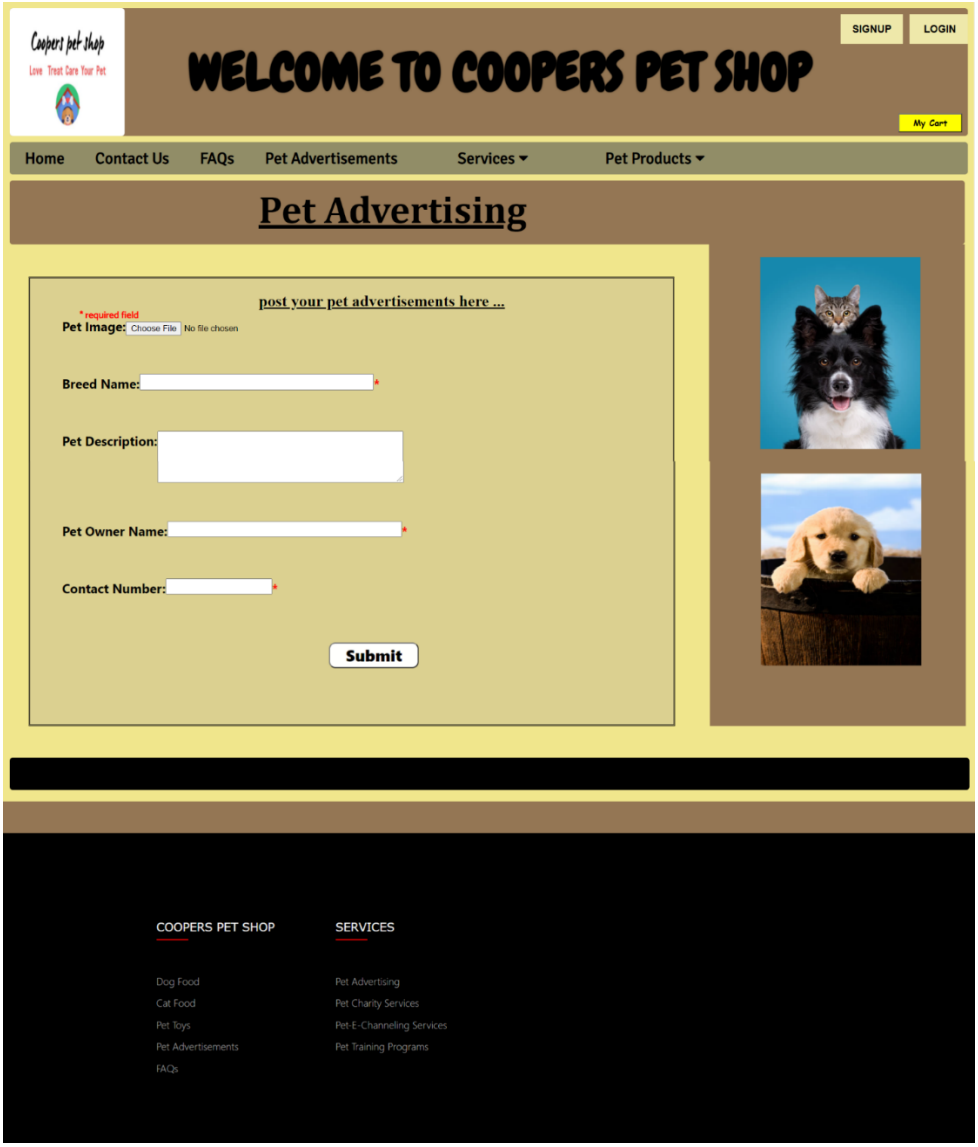


Figure 23 pet advertising page

The pet advertising page is designed for the customers who likes to post their pet advertisements in coopers pet shop. But in our online survey most people answered they mostly post their pet advertisements on Facebook or by using social media. But I think designing the pet advertisement page for our coopers' pet shop is important because our customers can post their pet advertisements in our website without any charge and also other customers can view all pet advertisements from

our website. This is an advantage for our website because we can attract more customers for our website by including pet advertisement page for our website.

Pet advertisements page

Figure 24 Pet advertisements page

Above page I includes pet advertising page and assume a customer post their pet advertisement by using above pet advertising page, the inserted pet advertisement will automatically update in above pet advertisements page in coopers pet shop. Customers can view all these pet advertisements though our website.

Pet E-channeling services

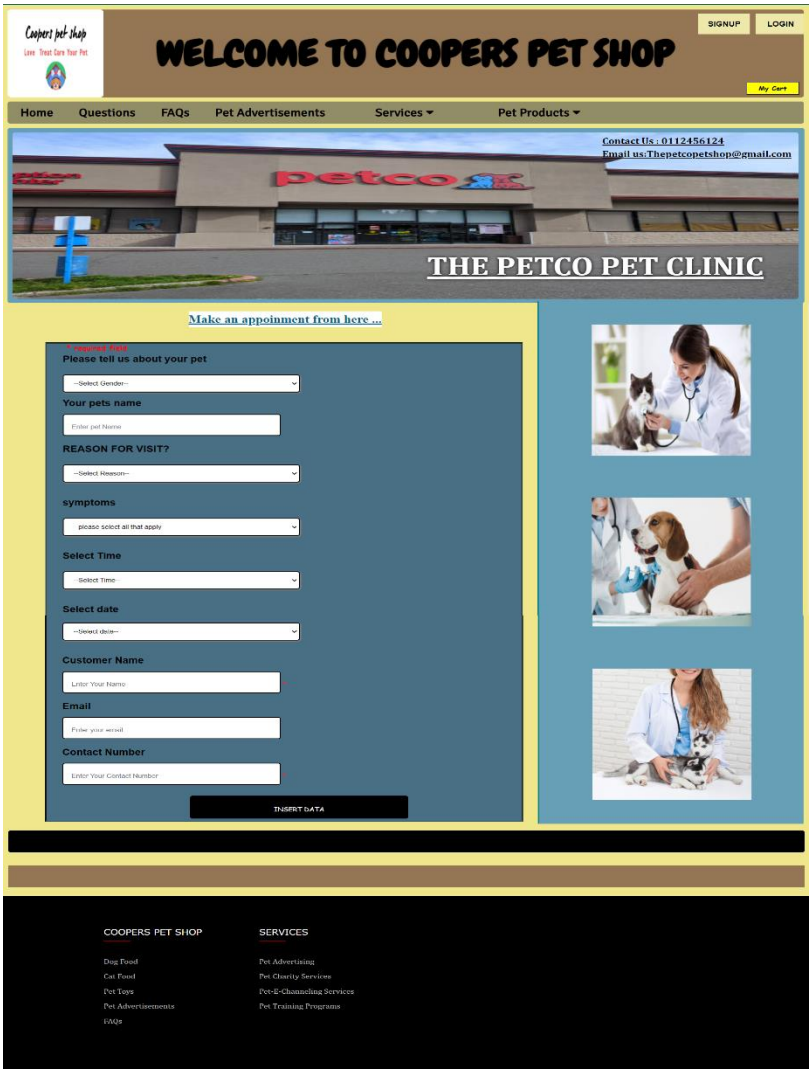


Figure 25 pet E-channeling page

By using pet e- channeling page customers can make an appointment for their pets from Petco pet clinic. Customers have to fill all the fields in this form to make an appointment.

Pet Products Page (Dog Food)

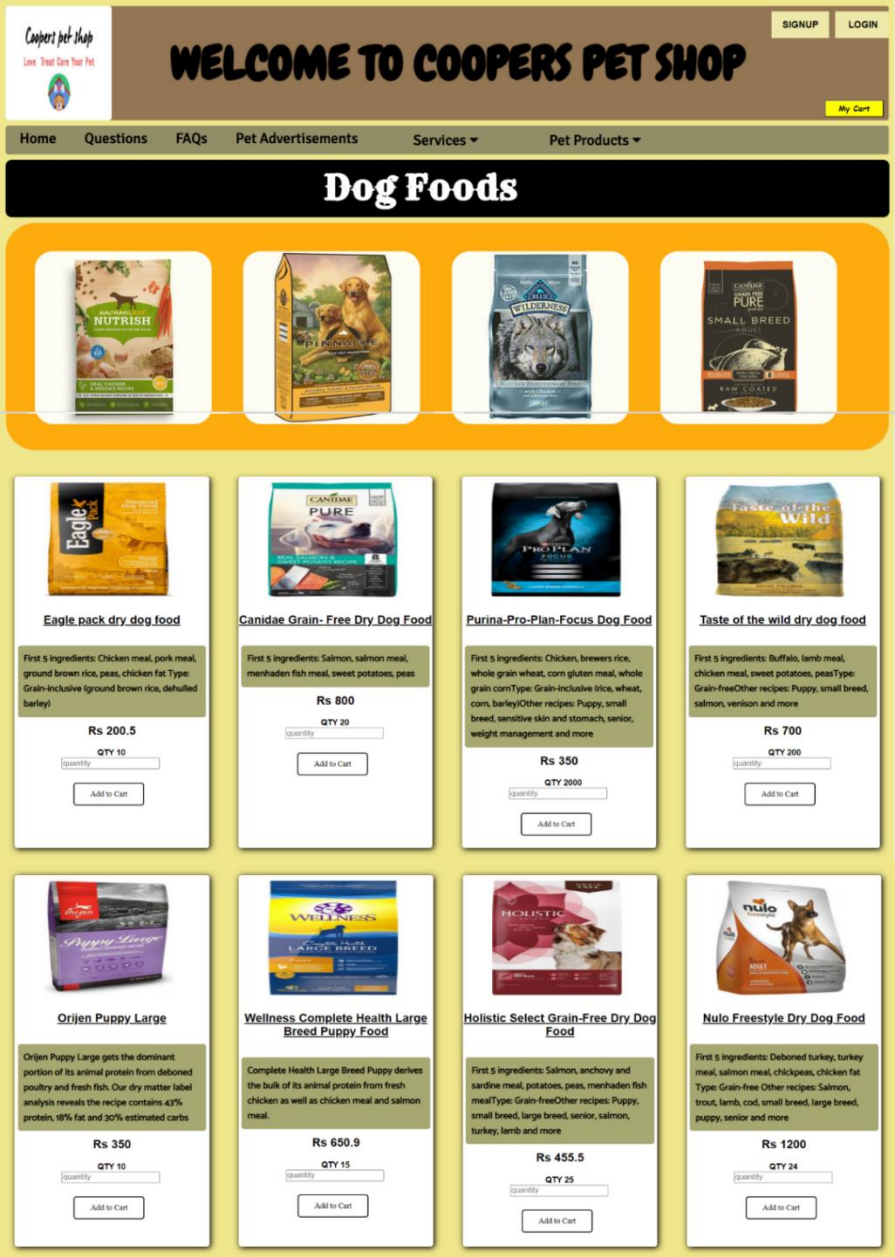


Figure 26 Dog food products page

The pet shop owner was inserted all these dog food products by using coopers pet shop admin panel. Customers can view dog food products through this dog food page and they can add products to the cart by using add to cart button.

Cat foods

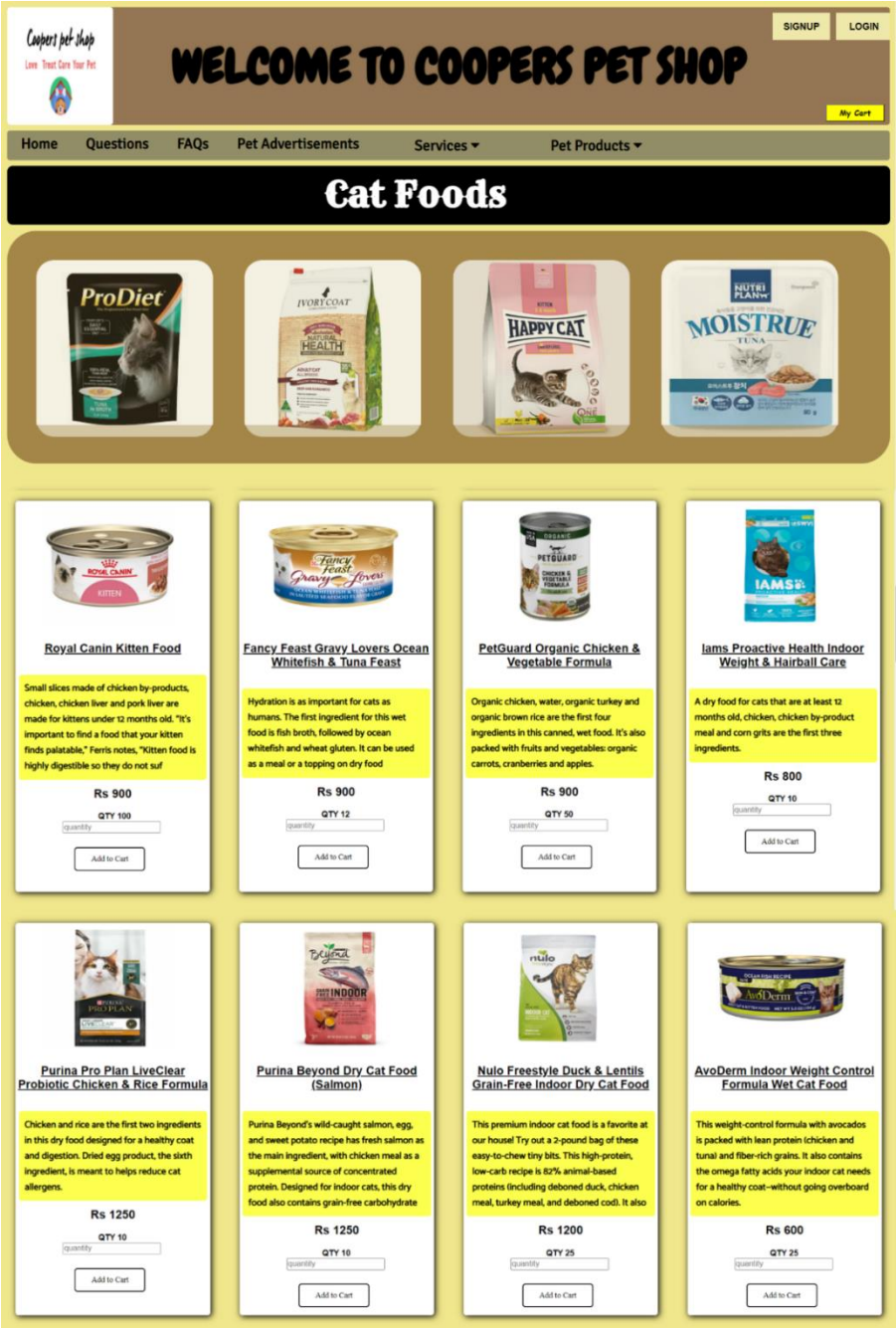


Figure 27 Cat food products page

The pet shop owner inserted all these cat food products by using coopers pet shop admin panel. Customers can view cat food products through this cat food page and they can add products to the cart by using add to cart button.

Pet toys page

Figure 28 Pet Toys page

The pet shop owner inserted all these pet toys by using coopers pet shop admin panel. Customers can view pet toys through this pet toys page and they can add pet toys to the cart by using add to cart button.

Above I mentioned a good user interface design, represents blend of visual design and interaction design. The design of an interface is really important to get customer satisfaction. It deserves the top spot. The design of an interface improves our website values purposively, implementing elements such as colors, images, fonts among other things.

The above user interfaces in coopers pet shop designed by using various colors, font and by using quality pictures.

The interactive design helps to anticipate how a person/customer interacts with this system. For an example when someone fill pet advertisement form and click submit button it performs a certain action for him/her.

Assume in our website, someone fill pet advertising form and click submit button, it will redirect to pet advertisement page. So, the customer can see his/her pet advertisement on pet advertisements page.

Below I uploaded pet advertising user interface with form validations. Assume if someone miss an important field in a same form it becomes highlighted and also span message will automatically displayed when someone entered wrong data to the fields. All above forms in coopers pet shop validate by using correct validation methods. So, in coopers 'pet shop all this is taken care of by the interactive side of UI design.

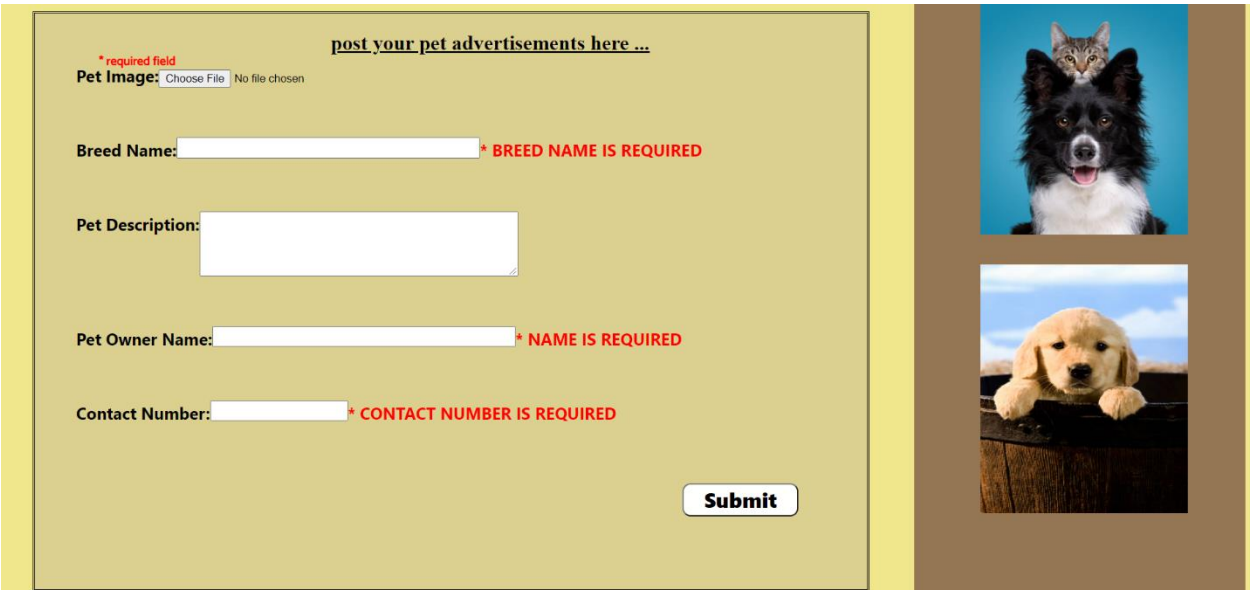


Figure 29 Validate pet advertising form

View cart page

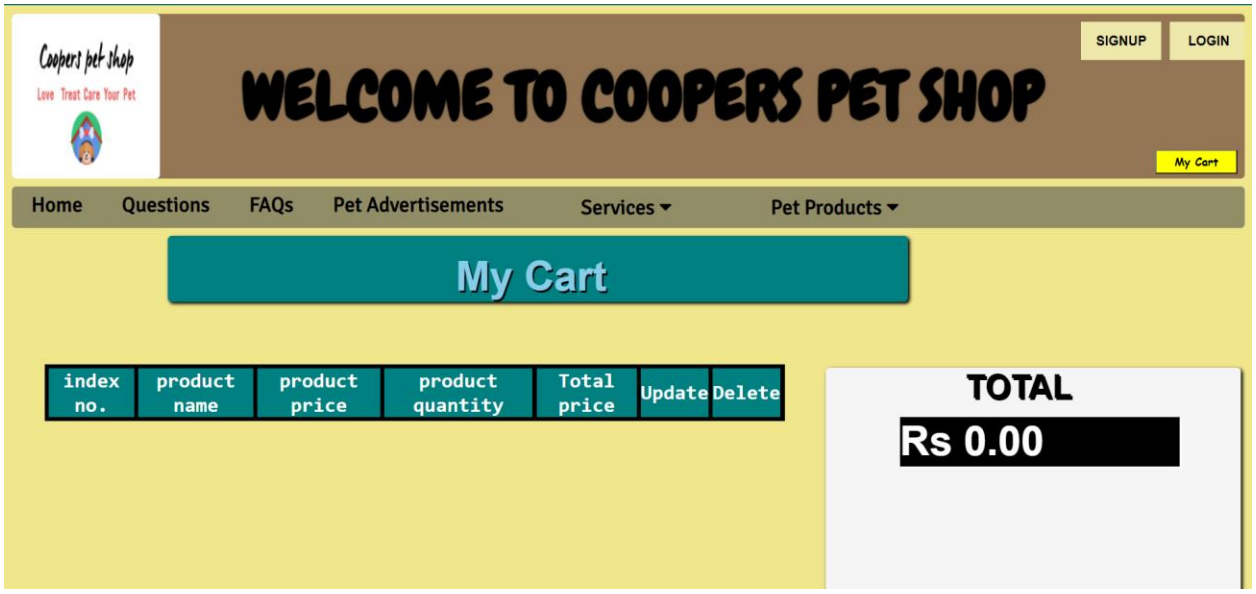


Figure 30 View cart page

The above image shows the view cart page without adding products in to the cart. If someone doesn't add products to the cart he/she can't purchase. The checkout form will not display if the cart is empty.

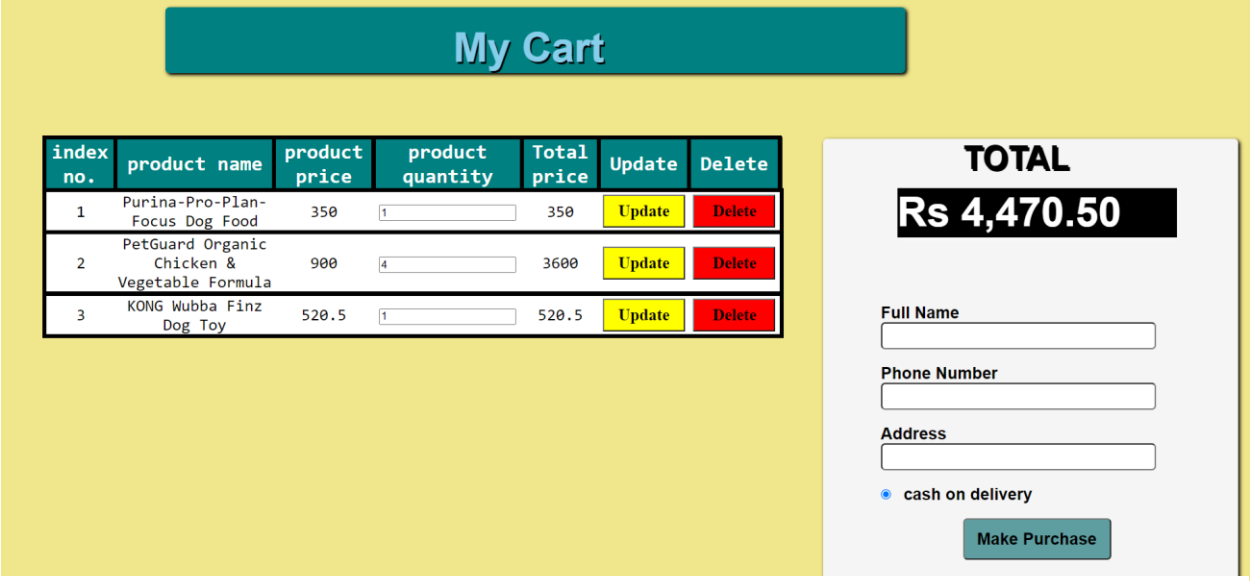


Figure 31 Cart with products

If a customer added products to the cart they can see cart details in view cart page. The view cart page includes a table with product name/ product price/ product quantity/ total price. If a customer wants to update product quantity they can update product quantity by using update button and also if they wanted to delete a product from the cart they can use delete button to delete products.

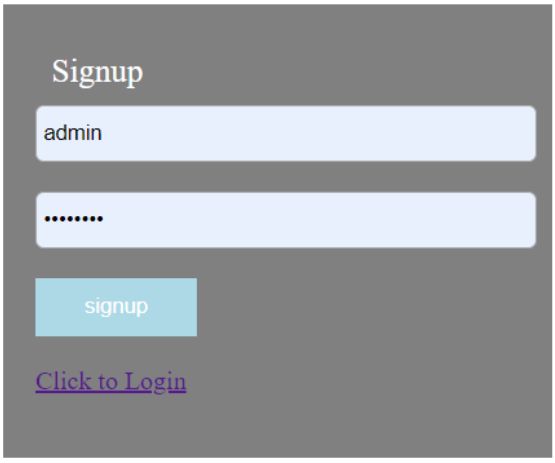
The checkout form includes total amount. After checking cart details and total amount customer can fill customer details to make purchase. In coopers pet shop still, it doesn't include payment gateway. So, for now customers can make orders by using cash on delivery.

Admin Panel Interfaces

The coopers pet shop includes an admin panel for pet shop owner to handle all the pet shop activities in coopers pet shop. The pet shop owner can insert/update/view/delete pet products and services from admin panel. Every action that takes in admin panel effects in coopers' pet shop.

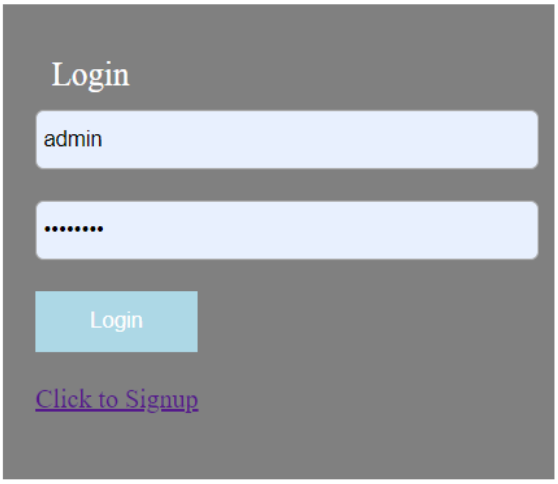
In below I included the interfaces that I designed for coopers' pet shop admin panel.

Admin login/ Register



Admin can register to the system by using signup form in coopers pet shop. After fill username password and click on signup button it will directed to login page.

Figure 32 admin Signup



After submit signup form, admin can enter his/her username and password for logging to the admin panel. After entering correct user name password and click on login button it will directed to coopers' pet shop admin panel.

Figure 33 Admin Login

(Order details Page)

Figure 34 Order details page

In this above interface pet shop owner can see all the order details. When the customers ordered products through coopers' pet shop it will automatically save in admin panel order details page.

Dog food insert from admin panel

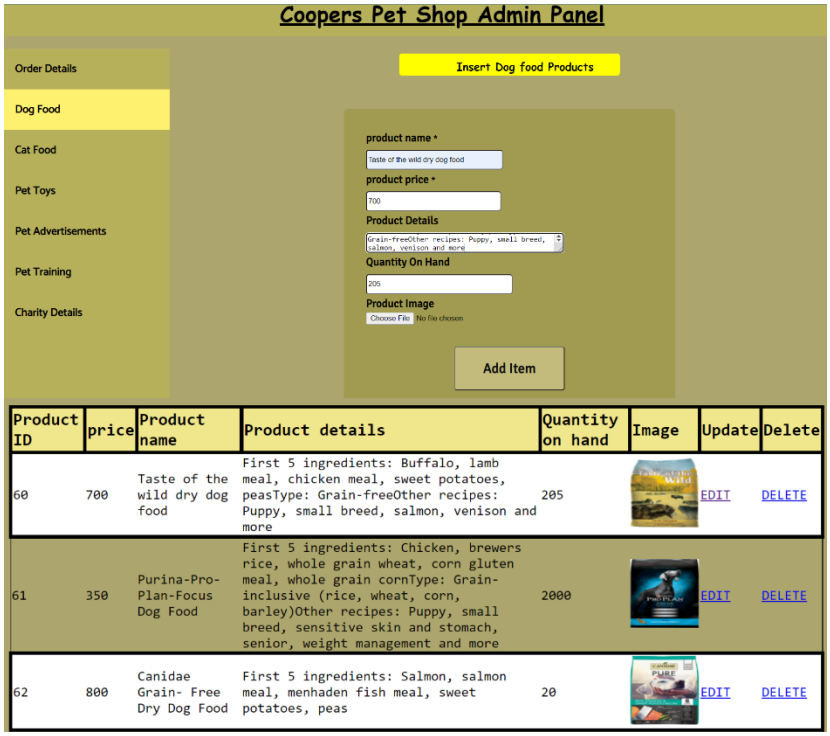


Figure 35 Dog food insert from admin panel

By using this page admin can insert dog food products to the cooper's pet shop. The inserted items will automatically update dog food products page in coopers pet shop. Pet shop owner can view inserted data and also, he/she can update, delete dog foods by using product table in dog food page in the admin panel.

Cat food insert from admin panel

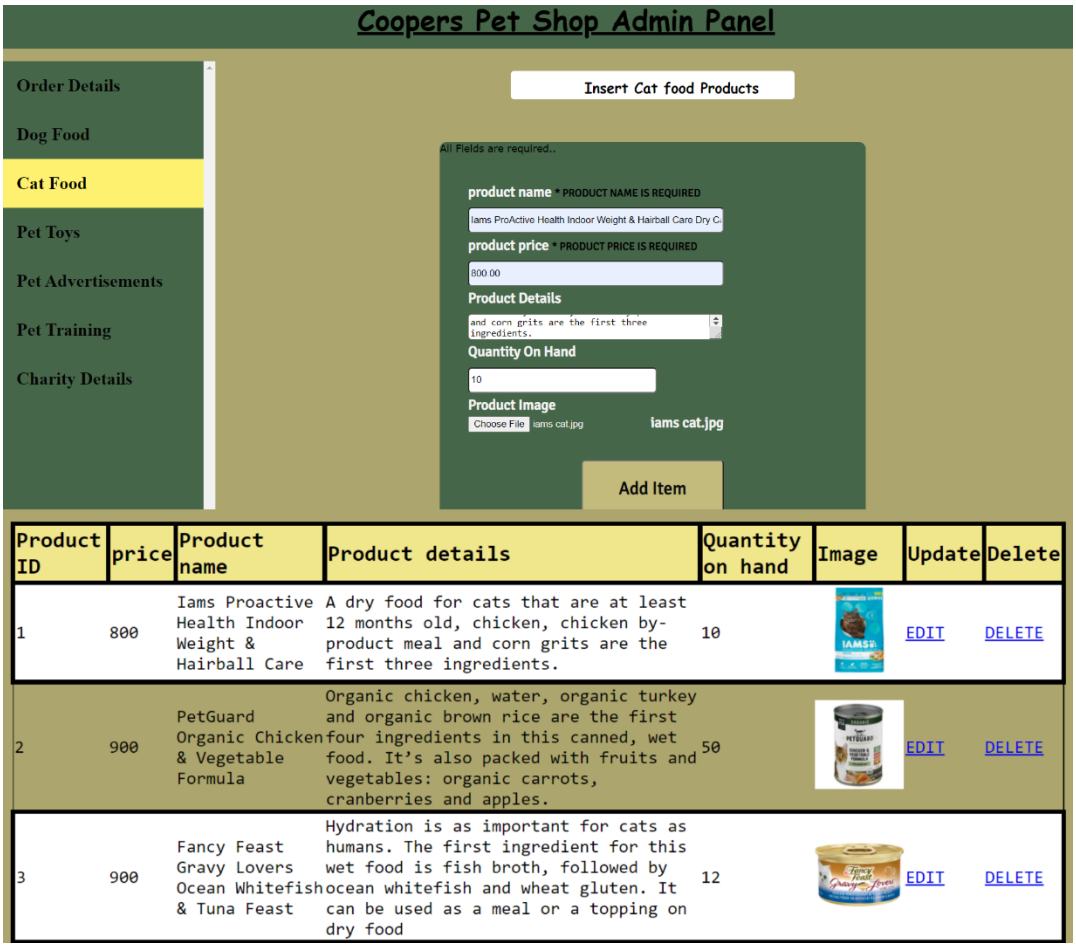


Figure 36 Cat Food insert From admin panel

By using this page admin can insert cat food products to the cooper's pet shop. The inserted items will automatically update cat food products page in coopers pet shop. Pet shop owner can view inserted data and also, he/she can update, delete cat foods by using product table in cat food page in the admin panel.

Insert pet toys from admin panel

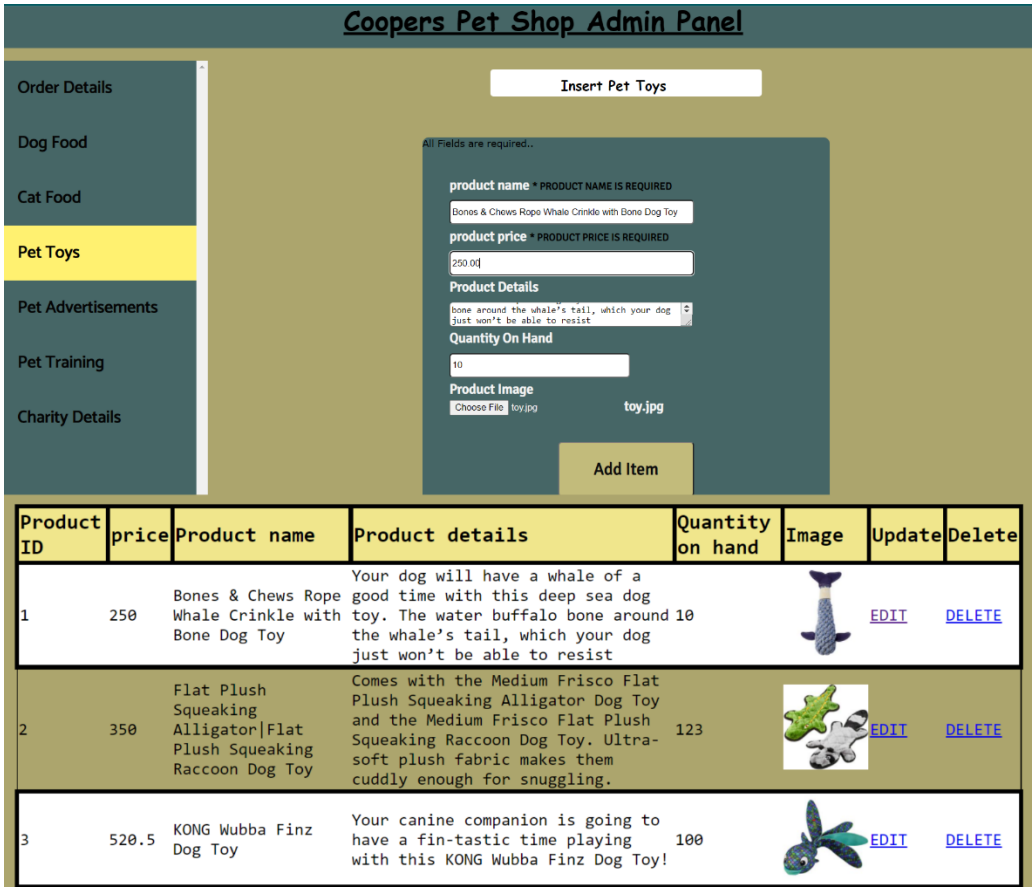


Figure 37 Pet Toys insert From admin panel

By using this page admin can insert pet toys to the cooper's pet shop. The inserted items will automatically update pet toys page in coopers pet shop. Pet shop owner can view inserted items and also, he/she can update, delete pet toys by using product table in pet toys page in the admin panel.

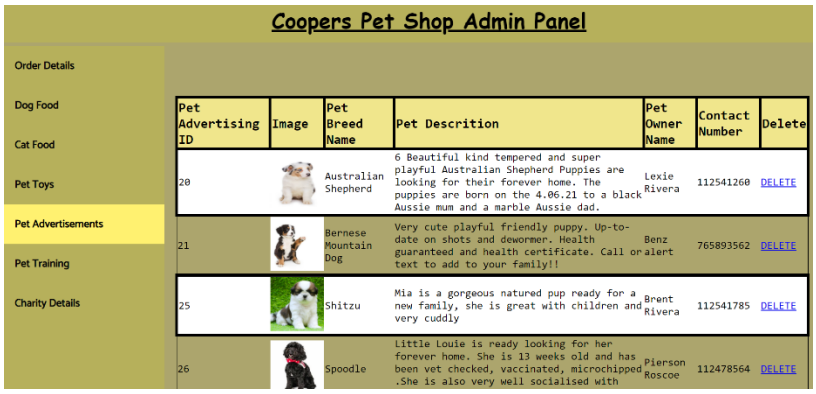


Figure 38 pet advertisements table load (admin panel)

This page includes all the pet advertisements, posted by customers from coopers' pet shop. Pet shop owner can view/delete all the advertisements by using this table in pet advertisements page in admin panel.

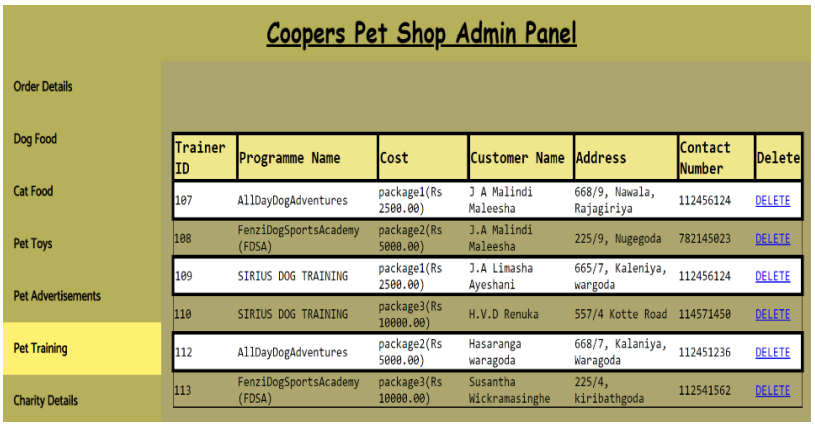


Figure 39 Pet Training table load (admin panel)

If a customer registered pet training program all the registered details will automatically save in pet training page in the admin panel. Pet owner can view/ delete details by using this table.

Figure 40 Charity details table load (admin panel)

This page includes charity details. People who donates for coopers' pet shop charity service, all the donation details will automatically save in this charity details page in the admin panel. Pet owner can view/ delete details by using this table.

3.4 Implementation

The Coopers' pet shop was developed by using many programming languages such as Php, html, bootstrap, java script, and CSS. The CSS stands for cascading style sheets. It is easy to create links to other documents on our website. The most important advantage of using CSS language to our website is, it easier to maintain and update. The CSS language helps me to design website looks and layouts. Without it this website would still be plain text on white backgrounds. All pages include its own CSS file and regardless of the page, we control all the elements from one or several stylesheets.

```
index.php ×   # style.css
index.php
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>cooper</title>
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="style.css">
    <link rel="stylesheet" href="cart1.css">
```

Figure 41 usage of CSS files in Index.php file

```
index.php   # style.css ×
# style.css > .bt
*{
    margin: 0;
    padding: 0;
}

body{
    background-color: khaki;
    margin: 0px;
    font-family: Verdana, Geneva, Tahoma, sans-serif;
    font-size: 14px;
    color: black;
}



#header{
    height: 200px;
    line-height: 200px;
    margin: 10px;
    background-color: rgb(148, 118, 84);
    border-radius: 5px;
    text-shadow: 0 0 2px #000;

}
```

Figure 42 Designed CSS file for index page

For this website we used XAMPP which helps as local host to test our website through our laptops before releasing it to the main server. When we install Xampp in our laptop MySQL database is automatically installed in our machine. The MySQL is a relational database management system which is based on structured query language. We used MySQL for this website because this website is developed by using PHP programming language and also MySQL is popular in web application development. The MySQL database used to store all the data in coopers' pet shop it helps pet shop owner to keep all the data secure without any data loss.

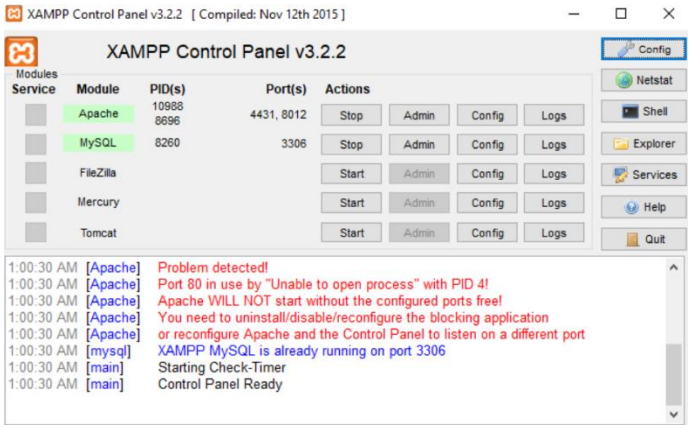


Figure 43 Xampp control panel

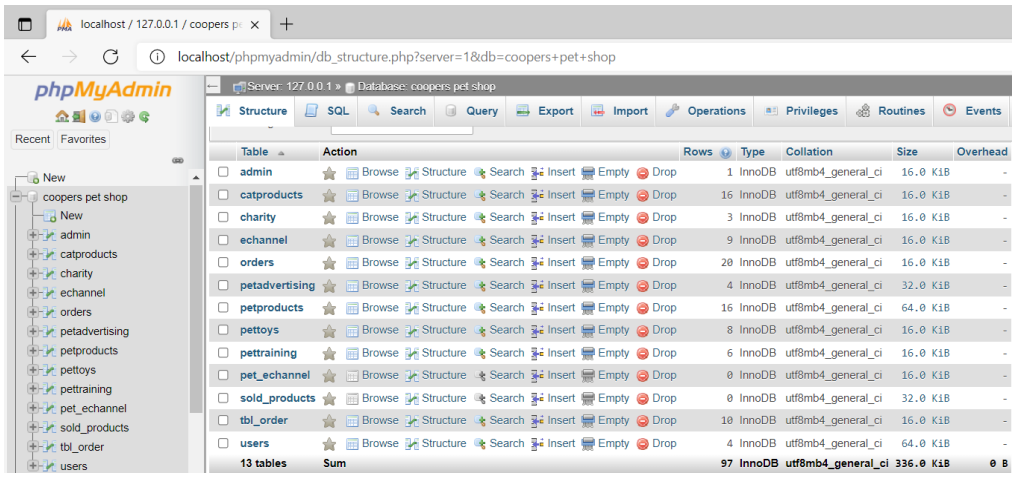


Figure 44 Coopers pet shop database (MYSQL)

This website was test as a localhost so, first of all we have to create a folder in Xampp htdocs to test our website. After creating this folder, we used to open it in Visual studio code to create php files and code them according to our website needs.

The visual studio code is open source code editor, implemented by Microsoft for windows, Linux and macOS. We used visual studio code to implement our website because it includes many features which helps me to debugs the codes and also it highlights syntax errors as well.

First, we have to open our website folder which is created in xampp htdocs and then we can create PHP files in this folder according to our website needs. Below I included our php files which is created on visual studio code and also, I included how is the visual studio code helps me to find my syntax errors when implementing this website.

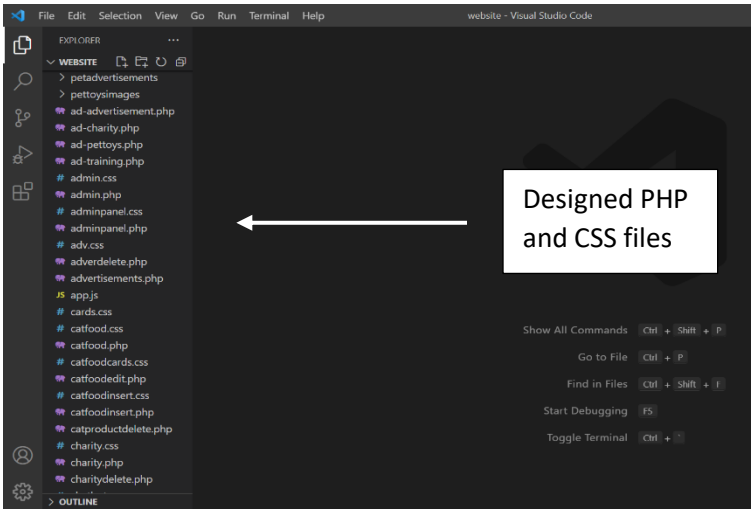


Figure 45 Designed PHP and CSS files

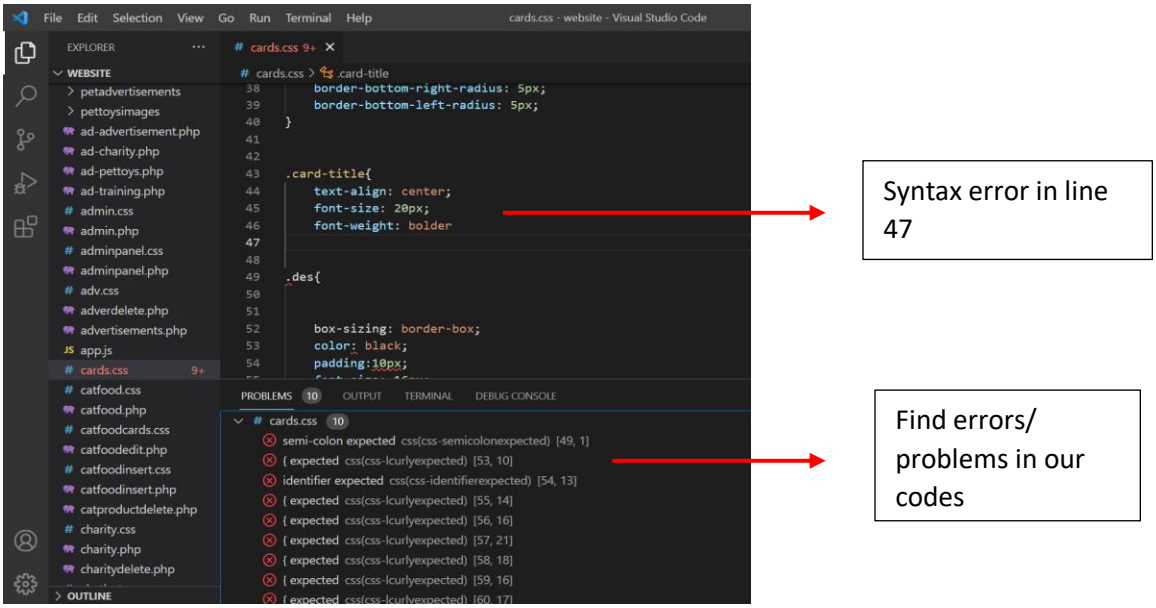


Figure 46 Syntax error Highlights from visual studio code

After creating web page, we can test each web page by using localhost and we can find whether it works or not.

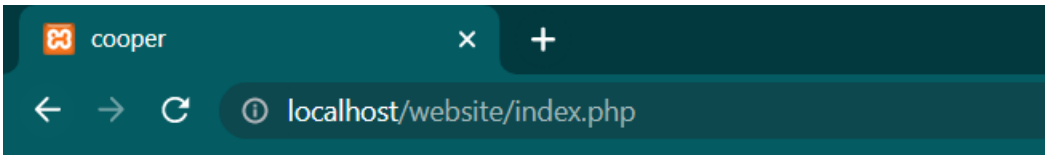


Figure 47 use Localhost for test web pages

Figure 48 home page

So, above details includes how I implemented this website by using all these software requirements.

3.5 Testing

3.5.1 Unit Testing

Simply the unit testing is a method that used to test smallest pieces of code or an individual function. These type of small pieces of code are named as units. A unit can be a line of code or may be a method.

The main advantage of unit testing is we can test small parts of our code. As a result of testing smaller units, it gives us a more detailed view of our code performance. And also, when dealing with small units' tests run fast.

The coopers pet shop is designed by step by step. So, in the navigation bar services includes pet advertising page.

Figure 49 Unit testing in pet advertising page

The above pet advertising form includes four input fields. Each field validate by using correct validation method. In above form if a customer entered wrong data into the fields such as assume the contact number field required ten numbers and a customer enter letters, (a-z) a span error will automatically display with how to enter correct data to the field. Below image includes how data validation works in our coopers' pet shop.

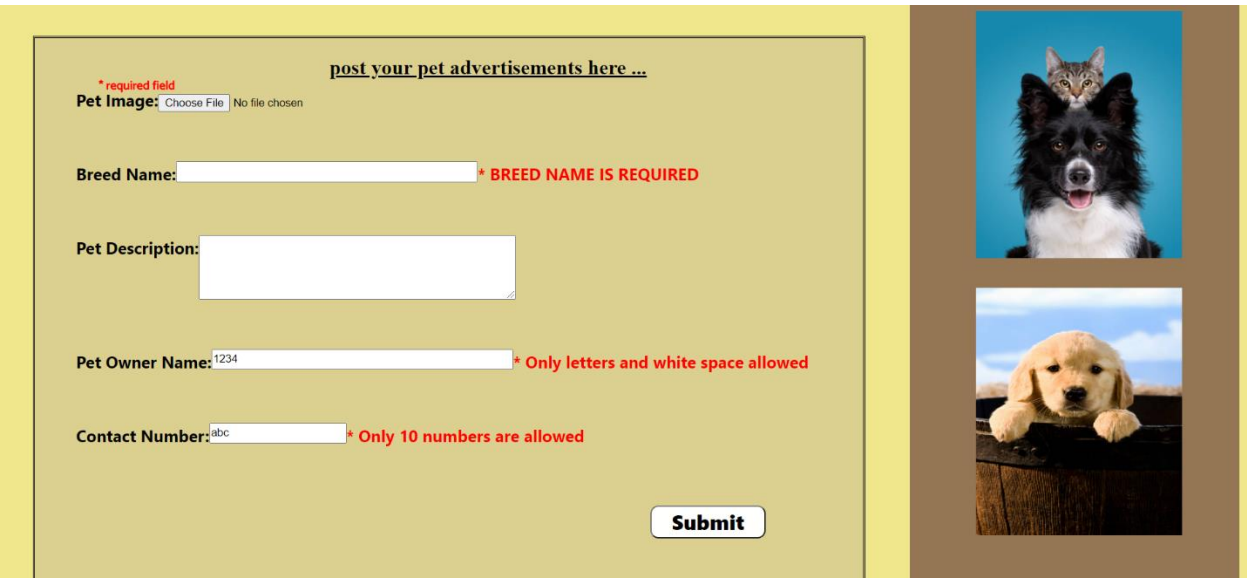


Figure 50 Validations in Pet advertising page

petadvertising.php

```
if($_SERVER["REQUEST_METHOD"]== "POST"){
    if (empty($_POST["name"])){
        $nameErr= "NAME IS REQUIRED";
    } else {
        $name =test_input($_POST["name"]);
        //check if name only contains letters and whitespace
        if(!preg_match("/^[a-zA-Z-' ]*$/",$name)) {
            $nameErr = "Only letters and white space allowed";
          }
    }
}


if($_SERVER["REQUEST_METHOD"]== "POST"){
    if (empty($_POST["breedname"])){
        $breedErr= "BREED NAME IS REQUIRED";
    } else {
        $breedname =test_input($_POST["breedname"]);
        //check if name only contains letters and whitespace
        if(!preg_match("/^[a-zA-Z-' ]*$/",$breedname)) {
            $breedErr = "Only letters and white space allowed";
          }
    }
}
```

Figure 51 coding of validations

Table 6 test case pet advertising

Test case identifier	02				
Test case	Pet advertising				
Test designed by	Malindi Maleesha				
Test designed date	20th September 2021				
Test executed by	Malindi Maleesha				
Test executed date	25th October 2021				
Description	When a customer clicks pet advertising in navigation bar, they will be directed to pet advertising page. If the customer entered valid data in pet advertising form and click submit button it will directing to pet advertisements page. Customer can see his/her pet advertisement post in pet advertisements page. If not (entered incorrect data) it will be redirected to the same page and display warning if the customer name/address/contact number are incorrect				
Dependencies	An operating computer with an xampp should be installed				
Test case	Sequence	Test case description	Test data / input values	Expected Result	Status (Pass/Fail)
02	2.1	Input fields empty and click submit button	Breed name = “” Pet owner name= “” Contact number = “”	Error message breed name is required. Error message pet description is required Pet owner name is required Contact number is required	Pass
	2.2	When entering incorrect data	Breed name = “labradog;12” Pet owner name= “1imasha12, Contact number= “011241278abc” “011245107845”	Error message Only letters and white space allowed Error message only 10 numbers allowed	Pass
	2.3	When entering correct data with no empty fields	Fill full form with correct data	Directing to pet advertisements page (view posted pet advertisement)	Pass

3.5.2 Integration testing

The integration testing used to combine/ integrate the unit tested module one by one and test the behavior as a combined unit. The main goal of integration testing is to test the interfaces between units and modules. Normally the integration testing is done by after unit testing.

Integration testing helps me to make sure if the integrated modules work properly as intended. I can easily find detected errors related to the interfaces between modules.

Coopers pet shop includes admin panel which helps pet shop owner to keep track of available pets/products and services on his pet shop. The coopers pet shop pet products named as dog food, cat food and pet toys. Those products are inserted by pet shop owner from admin panel. If dog food insert/ cat food insert/ pet toys insert interfaces doesn't work, the customer can't see what are the available products in coopers pet shop.

Below I included how pet shop owner insert pet products to the cooper's pet shop.

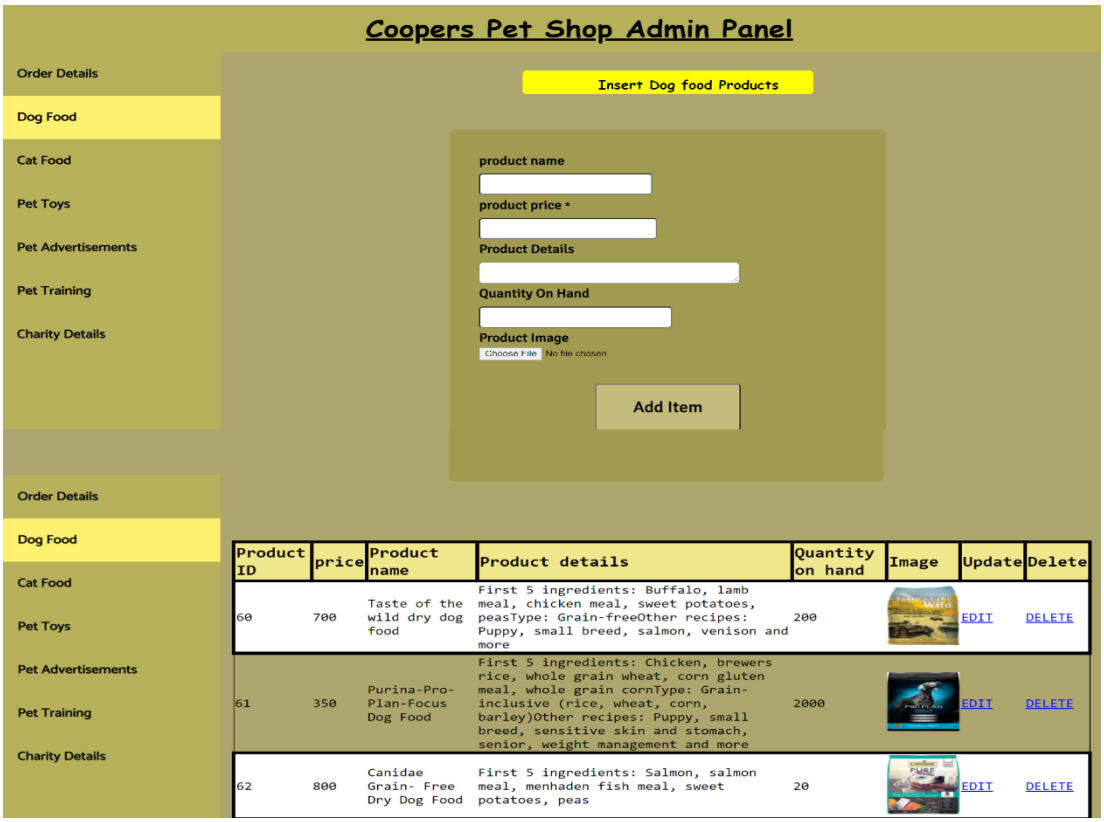


Figure 52 Inserting Dog food products from admin panel

Inserted dog food products from admin panel

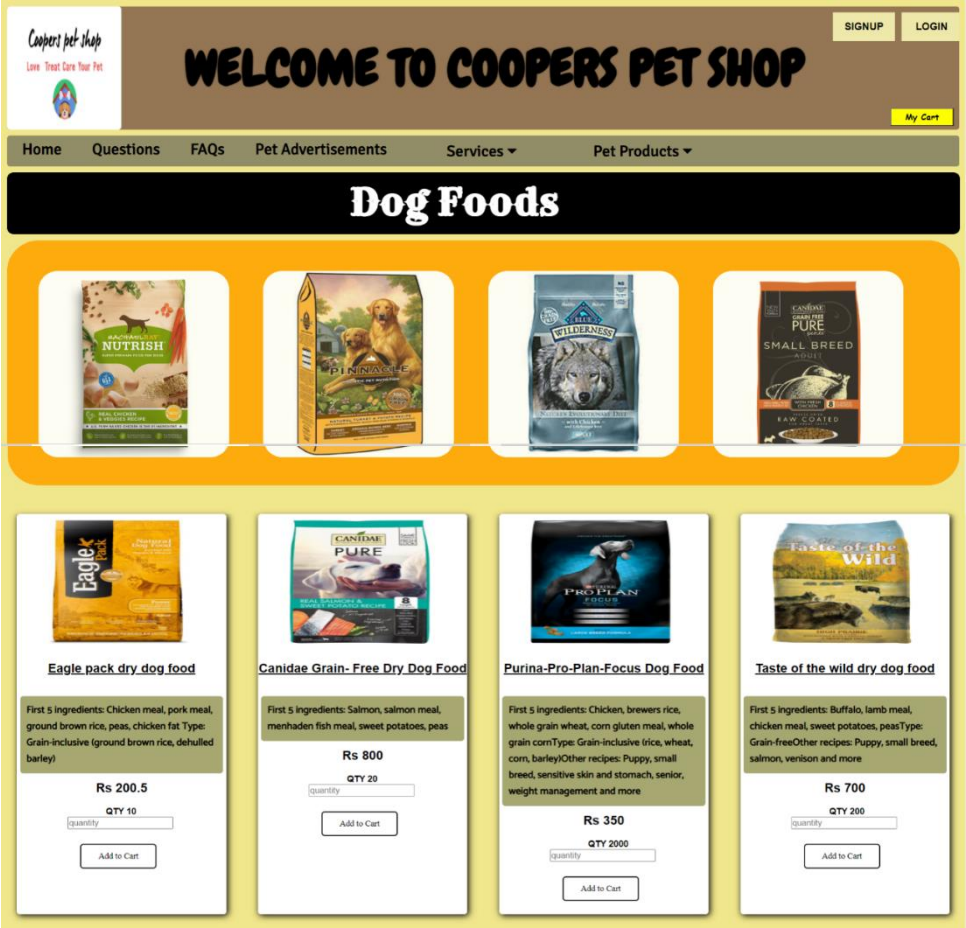


Figure 53 Inserted dog foods display in coopers pet shop

The above image includes dog food products, inserted by pet shop owner from the admin panel. Assume in admin panel the pet products interfaces do not work, as a result of this customers can't view dog food products from coopers' pet shop website. So, the pet shop owner has to insert all the pet products to the website by using admin panel.

The products update and delete also done by pet shop owner from the admin panel. If a product was updated, the updated field also updates in the coopers' pet shop with related pet products page.

The order details interface is another example for integration testing. Because assume if customers order products from our website. So, it is required to have order details page in admin panel to see the customer orders. If there is an error in order details page pet shop owner can't view what are the products the customer ordered from coopers' pet shop. And also, in coopers pet shop it is

required to have checkout form to insert customer details, without checkout interface pet shop owner can't view order details and customers can't order products from coopers' pet shop.

So, the above details give an idea about how the coopers pet shop interfaces and the admin panel was integrated. Below images includes how the customer fill checkout form and how the order details were stored in the admin panel.

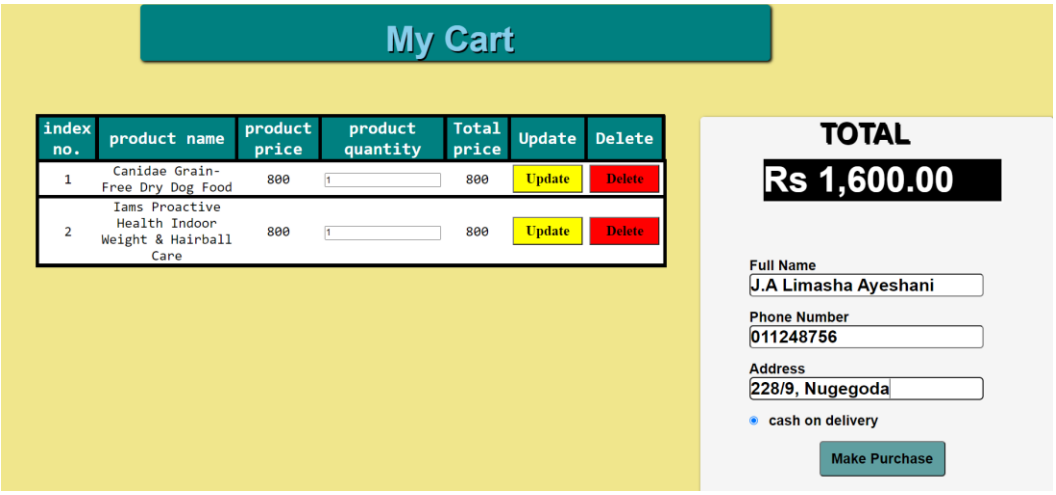


Figure 54 Checkout process

Not only pet products coopers pet shop service details also saved in admin panel for pet shop owner to keep track of details in his pet shop activities. Pet shop owner can view details, delete data and update details for coopers' pet shop. So, all above details shows how our admin panel and coopers pet shop website integrated.

3.5.3 system testing

The system testing is used to examine if every component of an application is working or not. Normally a quality assurance team typically conducts system testing after checking the individual modules with unit testing and integration testing.

The system testing is another level of a testing that validates the total and fully integrated software product. Before system testing we have to test unit testing and integration testing to find bugs and errors between the codes/ modules and the interfaces.

The unit testing normally done by the programmer who writes the code. So above I mentioned how was unit testing is done. This website includes various types of forms with validations. Each code is tested as small units and we doesn't find any errors in the codes.

After unit testing we done integration testing to test the interfaces between units and modules. The coopers pet shop includes an admin panel. All the data of this website is controlled by pet shop owner by using admin panel. If the admin panel doesn't work admin cannot insert/update/delete products and services to the website. In above I mentioned how admin panel and coopers pet shop works together as a system.

System testing helps to detects and defects within both the integrated units and the whole system. This report includes the test cases that I used to check if the website performs all the tasks as designed. So, in system testing individual test cases determine the overall test coverage for this website, and help me to catch critical defects coopers pet shop core functionalities before this release to the customers.

I think this website is ready to release because in unit testing and integration testing we doesn't find any failures and this system meets all the system requirement specifications and functional requirement specification and customer expectations as defined.

CHAPTER 04 |ARTIFACT

4.1 Academic Findings

The academic question of this project is, how is this coopers' pet shop will helpful in this Covid 19 pandemic situation.

The coopers pet shop is designed for the valuable customers, who loves to shop pet products and services for their pets. The Covid 19 pandemic has forever changed the way people shop. People can't visit pet shops to buy pet products for their pets. Although lockdown measures are slowly starting to lift, most people are still spending more time in computers and laptops. Most of pet owners' visits google, yahoo and other online search engines, pet owners constantly seeking where is the best website to get pet products and services for their pets. In this pandemic situation many pet stores had to temporarily close their pet shops to keep staff and customers safe. But I think coopers pet shop website will helpful in this pandemic situation because it is important to remember the internet is open 24/7. So, people can buy any pet products and services through our website.

An efficient website always includes products and services. So, this website includes various type of services such as pet E-channeling services, pet training services, pet advertising services and pet charity services. I think it is great opportunity for our valuable customers to get any services in our website during this pandemic situation.

Customers can make online appointments from Petco pet clinic for their pets, they can select their preferred date and time. So, this will help pet owners to save their time they don't have to wait outside to book an appointment to channel their pets. They can use their valuable time for more urgent tasks or they do not have to spend more time in outside in this pandemic situation.

Pet advertising also most important service during this pandemic situation. People don't have to design their pet advertisement or they don't have go outside to pay money for posting pet advertisements in our website. By posting pet advertisements in our website, they can meet their target audience as well. The pet training programs is another valuable service for our customers. They can register online for pet training programs by using our website. So, I think all of these website facilities will help our customers during this pandemic situation.

4.2 Sample code

Customer login and register

signup.php

```php
<?php
session_start();
    include("connection.php");
    include("functions.php");


    if($_SERVER['REQUEST_METHOD'] == "POST")
    {
        //SOMETHING WAS POSTED
        $user_name = $_POST['user_name'];

        $password = $_POST['password'];
        if(!empty($user_name) && !empty($password) && !is_numeric($user_name))
       {

          //save to database
          $user_id = random_num(20);
          $query ="INSERT INTO `users` (user_id,user_name,password) VALUES ('$user_id', '$user_name', '$password')

          mysqli_query($con, $query);

          header("Location:login.php");
          die;
       }else
       {
           echo"Please enter some valid information!";

       }
```

Figure 55 customer login code

login.php

```php
            //read from database
            $query = "SELECT * FROM users where user_name= '$user_name' limit 1";
            $result= mysqli_query($con, $query);

            if($result)
            {
             if($result && mysqli_num_rows($result) > 0)
             {

                 $user_data = mysqli_fetch_assoc($result);

                 if($user_data['password'] === $password)
                 {
                     $_SESSION['user_id']= $user_data ['user_id'];
                    header("Location:index.php");
                     die;
                 }
             }
         }
         echo"Wrong Username or Password!";

         }else
         {


         }
     }
```

Figure 56 Customer Register

Chatbot

```
JS app.js ×
JS app.js > talk > know > "can i know pet training packages"
function openForm() {
    document.getElementById("myForm").style.display = "block";

  }
  function closeForm() {
    document.getElementById("myForm").style.display = "none";
  }

function talk() {
    var know ={
        "Hi" : "Hello Coopers Pet shop here",
        "hi" : "Hello Coopers Pet shop here",
        "Hello" : "Hi Coopers Pet shop here",
        "hello" : "Hi Coopers Pet shop here",
        "Is COD available in your online pet shop" : "Yes we accept COD",
        "cod available" : "yes we accept cod",
        "hello how to join pet training program" : "hello, please fill pet training program form in our website",
        "Dog food" : "yes we have please check our website",
        "dog food" : "yes we have please check our website",
        "Cat food" : "yes we have please check our website",
        "cat food" : "yes we have please check our website",
        "pet toys" : "yes we have please check our website",
        "Pet toys" : "yes we have please check our website",
        "can i know pet training packages" : " Rs up to 1000.00/5000.00/10000.00",
        "cod" : "yes",

    };
    var user = document.getElementById('userBox').value;
    document.getElementById('chatLog').innerHTML = user + "<br>";
    if (user in know){
```

Figure 57 code for chatbot

Dog food insert

```php
adminpanel.php
$connection = mysqli_connect($servername, $username, $password, $database);
$error="";
if(isset($_POST['submit']))
{
    $p_price = $_POST['p_price'];
    $p_name = $_POST['p_name'];
    $p_detail = $_POST['p_detail'];
    $p_qty = $_POST['p_qty'];
    $uploadfile = $_FILES['uploadfile'] ['name'];
    $tmpname= $_FILES['uploadfile']['tmp_name'];
    $folder= "dogfoodimages/".$uploadfile;
    move_uploaded_file($tmpname,$folder);


 if($p_price!=""  && $p_name!=""  && $p_detail!=""  &&$p_qty!="" && $folder!="")

 {

  $q=  mysqli_query($connection, "INSERT INTO `petproducts`(`productId`, `price`, `productname`, `productdetails`, `quantityonhand`, `Image`) VALUES ('',

  $error .= "<div class='alert alert-success'> Data Insert !!</div>";
  header('location:adminpanel.php');
  exit();



 }
else{
   $error .= "<div class='alert alert-danger'> All Fields are required.. </div>";
 }
}
```

Figure 58 coding for dog food insert

Delete dog foods

```php
delete.php
delete.php
<?php

$conn = mysqli_connect("localhost", "root", "", "coopers pet shop");
$id= $_GET['id'];
mysqli_query($conn, "DELETE FROM `petproducts` WHERE productId= $id");
header("Location:adminpanel.php");
?>
```

Figure 59 coding for delete dog foods

Cat food insert

```php
catfoodinsert.php
$connection = mysqli_connect($servername, $username, $password, $database);
$error="";
if(isset($_POST['submit']))
{
    $p_price = $_POST['p_price'];
    $p_name = $_POST['p_name'];
    $p_detail = $_POST['p_detail'];
    $p_qty = $_POST['p_qty'];
    $uploadfile = $_FILES['uploadfile'] ['name'];
    $tmpname= $_FILES['uploadfile']['tmp_name'];
    $folder= "catfoodimages/".$uploadfile;
    move_uploaded_file($tmpname,$folder);


 if($p_price!=""  && $p_name!=""  && $p_detail!=""  &&$p_qty!="" && $folder!="")

 {

  $q=  mysqli_query($connection, "INSERT INTO `catproducts`(`productId`, `price`, `productname`, `productdetails`,

  $error .= "<div class='alert alert-success'> Data Insert !!</div>";
  //header('location:dogfood.php');


 }
 else{
    $error .= "<div class='alert alert-danger'> All Fields are required.. </div>";
 }
 }
```

Figure 60 coding for Cat food insert

Delete cat foods

```php
catproductdelete.php
<?php

$conn = mysqli_connect("localhost", "root", "", "coopers pet shop");
$id= $_GET['id'];
mysqli_query($conn, "DELETE FROM `catproducts` WHERE productId= $id");
header("Location:catfoodinsert.php");
?>
```

Figure 61 coding for cat products delete

Dog food update

```
adminpanel.php
adminpanel.php
if(isset($_POST['Update_image']))
{
    $_id=$_POST['p_id'];
    $p_price = $_POST['p_price'];
    $p_name = $_POST['p_name'];
    $p_detail = $_POST['p_detail'];
    $p_qty = $_POST['p_qty'];
        $query ="UPDATE petproducts SET price='$p_price', productname='$p_name', productdetails='$p_detail', quantityonhand='$p_qt
        $query_run = mysqli_query($connection, $query);
        }
?>
```

Figure 62 Coding for dog food update

Cat food update

```
if(isset($_POST['Update_image']))
{
    $_id=$_POST['p_id'];
    $p_price = $_POST['p_price'];
    $p_name = $_POST['p_name'];
    $p_detail = $_POST['p_detail'];
    $p_qty = $_POST['p_qty'];
        $query ="UPDATE catproducts SET price='$p_price', productname='$p_name', productdetails='$p_detail', quantityonhand='
        $query_run = mysqli_query($connection, $query);
}
```

Figure 63 Coding for cat food update

Pet toys update

```php
if(isset($_POST['Update_image']))
{
    $_id=$_POST['p_id'];
    $p_price = $_POST['p_price'];
    $p_name = $_POST['p_name'];
    $p_detail = $_POST['p_detail'];
    $p_qty = $_POST['p_qty'];




        $query ="UPDATE pettoys SET price='$p_price', productname='$p_name', productdetails='$p_detail', quantityonhand='$p_qty'
        $query_run = mysqli_query($connection, $query);



}



?>
```

Figure 64 Coding for pet toys Update

Pet toys delete

toysdelete.php

```php
<?php

$conn = mysqli_connect("localhost", "root", "", "coopers pet shop");
$id= $_GET['id'];
mysqli_query($conn, "DELETE FROM `pettoys` WHERE productId= $id");
header("Location:ad-pettoys.php");
?>
```

Figure 65 coding for pet toys delete

Dog food table load

adminpanel.php

```php
<?php
$conn = mysqli_connect("localhost", "root", "", "coopers pet shop");
// Check connection
if ($conn->connect_error) {
die("Connection failed: " . $conn->connect_error);
}
$query = "SELECT `productId`, `price`, `productname`, `productdetails`, `quantityonhand`, `Image` FROM `petproducts` ";
$query_run=mysqli_query($connection,$query);


if(mysqli_num_rows($query_run) > 0)
{
    while($row=mysqli_fetch_assoc($query_run))
    {
  ?>
      <tr>
        <td><?php echo $row ['productId']?></td>
        <td><?php echo $row ['price']?></td>
        <td><?php echo $row ['productname']?></td>
        <td><?php echo $row ['productdetails']?></td>
        <td><?php echo $row ['quantityonhand']?></td>
        <td> <img src="<?php echo $row['Image']; ?>" width="100" height="100"> </td>
        <td>
            <a href="edit.php?id=<?php echo $row['productId'];?>" class="btnn"> EDIT </a>
        </td>
        <td>
            <a href="delete.php?id=<?php echo $row['productId'];?>" class="btnn"> DELETE</a>


    <?php
    }
```

Figure 66 coding for dog food table load

Dog food products display

dogfood.php

```
$connection = mysqli_connect($servername, $username, $password, $database);

$query ="SELECT `productId`, `price`, `productname`, `productdetails`, `quantityonhand`, `Image` FROM `petproducts` ";
$query_run =mysqli_query($connection, $query);
$check_petproducts = mysqli_num_rows ($query_run) > 0;

if($check_petproducts)
{
    while($row=mysqli_fetch_assoc($query_run))
    {
        ?>
<div class="row">
  <div class="column">
    <div class="card">
        <form action ="insertcart.php" method="POST">

        <div class="image">
        <img src="<?php echo $row['Image']; ?>" >
            <h4 class="card-title"> <u> <?php echo $row['productname'];?> </u></h4>
            <br>
            <br>
            <h5 class ="des"> <?php echo $row['productdetails'];?> </h5>
            <h6 class="price"> Rs <?php echo $row['price'];?>  </h6> <br>
            <h7 class ="qty"> QTY <?php echo $row['quantityonhand'];?> </h7>
            <input type="hidden" name="hidden_name" value="<?php echo $row["productname"];?>">
            <input type="hidden" name="hidden_price" value="<?php echo $row["price"];?>">
            <input type="number"id="qt" name="quantity" value=' min='1' max='10'' placeholder='quantity'>
            <br>
            <br>
            <br>
            <input type ="submit" name="addCart" class="button" value= "Add to Cart">
```

Figure 67 Coding for Dog food Products display

Cat food table load

catfoodinsert.php

```php
<?php
$conn = mysqli_connect("localhost", "root", "", "coopers pet shop");
// Check connection
if ($conn->connect_error) {
die("Connection failed: " . $conn->connect_error);
}
$query = "SELECT `productId`, `price`, `productname`, `productdetails`, `quantityonhand`, `Image` FROM `catproducts` ";
$query_run=mysqli_query($connection,$query);


if(mysqli_num_rows($query_run) > 0)
{
    while($row=mysqli_fetch_assoc($query_run))
    {
  ?>
      <tr>
          <td> <?php echo $row ['productId']?> </td>
          <td> <?php echo $row ['price']?> </td>
          <td> <?php echo $row ['productname']?> </td>

          <td> <?php echo $row ['productdetails']?> </td>
          <td> <?php echo $row ['quantityonhand']?> </td>
          <td> <img src="<?php echo $row['Image']; ?>" width="100" height="100"> </td>
        <td>
            <a href="catfoodedit.php?id=<?php echo $row['productId'];?>" class="btnn"> EDIT </a>
        </td>
        <td>
            <a href="catproductdelete.php?id=<?php echo $row['productId'];?>" class="btnn"> DELETE</a>
```

Figure 68 Coding for Cat Food table load

Cat food products display

```
// Create connection
$connection = mysqli_connect($servername, $username, $password, $database);

$query ="SELECT `productId`, `price`, `productname`, `productdetails`, `quantityonhand`, `Image` FROM `catproducts` ";
$query_run =mysqli_query($connection, $query);
$check_catproducts = mysqli_num_rows ($query_run) > 0;

if($check_catproducts)
{
    while($row=mysqli_fetch_assoc($query_run))
    {
        ?>
<div class="row">
  <div class="column">
    <div class="card">
    <form action ="insertcart.php" method="POST">

        <div class="image">
        <img src="<?php echo $row['Image']; ?>" >
            <h4 class="card-title"> <u> <?php echo $row['productname'];?> </u></h4>
            <br>
            <br>
            <h5 class ="des"> <?php echo $row['productdetails'];?> </h5>
            <h6 class="price"> Rs <?php echo $row['price'];?>  </h6> <br>
            <h7 class ="qty"> QTY <?php echo $row['quantityonhand'];?> </h7>
            <input type="hidden" name="hidden_name" value="<?php echo $row["productname"];?>"/>
            <input type="hidden" name="hidden_price" value="<?php echo $row["price"];?>"/>
            <input type="number" id="qt" name="quantity" value=' min='1' max='10'' placeholder='quantity'>
            <br>
            <br>
            <br>
             <input type ="submit" name="addCart" class="button" value= "Add to Cart">
```

Figure 69 coding for cat food products display

Pet advertising insert

petadvertising.php

petadvertising.php

```php
// Create connection
$connection = mysqli_connect($servername, $username, $password, $database);
$error="";
if(isset($_POST['submit']))
{

    $uploadfile = $_FILES['uploadfile'] ['name'];
    $tmpname= $_FILES['uploadfile']['tmp_name'];
    $folder= "petadvertisements/".$uploadfile;
    move_uploaded_file($tmpname,$folder);
    $breedname = $_POST['breedname'];
    $description = $_POST['description'];
    $name = $_POST['name'];
    $contactnumber = $_POST['contactnumber'];


 if($folder!="" && $breedname!="" && $description!=""  && $name!=""  &&$contactnumber!="")

 {

  $q=  mysqli_query($connection, "INSERT INTO `petadvertising`(`petadvertisingid`, `petimage`, `petbreedname`, `petdescription`,
  $error .= "<div class='alert alert-success'> Data Insert !!</div>";
  header('location:advertisements.php');
  exit();




 }
 else{
    $error .= "<div class='alert alert-danger'> All Fields are required.. </div>";
 }
```

Figure 70 Coding for inserting pet advertisements

4.3 Test Cases

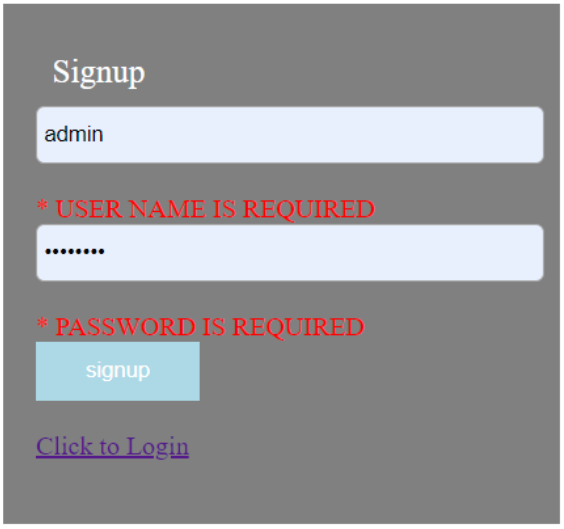
Table 7 Test case for customer signup

Test case identifier	01				
Test case	Customer signup / login				
Test designed by	Malindi Maleesha				
Test designed date	10th August 2021				
Test executed by	Malindi Maleesha				
Test executed date	12th August 2021				
description	First customer has to fill signup form to log in to the coopers' pet shop. After fill signup form with correct data and click on register button customer will directing to a login page. After enter login details in login form and click on login button, customer will be directing to coopers' pet shop home page.				
Dependencies					
Test case	sequence	Test case description	Test data input values	Expected results	Status (pass/fail)
1	1.1	Input fields empty and click signup button	Username= “” Password= “”	Error message username is required Error message password is required	Pass
	1.2	When entering incorrect data	Username= “123” Password= “123()”	Error message Only letters and white space allowed Error message Only Alphabets in Upper and lower case, numbers, back slash and commas allowed	Pass
	1.3	When entering correct data	username = “Amal Perera”	Directing to Login page	Pass

		with no empty fields	password= “Amal123”		

Actual result – Pass

Screen shot



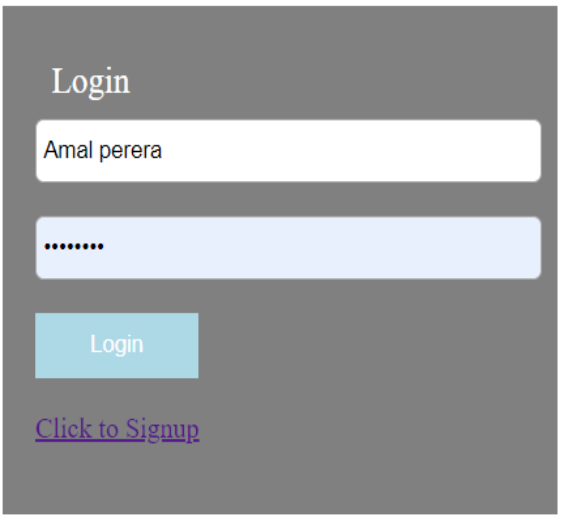


Table 8 Test case for Charity services

Test case identifier	03				
Test case	Charity services				
Test designed by	Malindi Maleesha				
Test designed date	12th August 2021				
Test executed by	Malindi Maleesha				
Test executed date	18th August 2021				
description	When a customer clicks charity services in navigation bar, they will be directed to pet charity services page. If the customer entered valid data in pet charity form and click submit button it will directing to the same page. If not (entered incorrect data) it will be redirected to the same page and display warning if the customer name/address/contact number are incorrect				
Dependencies					
Test case	sequence	Test case description	Test data input values	Expected results	Status (pass/fail)
3	3.1	Input fields empty and click submit button	Customer name = “” Contact number = “” Address = “” Donation amount = “”	Error message customer name is required. Error message contact number is required Address is required Donation amount is required	Pass

	3.2	When entering incorrect data	Customer name = “amal123” Contact number= “011241278abc” “011245107845” Donation amount= “”	Error message Only letters and white space allowed Error message only 10 numbers allowed Error message price can be decimal or without decimal	Pass
	3.3	When entering correct data with no empty fields	Customer name = “Amal Perera” Contact number= “0112456745” Donation amount= “1200.00”	Directing to pet charity page	Pass

Actual result – Pass

Screen shot

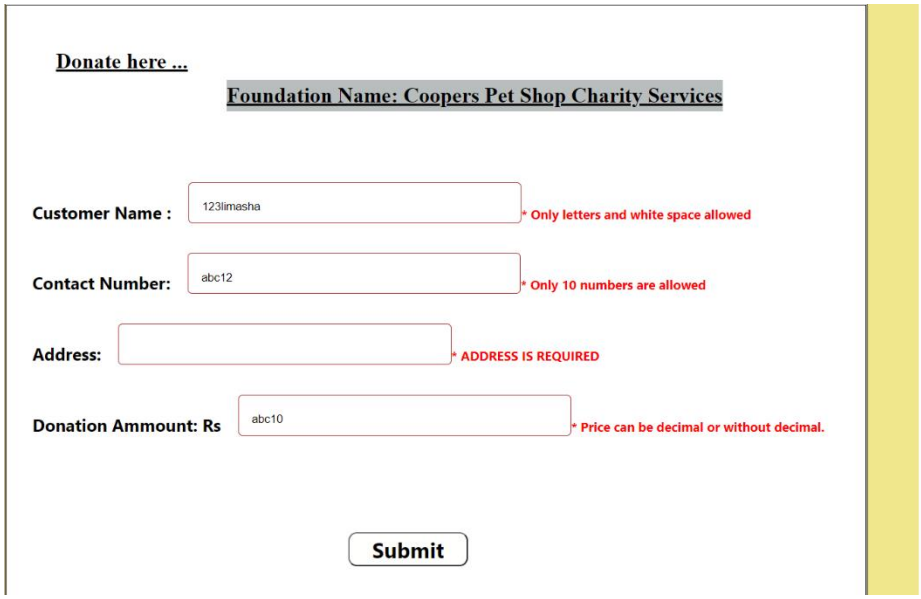


Table 9 Test case for Checkout process

Test case identifier	04				
Test case	My Cart (checkout page)				
Test designed by	Malindi Maleesha				
Test designed date	23rd August 2021				
Test executed by	Malindi Maleesha				
Test executed date	25rd August 2021				
description	When a customer added products to the cart, they will be directed to cart details page. And they can see checkout form. If the customer does not added products in to the cart the checkout form not display. After enter data in to the checkout form and clicks on the make purchase button. Customer can see order placed successfully message and directing to the home page.				
Dependencies					
Test case	sequence	Test case description	Test data input values	Expected results	Status (pass/fail)
4	4.1	Input fields empty and click make purchase button	Full name = “” phone number = “” Address = “”	Please fill out this form. Please fill out this form. Please fill out this form.	Pass
	4.2	When entering incorrect data	Customer name = “ayeshani14’” Contact number= “011241278abc” “011245107845” Address = “”	Error message Only letters and white space allowed Error message only 10 numbers allowed Error message Only Alphabets in Upper and lower case, numbers, back slash and commas allowed	Pass

	4.3	When entering correct data with no empty fields	Customer name = “Amal Perera” Contact number= “0112456745” address= “556/4 Kelaniya”	Can see order placed message and redirecting to the homepage.	Pass

Actual result – Pass

Screen shots

Table 10 Test case for Insert Dog food

Test case identifier	05				
Test case	Insert Dog Food Page				
Test designed by	Malindi Maleesha				
Test designed date	26th August 2021				
Test executed by	Malindi Maleesha				
Test executed date	29th August 2021				
description	The pet shop owner can insert dog food products by using dog food page in the admin panel. First pet shop owner has to fill all the input fields in dog food form. Without enter data and click on submit button, it will redirect to the same page. If the product is inserted the pet shop owner can see data inserted message in dog food form. Also pet shop owner can view if the product is inserted or not by using dog food table in dog food page. And also inserted data automatically loads into the dog food page in coopers pet shop(website).				
Dependencies					
Test case	sequence	Test case description	Test data input values	Expected results	Status (pass/fail)
5	5.1	Input fields empty and click make Insert button	Product name = “” price = “” description = “” Quantity on hand= “” Image = “”	Error message all fields are required.	Pass
	5.2	When entering incorrect data	Products name = “Eagle pack dry dog food []” Price= “Rs1250.00” “Rs 1250” Quantity on hand = twenty “”	Error message Only letters and white space allowed Error message Price can be decimal or without decimal Can’t type letters	Pass
	5.3	When entering correct data	Product name = “Eagle pack dry dog food”	Redirect to the same page with table load. Pet shop owner can see	Pass

		with no empty fields	Price= “2500.00” “2500” Quantity on hand = “10”	inserted product in dog food table. Inserted product automatically added to the dog food page in coopers pet shop.	

Actual result – Pass

Screen shots –

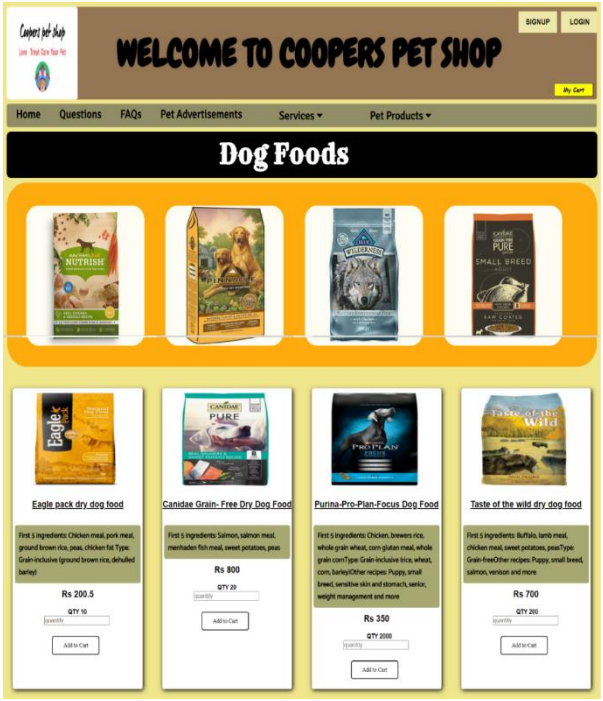


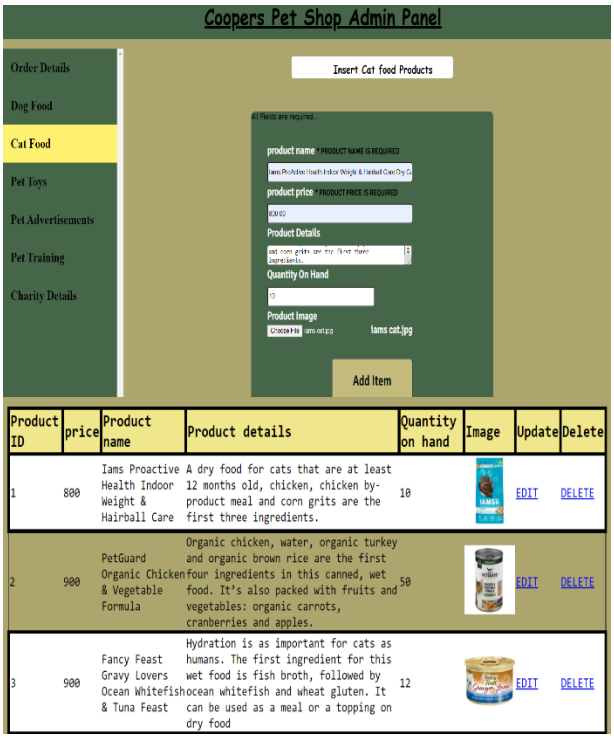
Table 11 Test case for insert pet toys

Test case identifier	06				
Test case	Insert pet toys Page				
Test designed by	Malindi Maleesha				
Test designed date	29th August 2021				
Test executed by	Malindi Maleesha				
Test executed date	31th August 2021				
description	The pet shop owner can insert pet toys by using pet toys page in admin panel. First pet shop owner has to fill all the input fields in pet toys form. Without enter data and click on submit button, it will redirect to the same page. If the product is insert pet shop owner can see data inserted message in pet toys form. Also pet shop owner can view if the product is inserted or not by using pet toys table in below pet toys page. And also inserted data automatically loads into the pet toys page in coopers pet shop(website).				
Dependencies					
Test case	sequence	Test case description	Test data input values	Expected results	Status (pass/fail)
6	6.1	Input fields empty and click make Insert button	Product name = “” price = “” description = “” Quantity on hand= “” Image = “”	Error message all fields are required.	Pass
	6.2	When entering incorrect data	Products name = “Iams Proactive Health Indoor Weight & Hairball Care []” Price=“Rs1350.00” “Rs 1550” Quantity on hand = twenty “”	Error message Only letters and white space allowed Error message Price can be decimal or without decimal Can’t type letters	Pass
	6.3	When entering correct data with no empty fields	Product name = Iams Proactive Health Indoor	Redirect to the same page with table load. Pet shop owner can see inserted product in cat	Pass

			Weight & Hairball Care” Price= “8000.00” “2500” Quantity on hand = “15”	food table. Inserted product automatically added to the cat food page in coopers pet shop.	

Actual result – Pass

Screen shots –



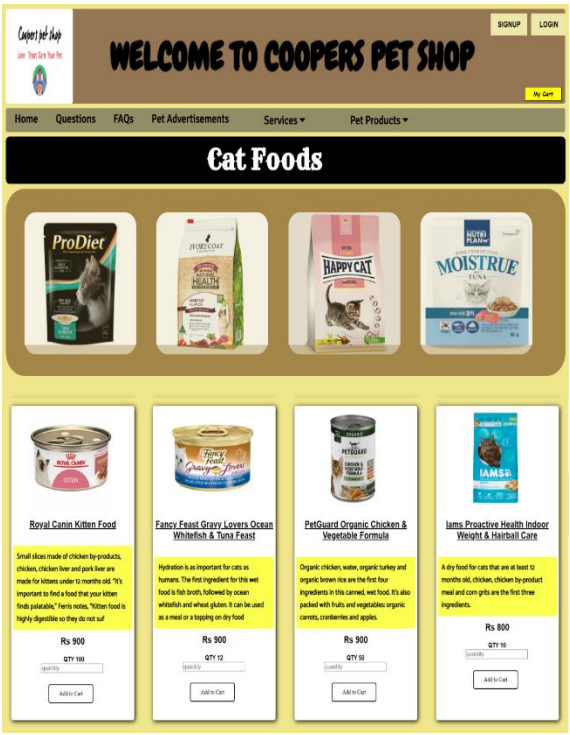


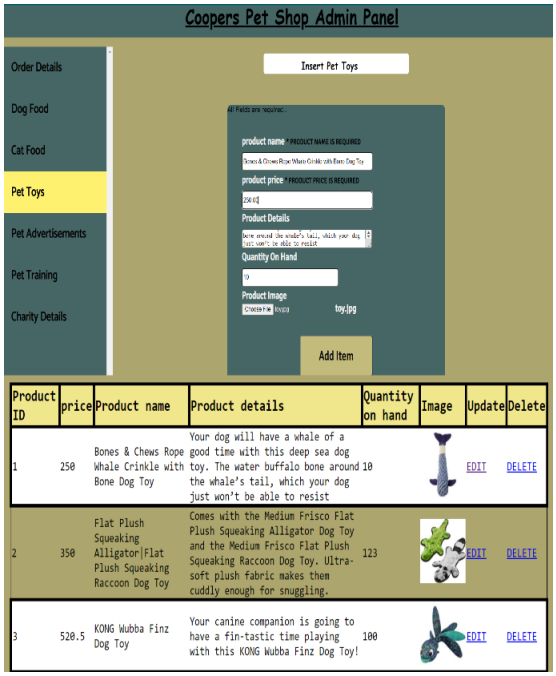
Table 12 Test case for insert pet toys

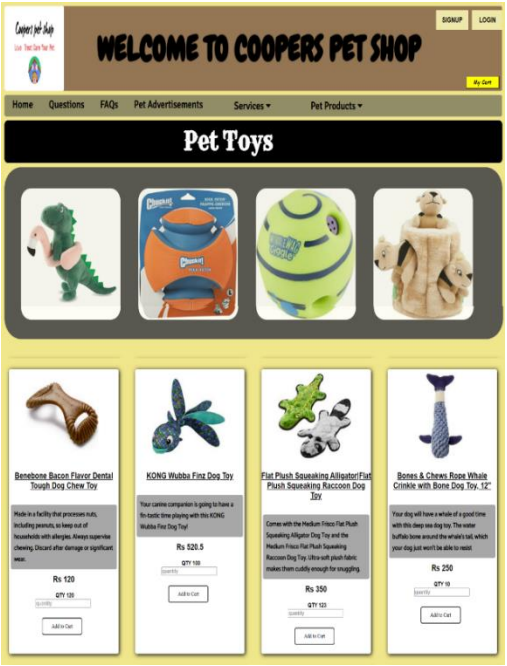
Test case identifier	07				
Test case	Insert pet toys Page				
Test designed by	Malindi Maleesha				
Test designed date	29th August 2021				
Test executed by	Malindi Maleesha				
Test executed date	31th August 2021				
description	The pet shop owner can insert pet toys by using pet toys page in admin panel. First pet shop owner has to fill all the input fields in pet toys form. Without enter data and click on submit button, it will redirect to the same page. If the product is insert pet shop owner can see data inserted message in pet toys form. Also pet shop owner can view if the product is inserted or not by using pet toys table in below pet toys page. And also inserted data automatically loads into the pet toys page in coopers pet shop(website).				
Dependencies	An operating computer with an xampp should be installed				
Test case	sequence	Test case description	Test data input values	Expected results	Status (pass/fail)
7	7.1	Input fields empty and click make Insert button	Product name = “” price = “” description = “” Quantity on hand= “” Image = “”	Error message all fields are required.	Pass
	7.2	When entering incorrect data	Products name = “Bones & Chews Rope Whale Crinkle with Bone Dog Toy 12 []” Price=“Rs1450.00” “Rs 1850” Quantity on hand = twenty “”	Error message Only letters and white space allowed Error message Price can be decimal or without decimal Can’t type letters	Pass
	7.3	When entering correct data	Product name = “Bones & Chews Rope	Redirect to the same page with table	Pass

		with no empty fields	Whale Crinkle with Bone Dog Toy” Price= “1200.00” “1200” Quantity on hand = “15”	load. Pet shop owner can see inserted pet toys in pet toys table.	

Actual result – Pass

Screen shots –

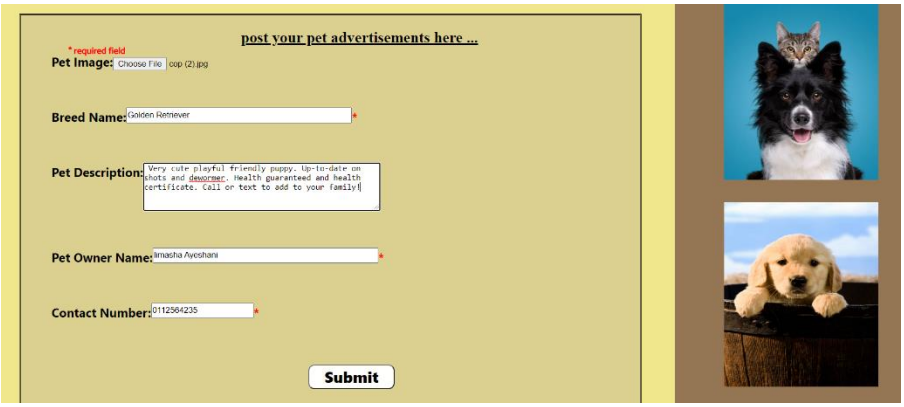


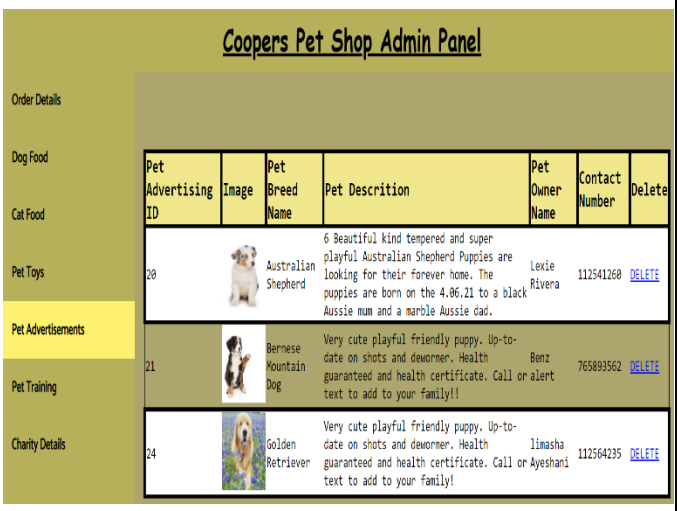


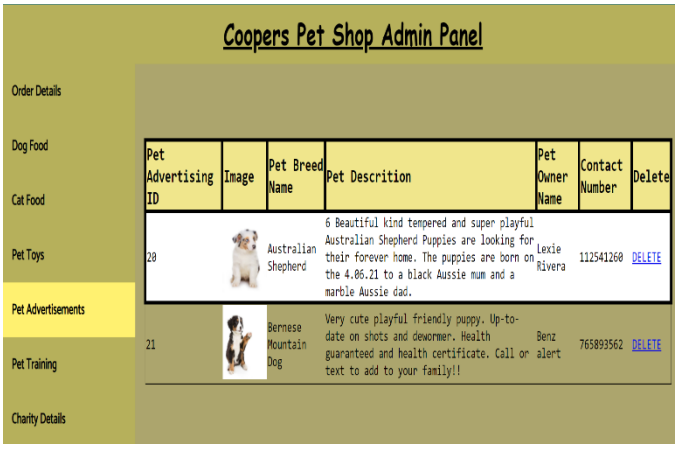
Test case identifier	08				
Test case	Pet advertisements table load in admin panel				
Test designed by	Malindi Maleesha				
Test designed date	20th September 2021				
Test executed by	Malindi Maleesha				
Test executed date	25th October 2021				
description	Test case number 02 includes how pet advertising page works with the validation methods. The admin panel includes pet advertisements page and pet shop owner can view and delete pet advertisements through the table which includes in the admin panel. When a customer posted pet advertisement, it will automatically save in this table. When the time period expired owner can delete these advertisements from the table. The deleted pet advertisement also deleted from the coopers' pet shop.				
Dependencies	An operating computer with an xampp should be installed				
Test case	sequence	Test case description	Test data input values	Expected results	Status (pass/fail)
8	8.1	When entering correct data to the pet advertising form	Breed name = "Labrador" Pet owner name= "1imasha Ayeshani, Contact number= "0112418754"	Directing to pet advertisements page (can view posted pet advertisement)	Pass
	8.2	Inserted pet advertisement will automatically upload pet advertisement table in the admin panel	Click submit button in pet advertising page.	Automatically update pet advertising table in admin panel.	Pass
	8.3	View inserted pet advertisement and delete pet advertisements from the table	Click on delete button in pet advertisement table in admin panel.	Delete pet advertisement from the admin panel and automatically delete it from coopers' pet shop.	Pass

Actual result – Pass

Screen shots –





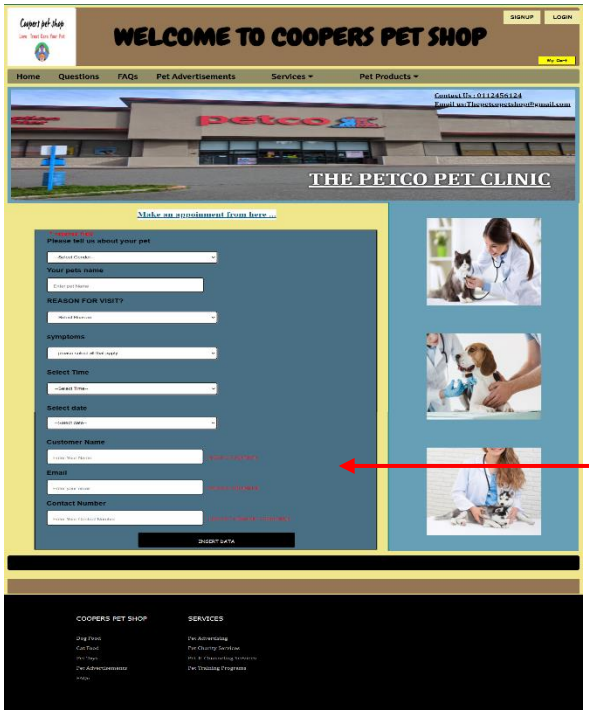


tTest case identifier	09				
Test case	Pet E- Channeling services				
Test designed by	Malindi Maleesha				
Test designed date	26th October 2021				
Test executed by	Malindi Maleesha				
Test executed date	28th October 2021				
description	When a customer clicks pet E-channeling services in navigation bar, they will be directed to pet E-channeling services page. If the customer entered valid data in pet e -channeling form and click submit button it will directing to the same page. If not (entered incorrect data) it will be redirected to the same page and display warning if the customer name/email/contact number are incorrect				
Dependencies	An operating computer with an xampp should be installed				
Test case	sequence	Test case description	Test data input values	Expected results	Status (pass/fail)
9	9.1	Input fields empty and click submit button	Customer name = “” Contact number = “” Email = “” “”	Error message customer name is required. Error message contact number is required Email is required	Pass
	9.2	When entering incorrect data	Customer name = “Malindi123” Contact number= “011241278abc” “011245107845” Email= “malindi%@gmail.com”	Error message Only letters and white space allowed Error message only 10 numbers allowed Error message email can be	Pass

				decimal or without decimal	
	9.3	When entering correct data with no empty fields	Customer name = “Malindi Maleesha” Contact number= “0112456745” Email = “malindi@gmail.com”	Directing to pet e-channeling page	Pass

Actual result – Pass

Screen shot -



Error messages

CHAPTER 05 | CONCLUSION

Coopers' pet shop is most efficient website for this pandemic situation. This website includes pet products and services. An efficient website always includes products and services. When comparing other pet shop websites in Sri Lanka, coopers' pet shop takes special place because it includes various types of services such as training programs, pet advertising, pet e-channeling services and etc.

To develop this system, we gathered information from websites, research papers and journals and use online survey for gather information. There were lots of systems regarding to pet systems so, it helps me to find information and also reading research papers also helps to get an idea about different pet system designed in previous years. We all know people have unconditional love for their pets. So, this website will help pet owners to buy products and services for their pets to keep them happy and healthy.

5.1) Importance Outcome

The project outcomes are the results that occur from creating our website. project outcomes are important because it helps to create, deliverables to meet our purpose and the project goals.

<u>The important outcomes of Coopers pet shop</u>

- The main outcome of this website is pet owners can buy pet products and services through the website.
- They can register their pets for pet training programs.
- Customers can order pet products by using cash on delivery method.
- Customers can make an appointment for their pets' form Petco clinic.
- Pet shop owner can handle all the pet shop activities through admin panel.
- People can donate coopers pet shop charity service
- And another best outcome of this website is people can ask questions from coopers' pet shop chatbot. It will be a huge advantage for customers to get information easily without contacting pet shop owner.
- The easy checkout process helps customers to order online without any doubt.

5.2 Limitation

Project limitations effect the success or the failures of a project directly. Projects may have limitations and the project manager must manage all these project limitations.

Below are the limitations of coopers' pet shop

- Beginning of our project we planned the start up cost for our project. According to our budget we planned the internet connection cost for eight months is Rs 48000.00. So, I have to use internet connection according to this budget during our project.
- The designed online survey, people did not give complete responses. So, it was quite hard gather information for this project.
- The report had to complete within a specified time line.
- Limited knowledge about php programming language when developing the project in the initial stages.
- It was hard to find codes/ articles and videos related to our project.

How limitations effect for our project success

- The report had to complete within specified time line so, it helps to complete our project according to our project schedule.
- The limited knowledge about php programming language makes me to find more tutorials, videos related to our project. So, it helps me to find out what are the codes I can add when implementing this system.

5.3) Critical Evaluation

The main reason of conducting this project is in Sri Lanka there are lots of pet shop website but those websites are not efficiency for pet owners. Some websites only sell products. We all know an efficient website includes products and services. And also, all these websites are not responsive all the interfaces were designed by using lack of information and some websites doesn't have chat bot or website features etc.

So, above problems is the reason why I choose this project as for my final project. I think this website is efficient solution for all these problems. After corona virus outbreaks people have to go through lockdown situations and also, they had to work from home. As a result of this many pet stores had to temporarily close their pet shops to keep their staff and customers safe. And also, people couldn't visit pet stores to buy pet products for their pets.

So I think this website will help to solve all these problems and pet owners can buy pet products and services to make their pets happy and healthy without any doubt.

5.4 Future Work

We can make various enhancements to improve this system for more effective and reliable way. So, for the future work we can add new website features such as adding tracking system to the website, this feature will help customers to get an idea about when their product will arrive and also, they can know how long it takes to the delivery process. Adding this feature to the system it gives confidence to our valuable customers that our business is dependable and transparent.

And another enhancement we can make is adding a report generation part to the admin panel. This will allow pet shop owner to get reports of his pet shop activities. And also, another enhancement is we can add pet pharmacy for this website. It will help pet shop owner to maximize his pet shop activities and also it will help to get more customer attraction to the website.

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Appendix- A: User Manual

customer

1) First user has to sign up by entering username and password in to the sign up form.
2) After submit signup details user will directing to the login page.
3) After entering login details user will directing to the Home page in coopers' pet shop.
4) user can view navigation bar.
5) The navigation bar includes home page, question page, pet advertisements page, and it includes two dropdown which contains pet services and pet products.
6) user can click on any page in the navigation bar.
7) The questions page includes a chatbot, user can type any question regarding to coopers' pet shop website.
8) user can click on back to home page button to go back to the homepage. When click on back to home page button it will redirect to the homepage in coopers pet shop.
9) The pet advertising page includes all the pet advertisements. user can view all the pet advertisements in this page.
10) The dropdown list of services includes pet charity services, pet training programs, pet E-channeling services and pet advertising page.
11) User can post pet advertisements by using advertising page in navigation bar. First user has to fill pet advertising form without any empty fields. After uploading image and enter pet description details, breed name, customer name and contact number click on submit button. After click on submit button customer will directing to pet advertisements page. user can see posted pet advertisement in pet advertisements page.
12) User can register their pets for training programs by registering pet training programs in pet training programs page. User has to fill all the fields with correct details. After filling the registration form user will be redirecting to home page.
13) User can donate money for coopers' pet shop charity services. The charity service page included in the navigation bar. After fill all the fields in the donation form user has to click on submit button to complete the donation.
14) The pet products contain includes dog foods, cat foods and pet toys.
15) User can click on dog foods, cat foods, pet toys page to buy products.
16) After adding products to the cart user will directing to the view cart page.
17) User can update/ delete cart as their choice.
18) After checking all the products in the cart user can make order by entering details to checkout form.
19) After entering details to the form user has to click make purchase button to place order
20) After click on make purchase button customer can view a message like Order Placed.

Admin

1) First admin has to register to the admin panel by using sign up form.
2) After entering details in to sign up page click on register button.
3) After click on register button admin will directed to the login page.
4) Enter login details in the login form and click on login button
5) After enter login button admin will directed to the coopers' pet shop admin panel.
6) In left side admin can see side bar with different types of pages,
7) Admin can click on each page and can view details of each page.
8) The order details page contains all the orders in coopers pet shop.
9) From dog food page admin can insert dog food products by using insert dog food form in dog food page. After entering all details click on add item button then it will redirect to the same page. Below include a table with all dog food products previously inserted. Admin can edit, delete products by using this table.
10) From cat food page, admin can insert dog food products by using insert cat food form in cat food page. After entering all details click on add item button then it will redirect to the same page. Below include a table with all cat food products previously inserted. Admin can edit, delete products by using this table.
11) From pet toys page in admin panel, admin can insert pet toys by using insert pet toys form in pet toys page. After entering all details click on add item button then it will redirect to the same page. Below include a table with all the pet toys previously inserted. Admin can edit, delete products by using below table.
12) The charity details page includes all the charity details. Admin can delete view details through charity details page.
13) The pet advertising page includes all the pet advertisements posted by the customers. Admin can view/ delete details from pet advertisements table. The deleted detail will automatically deleted on coopers pet shop.

Appendix – B Coding

```
.cards {
display: grid;
grid-template-columns: repeat(3, 1fr);
grid-auto-rows: auto;
grid-gap: 1rem;
}
&amp;amp;nbsp;
.card {
border: 2px solid #e7e7e7;
border-radius: 4px;
padding: .5rem;
}
```

Figure 71 Appendix-coding

```
Gender:
<input type="radio" name="gender" value="female">Female
<input type="radio" name="gender" value="male">Male
<input type="radio" name="gender" value="other">Other
```

Figure 72 appendix-coding

The Form Element

The HTML code of the form looks like this:

```
<form method="post" action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]);?>">
```

When the form is submitted, the form data is sent with method="post".

Figure 73 appendix-coding