

Faculty of Computing & Information Technology



Title: Project Deliverables for: PetX

Subject: Object-Oriented Analysis and Design

Instructor: Madam Amna Mirza

Session: BSSE Fall 2019 Morning

Group Members:

Serial Number	Student Name	Registration Number
1	Hassan Ahmad Sarfraz	BSEF19M033
2	Ata Ul Mohsin	BSEF19M031

Faculty of Computing & Information Technology



Title: Project Proposal for the Subject: Object-Oriented Analysis and Design

Instructor: Madam Amna Mirza

Session: BSSE Fall 2019 Morning

Group Members:

Serial Number	Student Name	Registration Number
1	Hassan Ahmad Sarfraz	BSEF19M033
2	Ata Ul Mohsin	BSEF19M031

Date of submission: Oct 10, 2021

PetX:

-- In the loving memory of Laika

An online portal where users can call rescue teams for pets or birds in times of distress and those team's manager/administrator can send the nearest team to spot for help.

This portal will also serve as a base for online appointments with pets and veterinary doctors.

Inspiration for this project is from the first animal taken in earth orbit, a female dog named Laika. While returning back to earth, the spacecraft malfunctioned and she was dead in a few moments. Had it been much better if some kind of rescue or ejection system was placed there? Let's aim to help them at least in our capacity (nearby areas).

Faculty of Computing & Information Technology



Title: First Deliverable for the project: **PetX**

Subject: Object Oriented Analysis and Design

Instructor: Madam Amna Mirza

Session: BSSE Fall 2019 Morning

Group Members:

Serial Number	Student Name	Registration Number
1	Hassan Ahmad Sarfraz	BSEF19M033
2	Ata Ul Mohsin	BSEF19M031

Date of submission: Nov 12, 2021

Vision

-- In the loving memory of Laika

An online portal where users can call rescue teams for pets or birds in times of distress and those team's manager/administrator can send the nearest team to spot for help.

This portal will also serve as a base for online appointments with pets and veterinary doctors.

Inspiration for this project is from the first animal taken in earth orbit, a female dog named Laika. While returning back to earth, the spacecraft malfunctioned and she was dead in a few moments. Had it been much better if some kind of rescue or ejection system was placed there? Let's aim to help them at least in our capacity (nearby areas).

Elaborated View

- Introduction

We want to design a system or marketplace to be more precise in which we can gather all the important and major services that a pet owner usually needs. We want to develop a platform where the pet owner need not to worry about the most things associated with the pets. This marketplace could make the life of a pet owner easier.

- Positioning

Individual services related to pets may be available out there, but we lack a system where one can get everything almost at an arm's length. Such a system does not exist with such a unique idea that makes pet keeping a lot more easy and convenient. So we are almost certain that we are going to make our own benchmark in the market and will serve the community as well.

- Stakeholder description

Our stakeholders include our sponsors that are from other domains but looking forward to working with us for their advertisement and branding.

The chief investor, who hitted upon the idea and decided to make his dream come true. Also the companies from our domain that want to cooperate with us and provide us with their best services to entertain our end users.

- High-level goals

A marketplace where we can earn both good repute and profit by serving the pets community. Our goal is to hit the highest rank of the market by developing a system in which a pet owner can get easy access to all the things he needs for the best growth of his pet.

- User-level goals

The idea is to provide an emergency rescue team for the animals in general that are trapped in a dangerous situation so that their lives may get saved.

We also want to make pet keeping hassle free by providing our vet care services that includes a general appointment with doc for consultation or appointment with doc for some specific medical condition.

Moreover we want our customers to access the pet food and other accessories from our store so that dont have to worry about anything.

And last but not least, we will be providing our users a common place where similar pet owners could interact with each other to have guidelines from experienced ones or just share their thoughts with others.

- Product overview
A full fledged product that will take away all the tension from the mind of pet owners by providing the assistance at every step be wants. We will make pet keeping more fun and peace of mind than ever.
- Summary of features
Users can call the rescue team for emergencies. Users can consult a doctor on general concerns or can have an appointment with a specialist for having a specific issue / disease oriented discourse. The online pet store will be providing all the important accessories for the pet keeping including toys and food and a section of infopedia will also be added for the interaction of pet owners with other owners.

Supplementary Specification

Licence

[Link to Original Licence](#)

Pet Registration Form

It is the policy of association that all animals be licensed and vaccinated. In an effort to comply with state ordinances and to protect our animals, we have committed to achieving 100% registration of our residents' pets. Therefore, please complete the following form to register your pets with the Association.

Name of Owner(s) _____ Unit# _____ Phone# _____

Name of Tenant(s) (if rental) _____ Emergency Contact _____

Total number of pets at this residence? _____ Dog(s) _____ Cat(s)

In an effort to protect and identify those pets of Providence Forge, the Association will be providing identification tags (**free of charge**) for all registered pets of our community. The registration will be valid for two years, and will be renewed on a bi-annual basis. This tag will identify your pet as owned by a Providence Forge resident, and will be used to contact you in the event that your animal is found.

PLEASE COMPLETE THE FOLLOWING FOR EACH PET IN YOUR HOME.

Pets:

Name _____ Age _____ Breed _____

M/F Neutered/Spayed Color/Markings

License # Rabies Vaccination Expiration Date Vet

In accordance with Pennsylvania Dog Laws, all dogs three (3) months of age or older must have a current license. If you have not yet licensed your dogs with the county or one of its authorized agents, please contact the PF Association Office at (610) 948-6714 to obtain a state license application. Licenses are issued by the County Treasurer; they are good for a period of one calendar year, and must be renewed each January.

In accordance with Pennsylvania Rabies Vaccination Law, all dogs and cats three (3) months of age or older must be vaccinated against rabies. Please see attached list of Montgomery County Health Department's Rabies Clinics that offer rabies vaccinations.

I have received and read a copy of the pet rules and regulations as stated in Section I, Paragraph C.2. of the Providence Forge Homeowners Association Handbook. I agree to abide by these and other pet rules to be promulgated in the future.

Signature of Pet Owner _____ Date _____

Witness _____ Date Received _____

Major Requirements

- ❖ Veterinary Doctors
- ❖ Pet Trainers
- ❖ Emergency Rescue Team
- ❖ Online Pets store
- ❖ Social community for Pet Owners

FURPS+

❖ Functionality

- The system will be thoroughly tested and quality assured before deployment to avoid any issues later on.
- Development team will be capable of modification at any stage later after providing a solution/system to the client.

- Security of the system will be the top notch priority for the development team. Emphasis over this part is due to the fact that data of clients and admin/high-tier users will be confidential (Credit card details).

❖ Usability

- Avoid colors associated with color blindness
- Speed and ease of use are essential
- System must be easily comprehensible for everyone because users from different backgrounds will be using it.

❖ Reliability

- Failure of external systems such as payment should be solved with a local solution, such as store and process later
- It will be ensured that the system avoids crashes at its best capacity. Even if it crashes, data storage in such times will be handled in an efficient manner.
- Before deployment, it'll be ensured that critical parts of the system like admin control and payment or financial information are working perfectly and are completely secure.

❖ Supportability

- Adaptability to different kinds of users. Different stores using a POS have different rules.
- Configurability: network configurations, credit card processes, etc.

❖ Performance

- Navigation among lists in a specific menu will be easy.
- Quick processing of payment via providing different payment methods.
- For better performance, Good Database design and efficient algorithms will be prioritized for the development team.

Feature List

❖ Call for emergency pet rescue

The system can contact animal rescuers for help in times of emergency.

❖ Consultancy

The system is capable of online appointment of veterinary doctors.
The system reminds registered users for regular checkup of their pets via email or SMS.

❖ Interaction with similar pet owners

There will be a portion of the system where registered users can interact with other users via posts or text messages.

❖ FAQ's/ Infopedia

The system will consist of an FAQ's list for common questions.

❖ Pet food purchasing/online store

There will be an online store for purchasing common items of pets.

❖ Membership or Special Discounts

The system will offer special discounts over different occasions.

Membership for regular customers.

❖ Pet trainers

Pet trainers will be available for users/customers having new born or recently adopted pets.

❖ Abandon or adopt a pet

The system will have an option for browsing different pets available for adoption.

Domain Rules

Pet rules

Vaccination

All kinds of pets must be vaccinated against rabies. It is the responsibility of pet owners to vaccinate them. A fine may be imposed on the owner for negligence in this regard.

Shelter

Providing shelter to pets is the responsibility of pet owners. They must be protected from heat, cold and snow or harsh weather conditions.

Attention

A pet owner must take care and attend to it everytime round the clock. If unattended and caught by authorities, a fine must be paid by the owner and it may be required to prove that the pet belongs to the right owner.

Medical

Taking good medical care is the responsibility of the owner. If a pet gets ill, the owner must visit a veterinary doctor or hospital.

Insurance

Pet must be insured by a reputable insurance agency.

Shooting in case of bad behaviour

If a pet shows aggression above the bearable limit and this behaviour is reported to the local government, the pet may get killed by the authorities.

Vet doctors rules

- A veterinarian will be affected simply by the betterment of the patient, the wellbeing of general society, and the need to maintain the public trust vested in the veterinary calling.
- A veterinarian will give able veterinary clinical consideration under the particulars of a veterinarian-customer patient relationship (VCPR), with sympathy and regard.
- A veterinarian will maintain the norms of demonstrable skill, be straightforward in all expert corporations, and report veterinarians who are inadequate in character or ability to the suitable substances.
- A veterinarian will regard the law and furthermore perceive an obligation to look for changes to laws and guidelines which are in opposition to the wellbeing of the patient and general wellbeing.
- A veterinarian will regard the freedoms of customers, associates, and other wellbeing experts, and will shield clinical data inside the bounds of the law.
- A veterinarian will keep on applying, and advancing logical information, keep a guarantee to veterinary clinical schooling, make significant data accessible to customers, partners, the general population, and acquire reference when shown.
- A veterinarian will, in the arrangement of suitable patient consideration, besides in crises, be allowed to pick whom to serve, with whom to relate, and the climate where to give veterinary clinical consideration.
- A veterinarian should see, assess, and treat all people in any expert movement or situation where they might be involved, exclusively as people based on their very own capacities, capabilities, and other applicable attributes.

Online Business rules

- Taxes
Taxes are applied for most of the things we are dealing with in this system. Wherever this system is deployed, we need to take care and complete all legal and taxation rules of the state or country.
- Payment gateways
These gateways are the backbone of our system. We carefully need to select payment gateways to avoid crashes and payment failures.
- Trademarks, patents and copyrights
Before deployment of the system, we need to know about the copyright of the name and features of our system.
- Shipping restrictions
Some states or countries may ban some products ordered for our store in bulk as foreign imports or may ban selling of products to other countries. This point will be covered by taking help from customs authorities of the state.
- Inventory
We need to make sure that there may be some products in such a large quantity that laws of the state may ban online selling of those products.
- Age restrictions
If we are selling products that belong to age restriction categories, we need to make sure that those things comply with the regulation of your concerned authority's rules.
- Business insurance
Business insurance may be required in some states. If this is the case, it'll be necessary for stakeholders to insure their product.
- Customer privacy
Some clients of our system and especially local government agencies may be quite strict when it comes to customer data. We need to make sure that no data breach happens at any stage after deployment of the system or product.

Risk List

- Customers may change their functional/ elemental requirements.
- We may have to modify throughout the project resulting in development side loss.
- Performance may not be according to the needs of the client.
- Security and privacy may not be enough for clients.
- Development team may not meet the deadline for the project.
- Project cost may increase later.

Feasibility

❖ Timeline

We will be using the UP model to complete the project and modules will be kept as simple as possible with short deadlines to deliver the final polished project on time.

❖ Technical

The technology we are gonna use is the best fit to work with and will not cause any major blocker in our development side. We have enough teams of the required expertise for the project.

❖ Financial

Based on a unique idea, this system will be an interesting project for the team. The project is a profit for the company and provides growth of our team as well which can pay off in future projects as well.

Identification

❖ Actor

❖ Primary Actors

Veterinary Doctors
New Pet Owner
Customer or Pet Owner
Previous Owner

❖ Secondary Actors

Rescue Team
Courier Service
Bank
Shelter Home

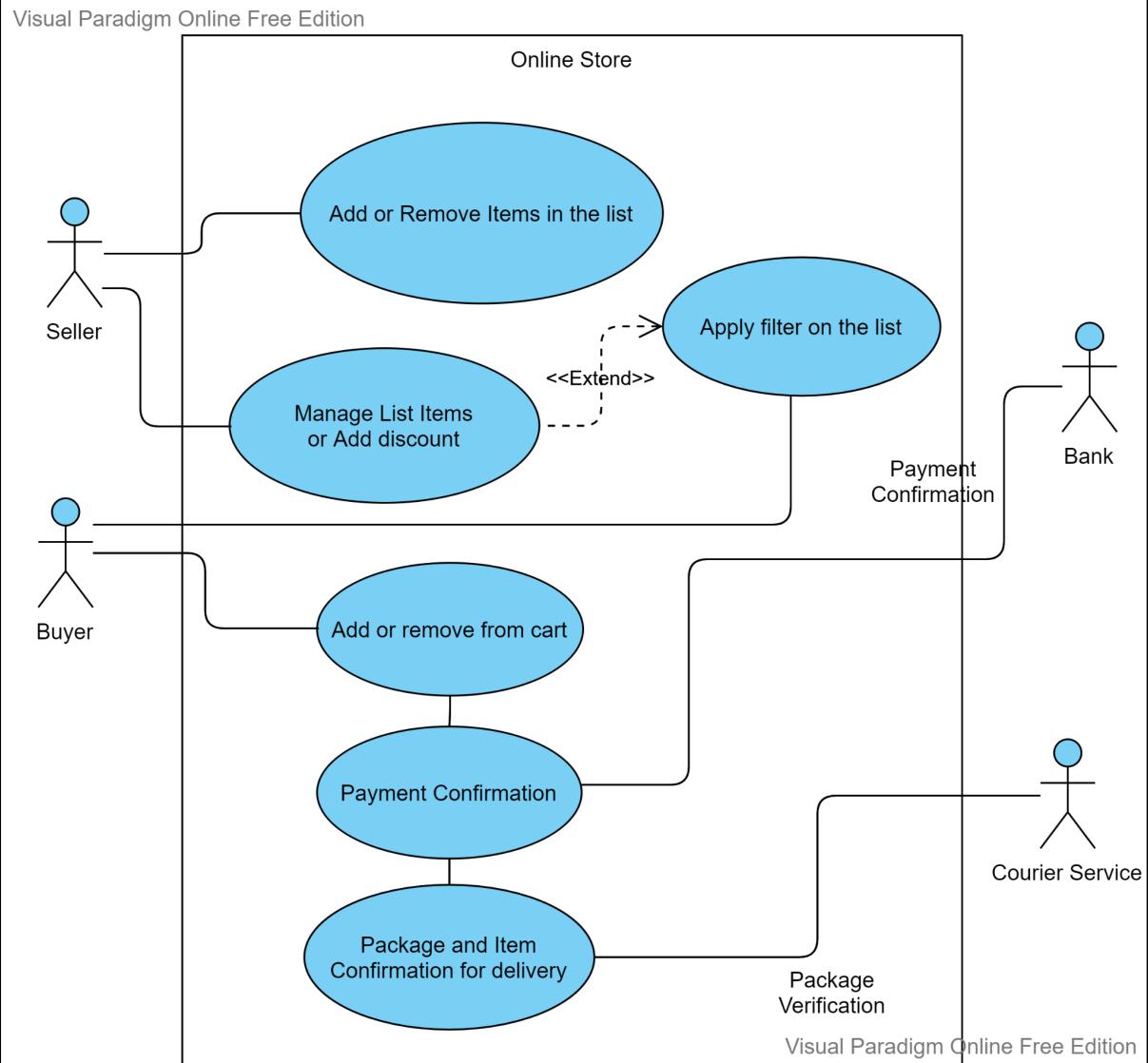
❖ Goals

A marketplace where we can earn both good repute and profit by serving the pets community. Our goal is to hit the highest rank of the market by developing a system in which a pet owner can get easy access to all the things he needs for the best growth of his pet.

❖ Descriptive Use Cases

Online Store

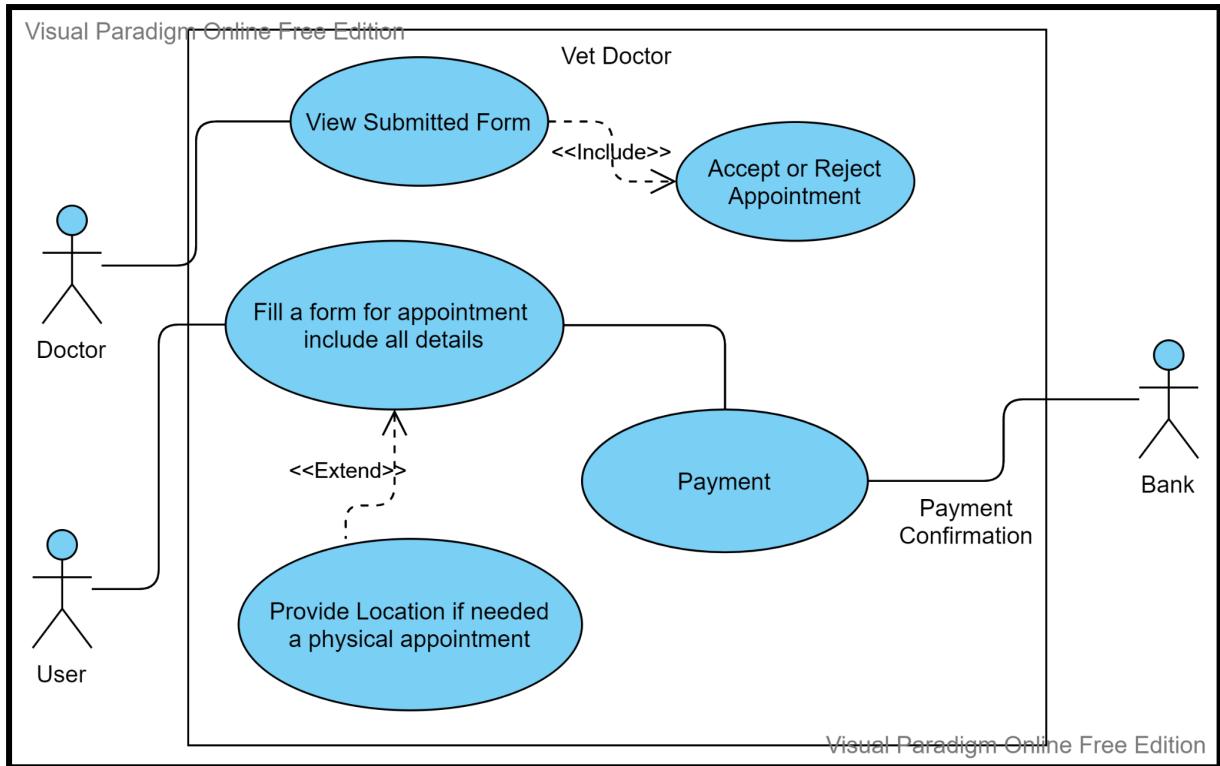
Goal: Customer enters store and he selects Items for purchase by adding them one by one in the cart. Then he confirms his cart and pays via credit card. In the end, he provides delivery details and exits the system or logs out.



Vet Doctor

Goal: Patient pet owner logs into the system and fills out a form for appointment and selects a schedule as well. Then he pays for appointments via credit card and checks out or exits the system.

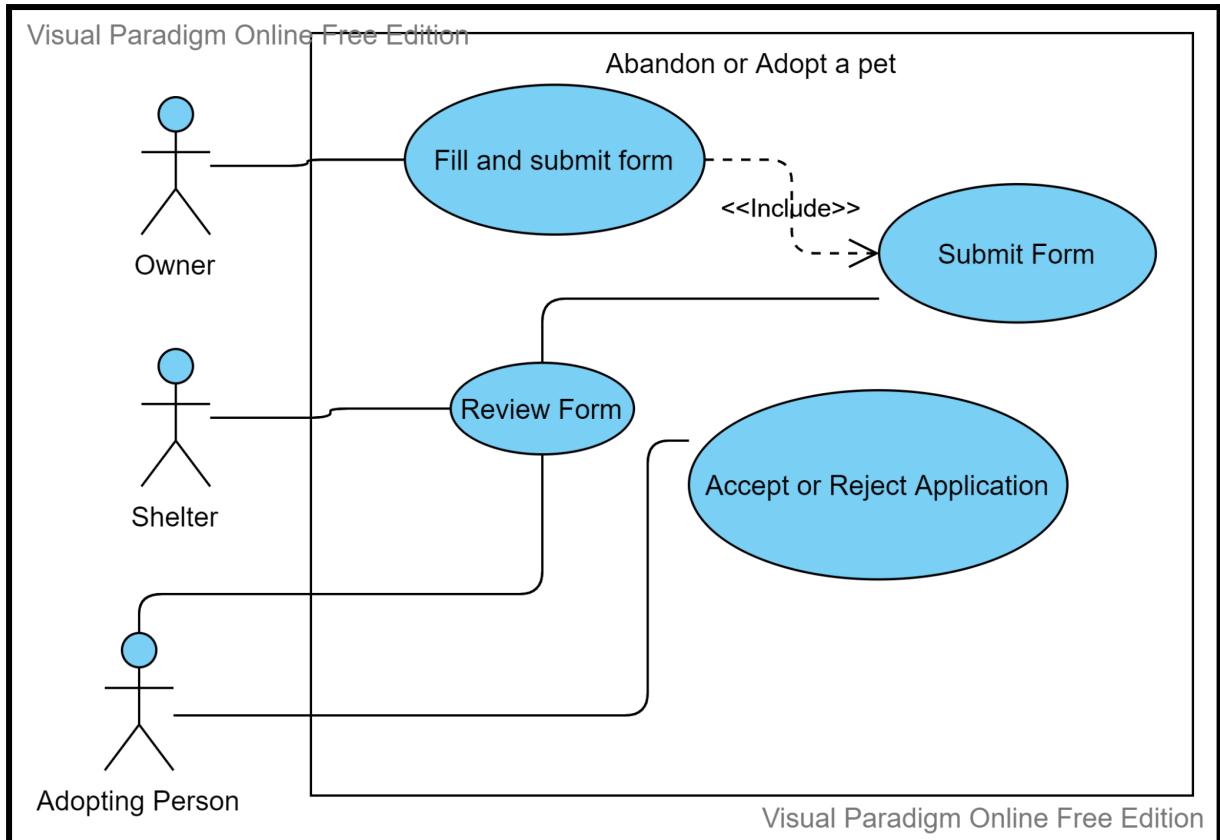
Veterinary doctor on the hand, logs in the system and can see a list of his scheduled appointments. He has the right to accept or reject the appointment or he can update the schedule of the appointment.



Abandon or Adopt a Pet

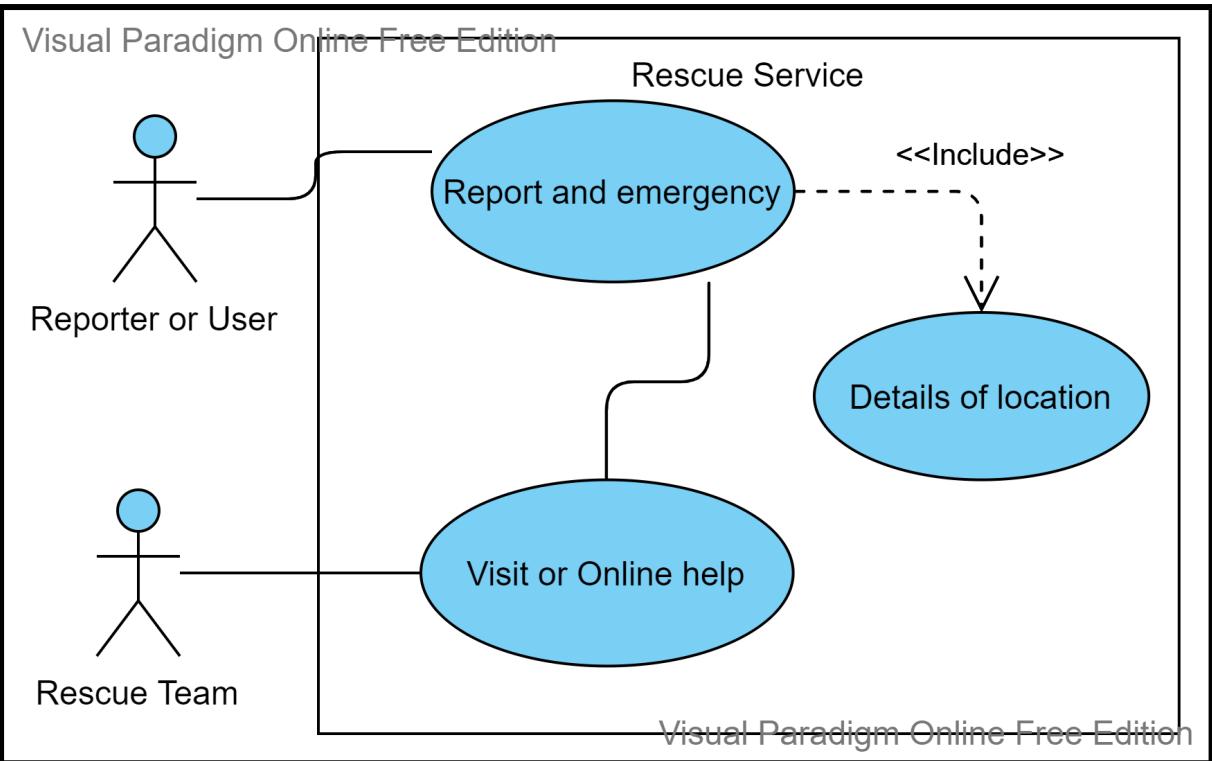
Goals: Old owner enters the system and submits a request to shelter home for abandoning his pet. Shelter home reviews his request and can accept or reject his request. If approved, the pet is dropped at the shelter home for care by the shelter home.

On the other hand, a new owner enters the system and he can view a list of pets available for adoption. If he is willing to adopt any pet, he submits an application to the shelter home. If the shelter approves his request, he can take the pet to his home.



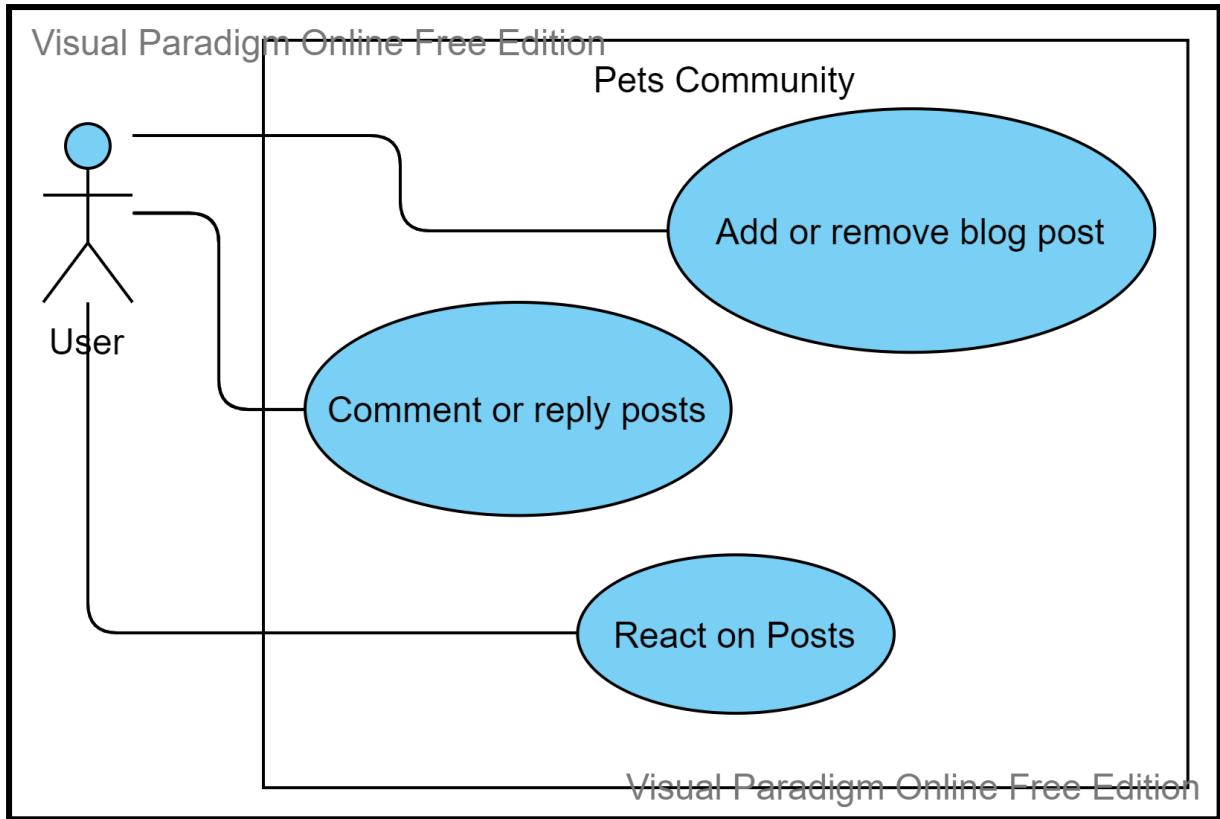
Rescue Team

Goals: Any person who can be a user or reporter, reports an incident of pet emergency and rescue team can view that in the system. If rescue teams can assist online, they do so. If online help is not possible, he can access the location of the emergency incident and visit the place for help.



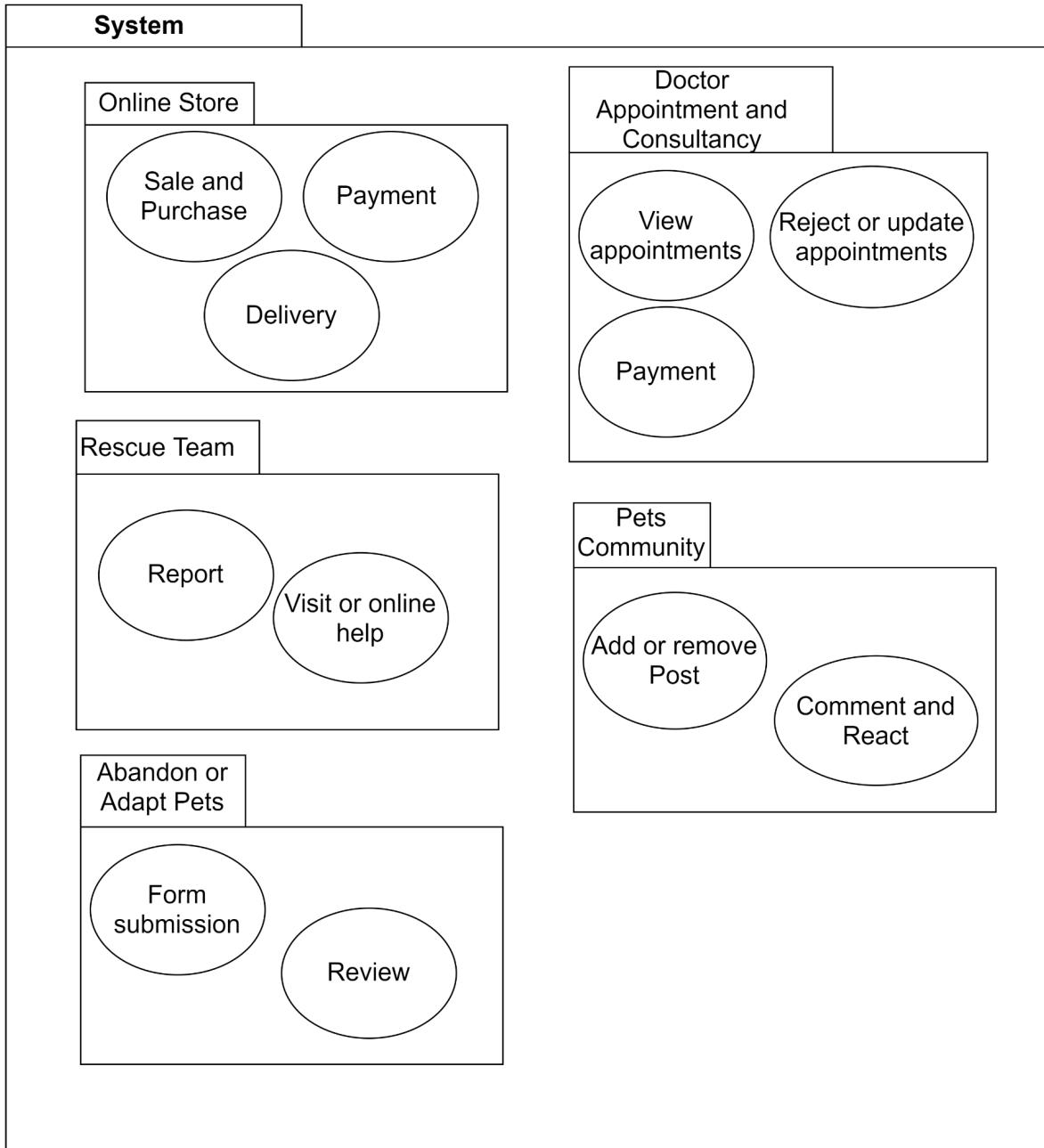
Pets Community

Goals: It is a place for social hang outs online. You may call it a blog for pet owners. Here the pet owner can browse the feed where he can react or comment on the posts of others. He can also post for others. There'll be a dedicated area in this blog for common questions for new pet owners where a new pet owner can browse Frequently asked questions for his newly adopted pet.



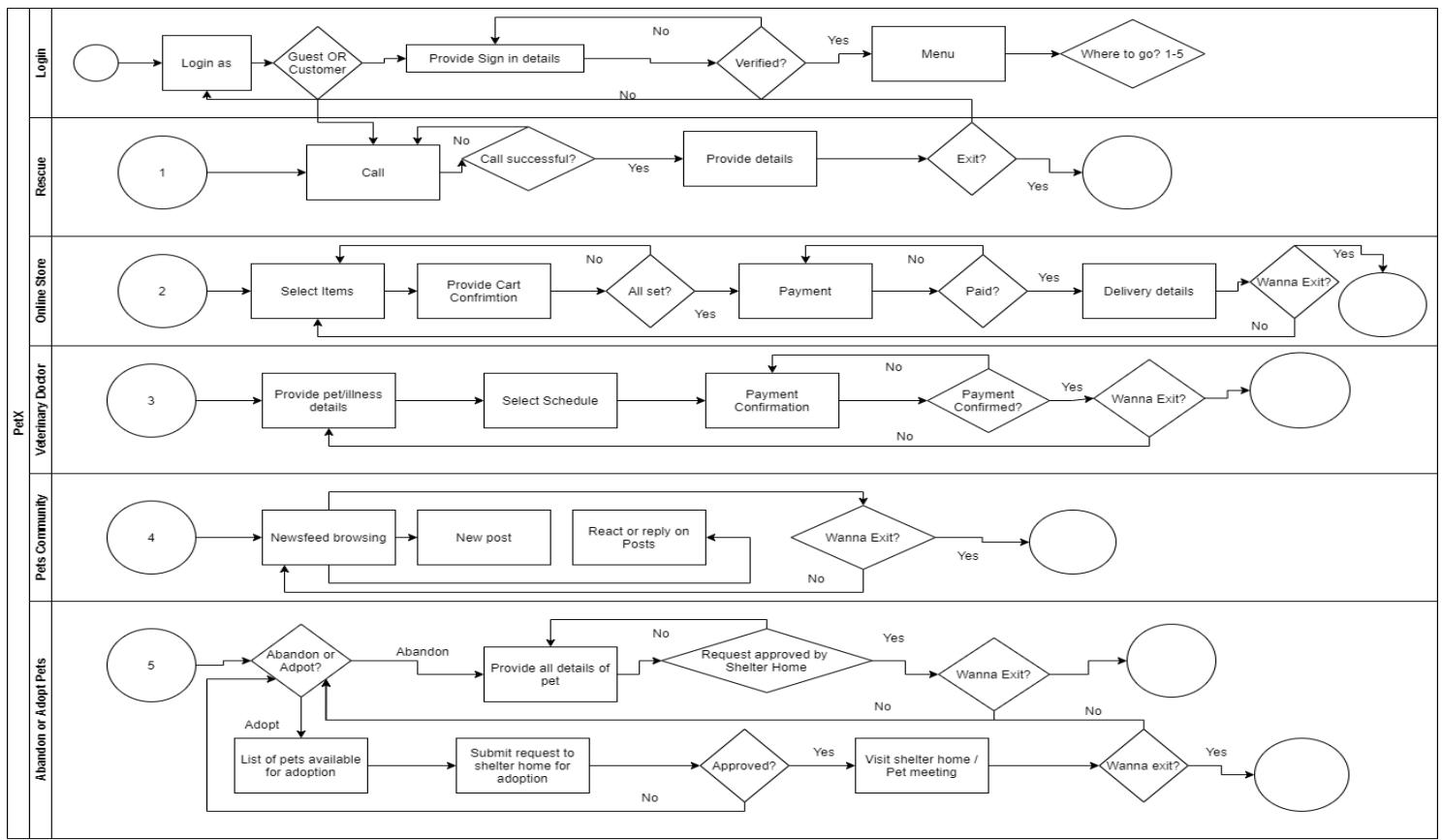
Package diagram

[Link to Original Package Diagram](#)



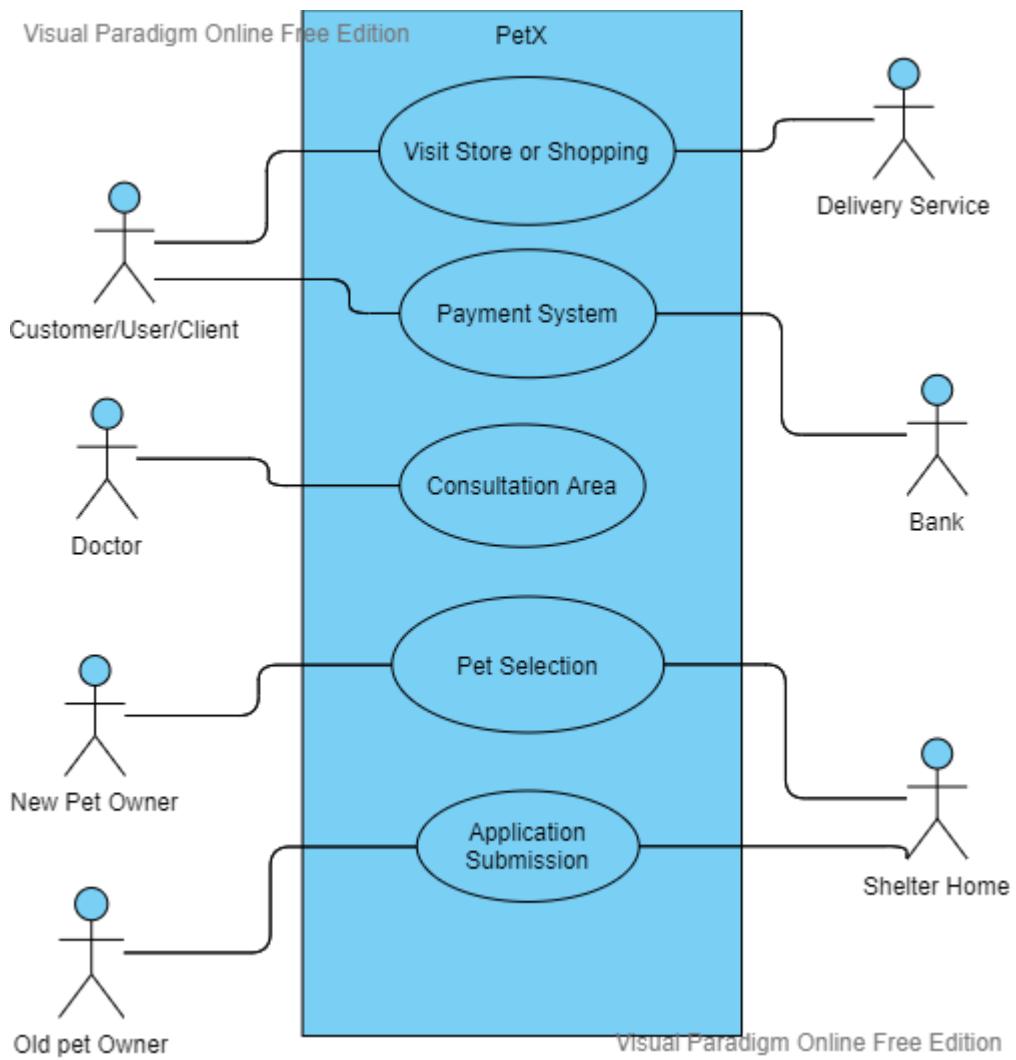
Activity Diagram with Swim Lane

[Link to Original Activity Diagram](#)



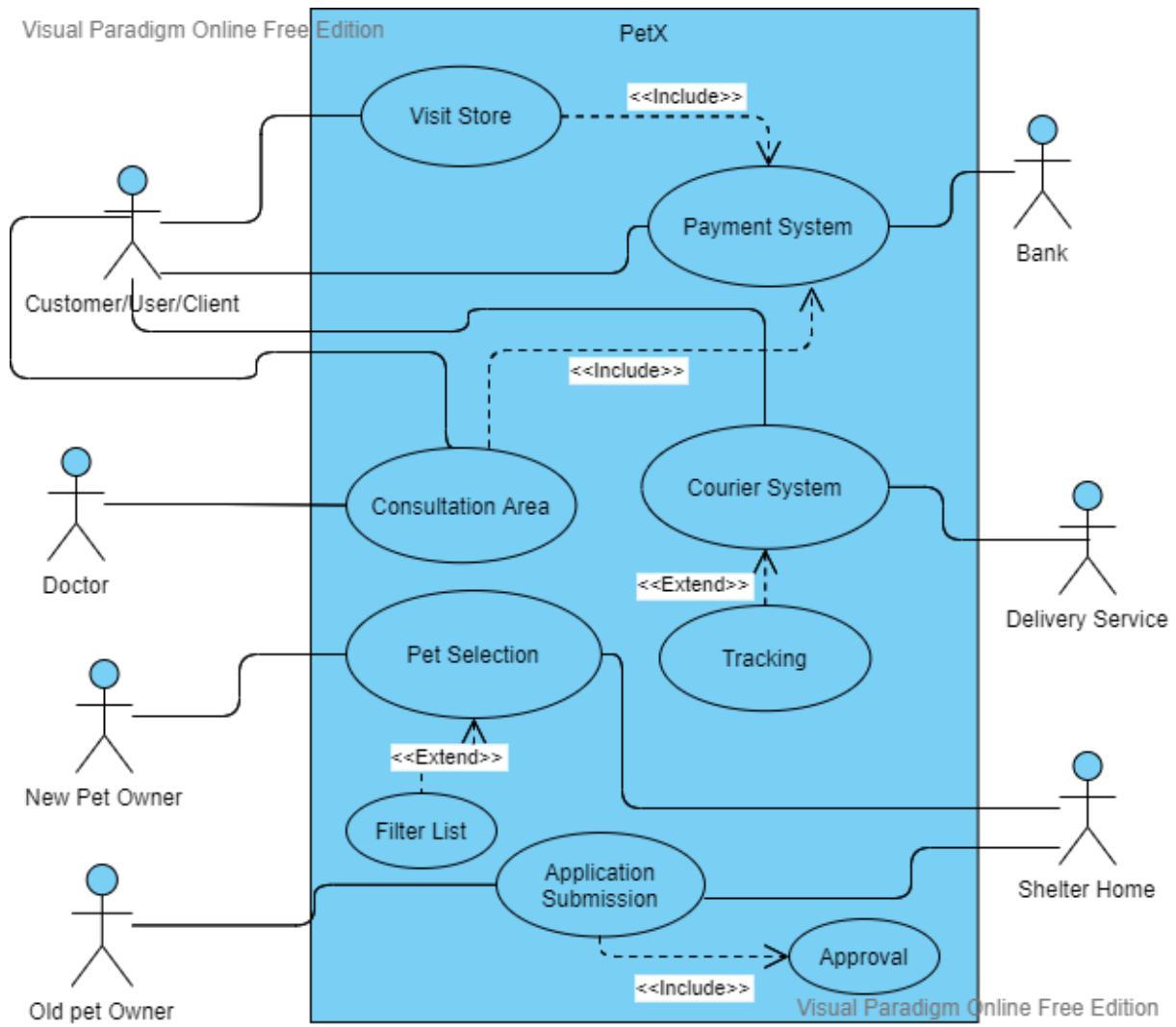
Business Level Use Case Diagram

[Link to Original Business Level Use Case Diagram](#)



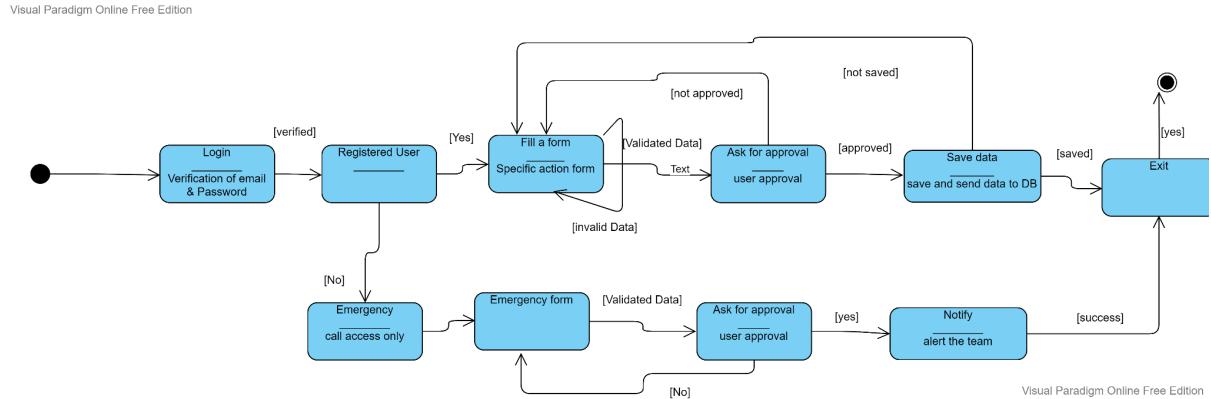
Analysis Level Use Case Diagram

[Link to Original Analysis Level Use Case Diagram](#)



State Chart Diagram

[State Diagram Link](#)



Glossary

Word Used	Definition
Deployment	Situation or name of the system when our product starts working
System/Product:	PetX software which is under discussion
Old Owner	The person who is intending to abandon his or her pet
New Owner	The person intending to adopt the pet who is being abandoned

Faculty of Computing & Information Technology



Title: Second Deliverable for the project: **PetX**

Subject: Object-Oriented Analysis and Design

Instructor: Madam Amna Mirza

Session: BSSE Fall 2019 Morning

Group Members:

Serial Number	Student Name	Registration Number
1	Hassan Ahmad Sarfraz	BSEF19M033
2	Ata Ul Mohsin	BSEF19M031

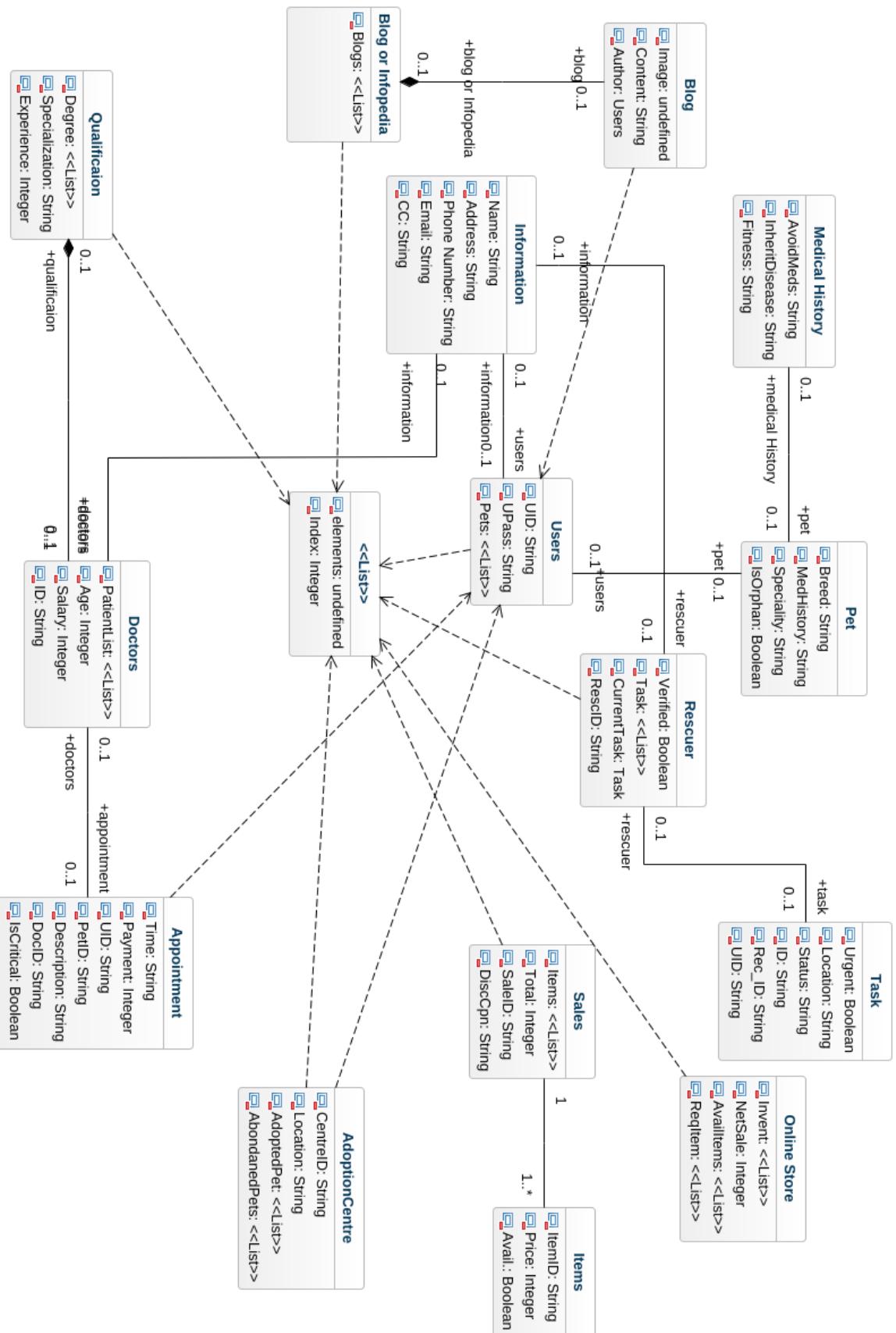
Date of submission: Dec 19, 2021

Architecture

Model-View-Control Architecture will be used here for the development of the system. The reason for selecting MVC architecture is that it is an easy and commonly used architecture for application development. Also, there is no such requirement in our system that requires us to switch to another architecture. A brief overview of the architecture depicting different things is given below.

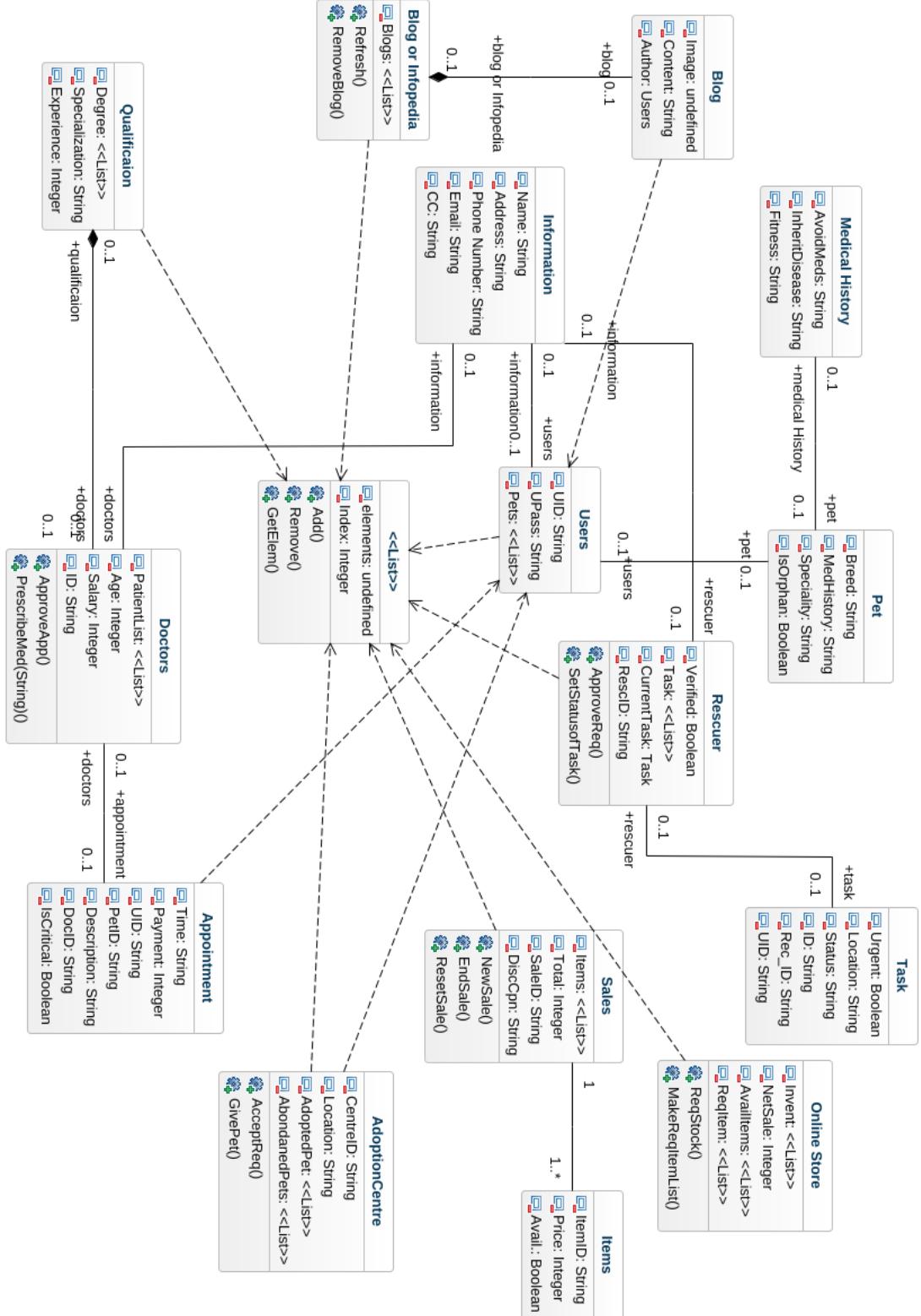
Model	View	Control
Data Logic	User Interfaces	Updates both Model and View
Backend of the System	Prototypes	
DataBase	Displays different types of views	

Domain Model

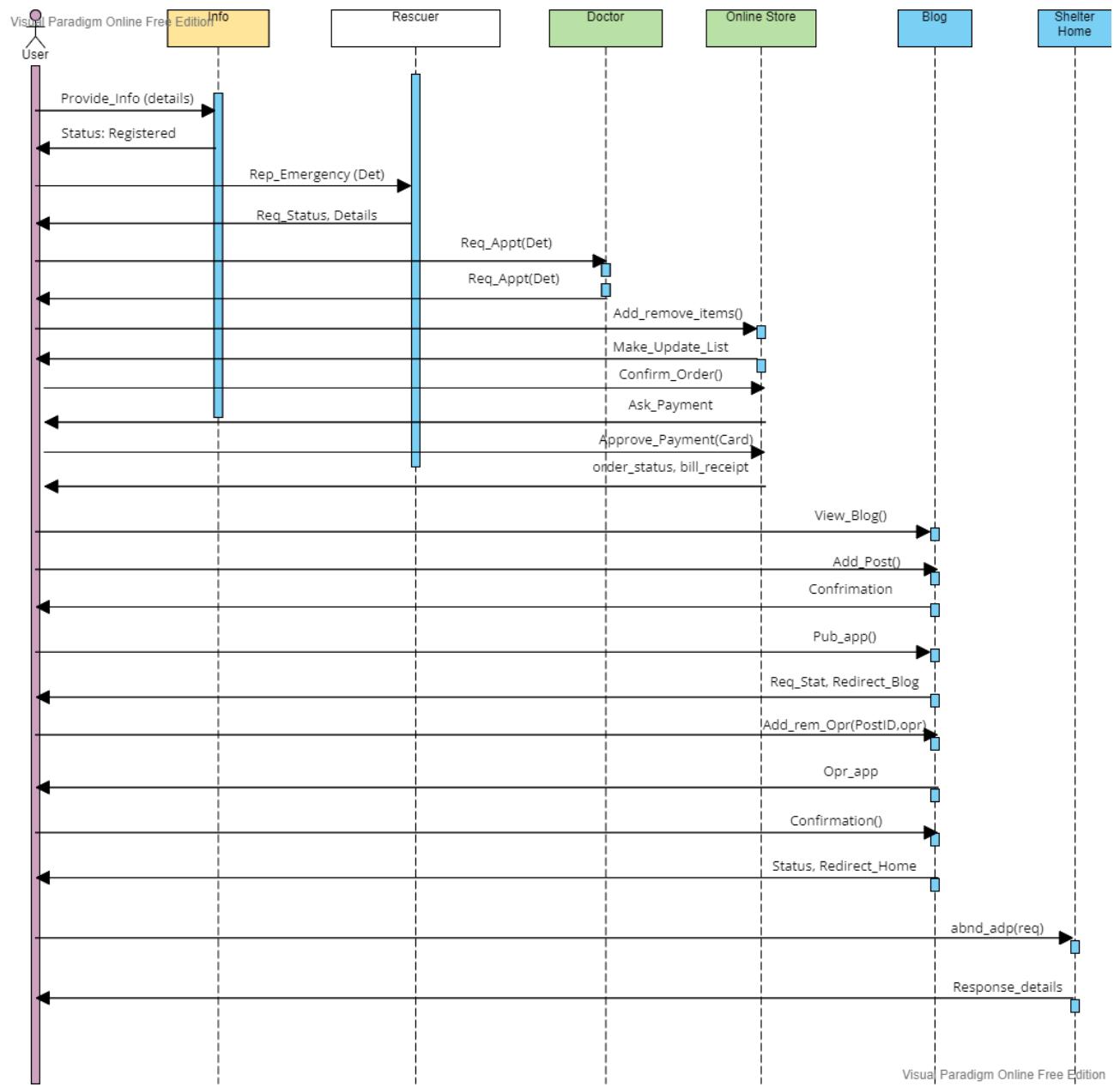


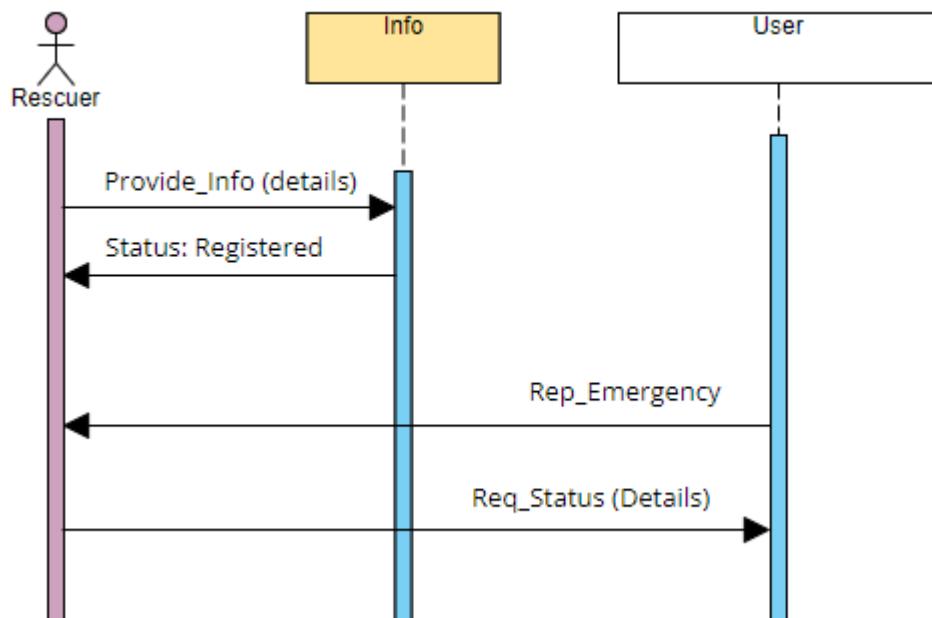
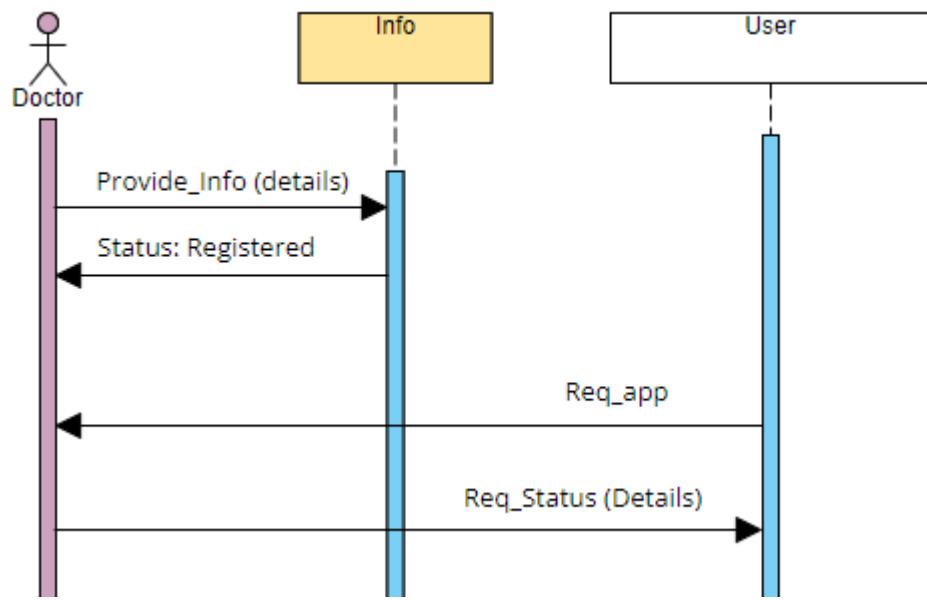
Design Class Diagram

[Link to Design Class Diagram](#)

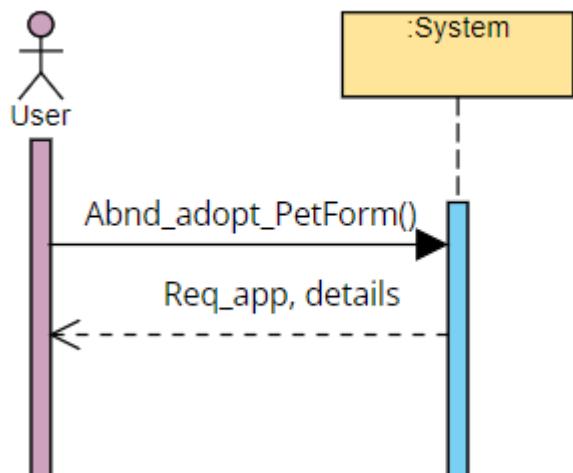
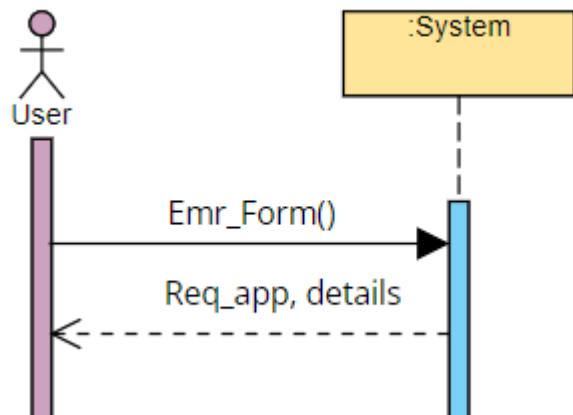


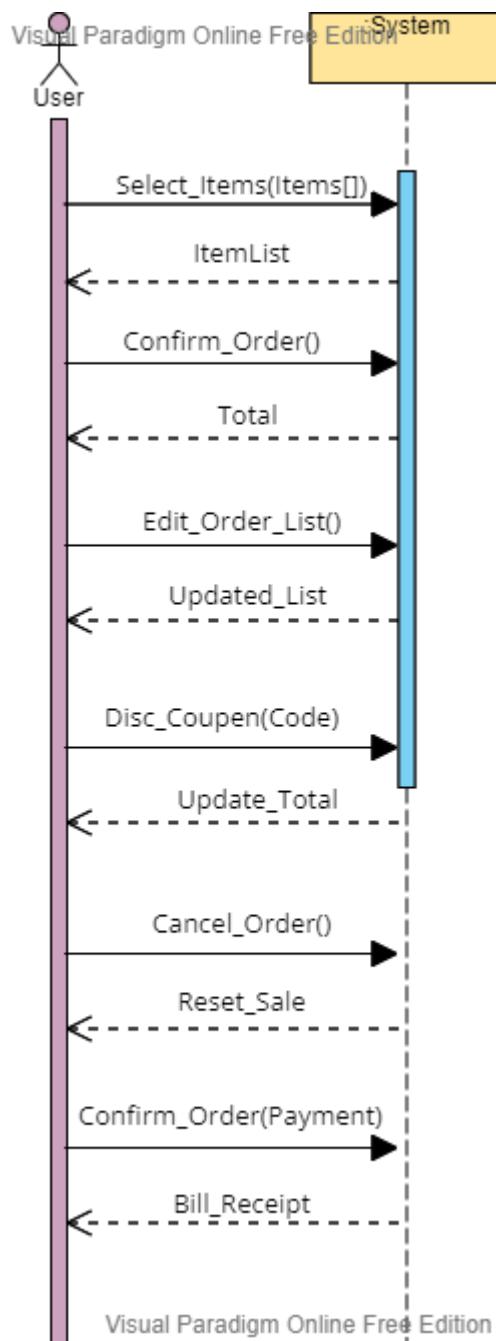
Sequence Diagram



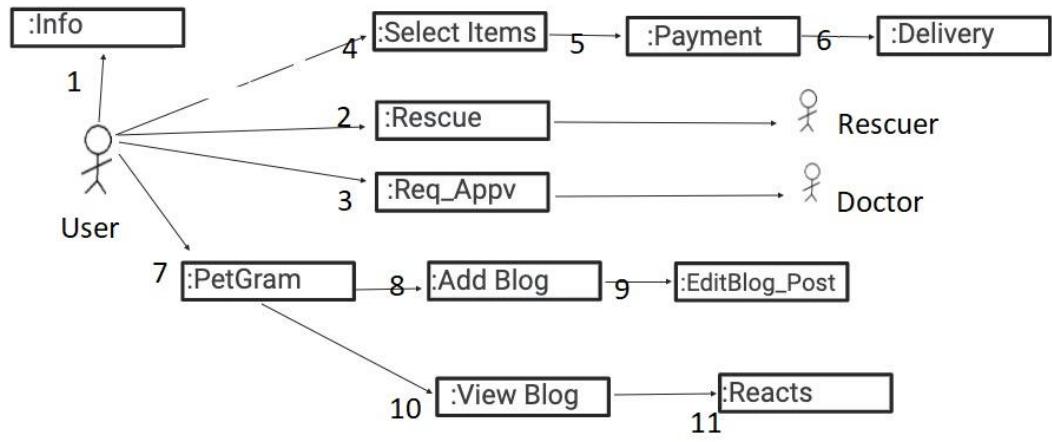


System Sequence Diagrams





Collaboration Diagram



Prototypes

Welcome - Sign In

Sign In **Sign Up**

SOS

Username

Enter Username here

Password

Enter Password here

Sign In

Having Troubles?

Copy Rights 2021. Managed by Team PetX

Welcome -Sign Up

Sign In **Sign Up**

SOS

Email

Enter your email here

Create Account

Password

Enter Password here

Username

Choose any username

Having Troubles?
Live chat with us

Copy Rights 2021. Managed by Team PetX

Welcome -Guest

Report Emergency

SOS

Title

Enter title here

Phone Number

Enter contact number

Location

Enter or choose location

Report

Write description here

Having Troubles?
Let us Know

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PetX - Dashboard

Mohsin 

Pet Store

Buy all commodities
for your Pet in one place

Shelter Home

Adopt a pet or
abandon a pet

Vet Doctor

Get your pet checked
up from our Doctor

Pet's Community

Discuss things with
Other Pet Owners

SOS



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PetX - Store

Mohsin 

Energy Drink of Size XYZ

- 1 +

Sugar of Size XYZ

- 1 +

Gallon of XYZ thing

- 2 +

Sugar of Size XYZ

- 1 +

Energy Drink of Size XYZ

- 1 +

SOS



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PetX - Store

Mohsin 

— \$ 423.00

January 27, 2021 - 3:45 PM

Lahore, XYZ Street, Pakistan LA 95673		\$400.00
Sugar		\$400.00
Subtotal		\$20.00
Sales Tax (7.5%)		\$3.00
Tip		

SOS



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PetX - Store

Mohsin 

SOS

Payment

Choose payment method below



PayPal

amazon

Billing Info

FULL NAME

John Doe

ADDRESS

497 Evergreen Rd.

CITY

Roseville

ZIP CODE

95673

COUNTRY

United States

Credit Card Info

CARD NUMBER

1234 5678 3456 2456

VISA

CARDHOLDER NAME

John Doe

EXPIRE DATE

05 / 21

CVV

123



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Mohsin 

SOS

Payment

Choose payment method below



amazon

Billing

FULL NAME

John Doe

ADDRESS

497 Eve

CITY

Roseville

COUNTRY

United States

\$15.00

Payment Successful!

You order will be dispatched on your provided address



VISA

123



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PetX - Community

Mohsin 

SOS



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PetX - Community

Mohsin 

SOS



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PetX - Appointment

Mohsin 

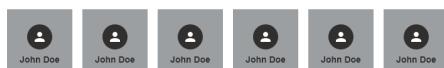
SOS

List of Doctors

Trainers



Specialists



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PetX - Appointment

Mohsin 

SOS

Trainee

Specialist

PROFILE



John Doe
San Francisco, CA

+ Add

Bio: My name is John. I'm a Vet Doctor from San Francisco, CA. Contact me at john@mail.com

140 Appointments 24K Love Reacts 1,900 Following

609 120



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PetX - Appointment

Mohsin 

SOS

Payment

Choose payment method below



PayPal

amazon

Billing Info

FULL NAME

John Doe

ADDRESS

497 Evergreen Rd.

CITY

Roseville

ZIP CODE

95673

COUNTRY

United States

Credit Card Info

CARD NUMBER

1234 5678 3456 2456

VISA

CARDHOLDER NAME

John Doe

EXPIRE DATE

05 / 21

CVV

123

Copy Rights 2021. Managed by Team PetX

Mohsin 

SOS

PetX - Appointment

Payment

\$15.00

Payment Successful!

Your order will be dispatched on your provided address



Billing Info

FULL NAME

John Doe

ADDRESS

497 Evergreen Rd.

CITY

Roseville

COUNTRY

United States

zon

VISA

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PetX - Shelter Home

Mohsin 

Request for pet abundance

SOS

Pet Name Input pet Details here	Reason for abundance Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut
Speciality Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut	Breed Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut

Submit



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PetX - Shelter Home

Mohsin 

List of Pets available for adoption

SOS

Or Request
for donation



Excepteur sint

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt

heart 609 comment 120

Excepteur sint occaecat.

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt

heart 609 comment 120

Excepteur sint occaecat.

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt

heart 609 comment 120

See More



Copy Rights 2021. Managed by Team PetX

PetX - User Profile

Mohsin 



John Doe
San Francisco, CA

SKILLS
web illustration graphics ui
interface adobe

FULL NAME	John Doe
EMAIL	*****
PASSWORD	09/09/1987
COUNTRY	United States
FULL NAME	John Doe
STATE	California
CITY	Roseville
CITY	Roseville

Update

SOS

Or Request
for donation



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PetX - Team

Mohsin 

Development Team



Name Surname
Co-Founder & CTO

web illustration graphics



Name Surname
Co-Founder & CTO

web illustration graphics

SOS

Or Request
for donation



Copy Rights 2021. Managed by Team PetX

Use Case Contracts:

Contract 01: Payment verification

Operation: Payment verification

Cross-reference: Payment system

Pre-Condition: User provides credit card number, name, expiry date and security code

Post-Condition: Card is verified, un expired and integrated successfully with user's account for the future usage

Contract 02: Courier delivery

Operation: Courier delivery

Cross-reference: Delivery System

Pre-Condition: User has ordered things and transaction has been completed successfully, address is provided in correct format

Pos-Condition: The address was valid and authentic, User has acknowledged the pkg /parcel. The delivery was success process has ended
