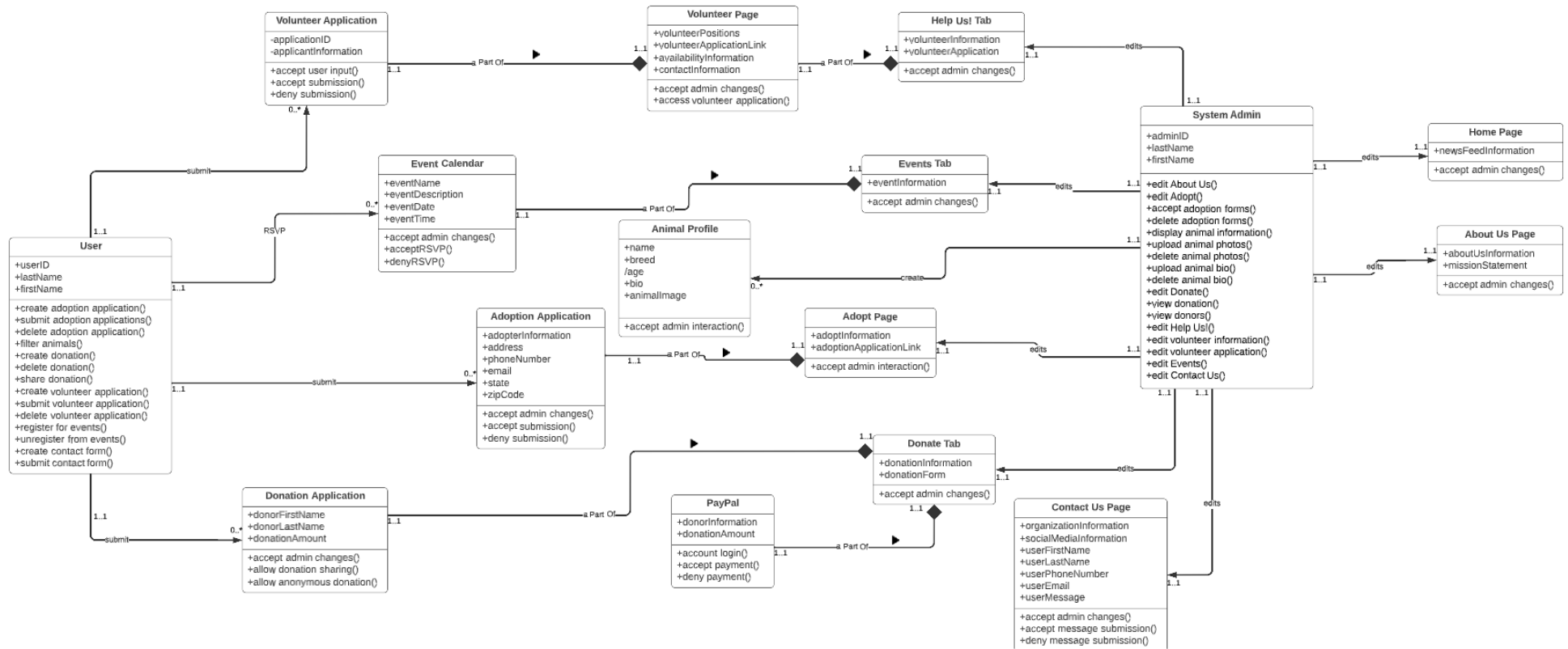


**Iteration Five**

**Paw Patrol**

**Madison Heil, Lizzie Perkins, Adam Harlow, Patrick Nguyen, Dylan  
Dombrowski, Binh Nguyen**

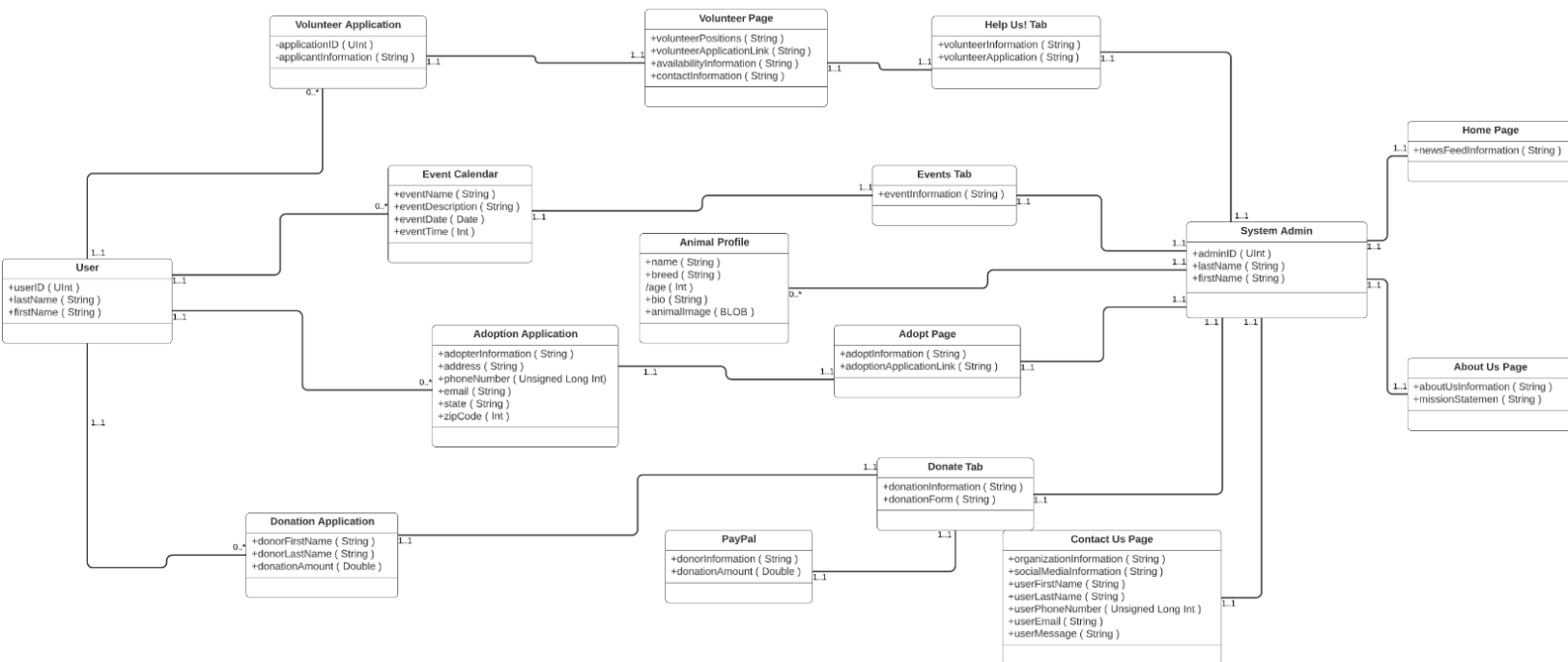
## Class Diagram



**Narrative:** Classes were identified through a series of CRC cards. These cards stand for Class, Responsibility, Collaborator and are used to brainstorm series of classes/objects within a system. In this instance, we took the approach of both the system administrator and a user through roleplay. How does the user interact with a website. Some areas of the system are composed of other classes. When a user visits the Events tab, they will be greeted with a class Event Calendar which is part of the Events Tab. The same goes for the Help Us! Tab. Classes are composed within it and the user will interact with all.

## Database Design:

Third Normal form is considered beneficial because it always ensures functional dependency preserving and lossless. The diagram below displays all the relationships and conditions between classes. Using Primary and Foreign keys, 3NF ensures that tables don't depend on nonprimary key fields.



## Database Definitions:

### User Table

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>UserID</b>	Unique Identifier for user	<b>4 bytes</b>	UInt	<b>Primary</b>
<b>LastName</b>	User's last name	<b>Max 255 bytes</b>	String	N/A

<b>FirstName</b>	User's First Name	<b>Max 255 bytes</b>	String	N/A
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**Volunteer Application Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>ApplicationID</b>	Unique Identifier for Applications	<b>4 bytes</b>	UInt	<b>Primary</b>
<b>Applicant Information</b>	Information regarding applicant	<b>Max 255 bytes</b>	String	N/A

**Volunteer Page Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Volunteer Positions</b>	Positions available for volunteers	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Volunteer Application Link</b>	Link to Volunteer Application	<b>Max 255 bytes</b>	String	N/A
<b>Availability Information</b>	Availability Information on Volunteer Position	<b>Max 255 bytes</b>	String	N/A
<b>Contact Information</b>	Volunteer's Contact Information	<b>Max 255 bytes</b>	String	N/A

**Help Us! Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
-----------	----------------------	----------------	----------------	-------------------------

<b>Volunteer Information</b>	Volunteer's Information	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Volunteer Application</b>	Uses Volunteer Application information	<b>Max 255 bytes</b>	String	<b>Foreign</b>

**Event Calendar Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>EventName</b>	Name of Event	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Event Description</b>	Description of the event	<b>Max 255 bytes</b>	String	N/A
<b>EventDate</b>	The Date of the Event	<b>4 bytes</b>	Date	N/A
<b>EventTime</b>	The Time of the Event	<b>4 bytes</b>	Int	N/A

**Events Tab Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Event Information</b>	Information about upcoming events	<b>Max 255 bytes</b>	String	<b>Primary</b>

**Adoption Application Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Adopter Information</b>	An Adopter's information	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Address</b>	Adopter's Street Address	<b>Max 255 bytes</b>	String	N/A
<b>Phone Number</b>	Adopter's Phone Number	<b>8 bytes</b>	Unsigned Long Int	N/A
<b>Email</b>	Adopter's Email	<b>Max 255 bytes</b>	String	N/A
<b>State</b>	Adopter's State	<b>Max 255 bytes</b>	String	N/A
<b>Zip code</b>	Adopter's Zip code	<b>2 bytes</b>	Int	N/A

**Adopt Page Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Adopt Information</b>	Information about current adoptions	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Adoption Application Link</b>	Uses Adoption Application information and links to it	<b>Max 255 bytes</b>	String	<b>Foreign</b>

**Donation Application Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Donor FirstName</b>	<b>Donor's First Name</b>	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Donor LastName</b>	<b>Donor's Last Name</b>	<b>Max 255 bytes</b>	String	N/A
<b>Donation Amount</b>	<b>Amount Donated by User</b>	<b>8 bytes</b>	Double	N/A

**Donate Tab Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Donation Information</b>	Information from the Donor and amount donated	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Donation Form</b>	Donation Form using PayPal	<b>Max 255 bytes</b>	String	<b>Foreign</b>

**Paypal Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Donor Information</b>	Donor's information	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Donation Amount</b>	The amount donated saved as a decimal (double)	<b>Max 255 bytes</b>	String	N/A

**Contact Us Page Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Organization Information</b>	General information and contact methods	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Social Media Information</b>	Information and social media handles	<b>Max 255 bytes</b>	String	N/A
<b>User FirstName</b>	User's First Name	<b>Max 255 bytes</b>	String	N/A
<b>User LastName</b>	User's Last Name	<b>Max 255 bytes</b>	String	N/A
<b>User Phone Number</b>	User's Phone Number	<b>8 bytes</b>	Unsigned Long Int	N/A
<b>User Email</b>	User's Email	<b>Max 255 bytes</b>	String	N/A
<b>User Message</b>	User created message to administrator	<b>Max 255 bytes</b>	String	N/A

### System Admin Table

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>AdminID</b>	Unique Identifier for Administrator	<b>4 bytes</b>	UInt	<b>Primary</b>
<b>LastName</b>	System Admin Last Name	<b>Max 255 bytes</b>	String	N/A



<b>FirstName</b>	System Admin First Name	<b>Max 255 bytes</b>	String	N/A
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**Animal Profile Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>Name</b>	Name of the associated animal	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Breed</b>	The Breed of associated animal	<b>Max 255 bytes</b>	String	N/A
<b>Age</b>	Age of associated animal	<b>4 bytes</b>	Int	N/A
<b>Biography</b>	A brief Biography of animal	<b>Max 255 bytes</b>	String	N/A
<b>Animal Image</b>	An Image of the animal	<b>10 kilobytes</b>	Binary Large Object (BLOB)	N/A

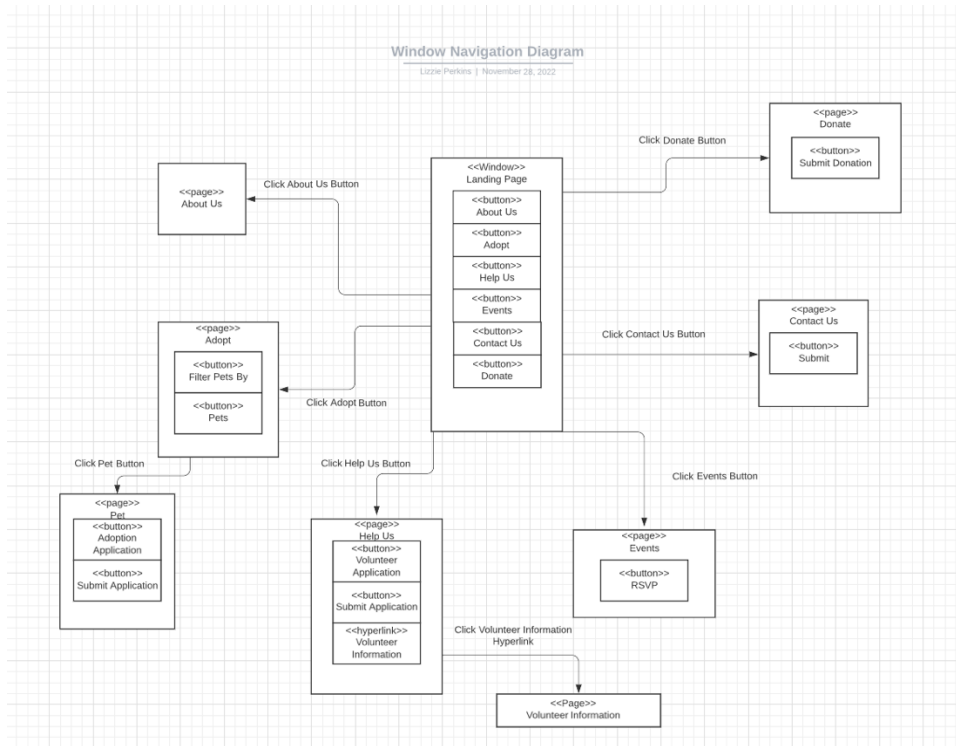
**Home Page Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>News Feed Information</b>	The information displayed on the news feed	<b>Max 255 bytes</b>	String	<b>Primary</b>

**About Us Table**

Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary Or Foreign Key?
<b>About Us Information</b>	Information displayed in About Us	<b>Max 255 bytes</b>	String	<b>Primary</b>
<b>Mission Statement</b>	Mission statement that is displayed	<b>Max 255 bytes</b>	String	N/A

## Navigation Diagram



## Screen Layouts:

Blue Ridge Animal Rescue and Sanctuary



Event Name:	Dog Meet at the Park
First Name:	★ <input type="text"/>
Last Name:	★ <input type="text"/>
How many in your party?	★ <input type="text"/>
Is this your first event?	★ <input type="text"/>

This would be the screen layout for a user entering information to RSVP for an event that would be on the calendar. This layout supports use cases 51-57. From here a user will be able to manage attendees, share events and access directions to the event.

# Adoption Application

moqups

We're so excited that you're interested in adopting from us! First we need some information from you.

<b>*First Name</b> Type first name here	<b>*Last Name</b> Type last name here	<b>*Email Address</b> Type email here
<b>*Phone Number</b> Phone number	<b>*Address</b> Type address here	<b>Apt/Suite</b> Type address here
<b>*City</b> Type city here	<b>*State</b> Select	<b>*Zip Code</b> Type zip code here

## Housing Information

**\*Please describe your living arrangements (select all that apply)**

☒ Own ☒ Rent ☒ Live with Family ☒ House ☒ Apartment ☒ Condo ☒ Duplex ☒ Mobile Home

**\*How long have you lived at this residence?** Type years here

**\*Are there children under 10 that live in this residence or visit frequently?** Select

**\*Is anyone allergic to pets?** Select

**\*Please describe your household using one of the options below.**

☒ Calm ☒ Noisy ☒ Active ☒ Quiet

## Other Information

**Veterinary Name** Type full name here

**Vet Address** Type full address here

**Vet Phone Number** Phone number

**\*Please give us a short biography of who you are and why you would like to adopt a pet.**

Type your biography here

SUBMIT

This would be the screen layout for a user entering information for applying for adopting after navigating through the adopt tab. This layout supports use cases 14 and 15.

# Volunteer Application

Thank you for your helping our cause!  
First, we need you to fill out an application

Image

First Name

Insert First Name

Last Name

Insert Last Name

Email Address

Insert Email Address

Street Address

Street Address

City

City

Zip Code

Zip

State

Kentucky

Phone Number

Phone Number

Do you have a License?

Select

What is your preferred availability? (We will do our best to accommodate)

☐ Morning

☐ Midday

☐ Late Afternoon

☐ Evenings

☐ Weekdays

☐ Weekends

Additional Comments Regarding Availability.

Type here

Tell us about you! Why are you interested?

Type here

Please Select Areas of Interest

☐ Transportation

☐ Pet Welfare

☐ Grooming

☐ Adoption Center

☐ Fundraiser Coordinator

☐ Adoption Events

Are there any limitations/conditions  
that may hinder you from specific volunteering activities?

Type here

Submit Form

This would be the screen layout for a user entering information for a volunteer position after navigating through the help us tab. This layout supports use cases 34-36, 38-40, 45-47. Users will be able to manage their volunteer applications, manage information in the application, and manage interests within it.

## Contact us

We love questions and feedback – and we're always happy to help!  
Here are some ways to contact us.

### Send us a message

Send us a message and we'll respond within 24 hours.


**Full Name**


**Email**


**Telephone**




SUBMIT

### Contact information

 177 Huntington Ave Ste 1703

 contact-us@company.com

 +1-617-555-0108

This would be the screen layout for someone entering information for the company to reach back out to them after navigating through the contact us tab. This layout supports use cases 64-67. These use cases consist of adding contact information, editing the information, deleting information, and changing methods of contact.

Blue Ridge Animal Rescue and Sanctuary

About Us

Adopt

Help Us

Events

Contact Us

Donate To:

Blue Ridge Animal Rescue and Sanctuary

Would you like to share your donation?

☐ Yes

☐ No

☒ Monthly Donation?

☒ Anonymous?

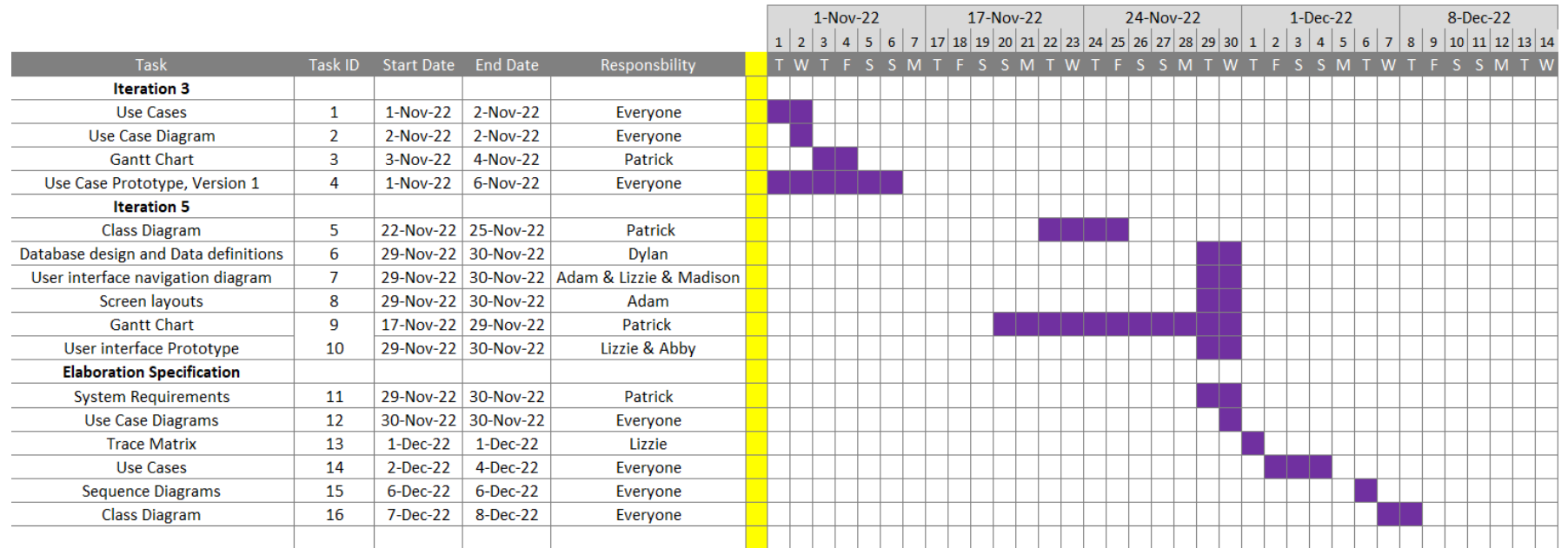
Donate with PayPal

This would be the screen layout for a user trying to send a donation when navigating through the donate tab. This layout supports use cases 21-23 and 26-28. These use cases consists of managing donations from the front-end and back-end and giving users the options for anonymous donations, sharing donations and specifying donation amounts.

## Gantt Chart:

Project Start

Tue, 1-Nov-2022



## Task Dependencies:

Iteration 3	Task ID	Task	Start Date	End Date	Task Responsibility	Task Dependencies
	10	Use Cases	11/1/22	11/2/22	Madison & Patrick	The Use Cases in this iteration are dependent on the system requirements identified in I2. These are needed to form essential and detailed use cases.
	11	Trace Matrix	11/2/22	11/2/22	Madison	The Trace Matrix is dependent on the list of use cases in this iteration.
	12	Use Case Diagram	11/3/22	11/4/22	Lizzie & Dylan	The use case diagram is dependent on the use cases stated in this iteration. Without them, the diagram cannot be created.
	13	Gantt Chart	11/1/22	11/6/22	Patrick	The Gantt Chart relies on the completion of tasks and their duration. Completion dates factor into this as well as future iterations/tasks.
	14	Use Case Prototype, Version 1	11/5/22	11/6/22	Adam & Abby	The Use Case Prototype is a high-level prototype used to represent data needs and process flows. High risk use cases are required for this task as well as previous prototypes.

Iteration 5	Task ID	Task	Start Date	End Date	Task Responsibility	Task Dependencies
	5	Class Diagram	22-Nov-22	25-Nov-22	Patrick	The class diagram is dependent on the group's assignment 3 class diagrams. Once provided, the group can discuss any changes needed to be made to create the diagram.
	6	Database design and Data definitions	29-Nov-22	30-Nov-22	Dylan	Database diagrams and data definitions are dependent on completion of the class diagram. It seems to transform the class diagram to an ERD and display data types associated with the attributes.
	7	User interface navigation diagram	29-Nov-22	30-Nov-22	Adam & Lizzie & Madison	The User interface and navigation diagrams depict views of the use cases. Completion of use cases and use case diagrams are needed in order to finish this step.
	8	Screen layouts	29-Nov-22	30-Nov-22	Adam	Screen layouts provide input screens/forms along with output screens/reports. These are borrowed from HTML prototypes and it is crucial that those prototypes are completed for this step.



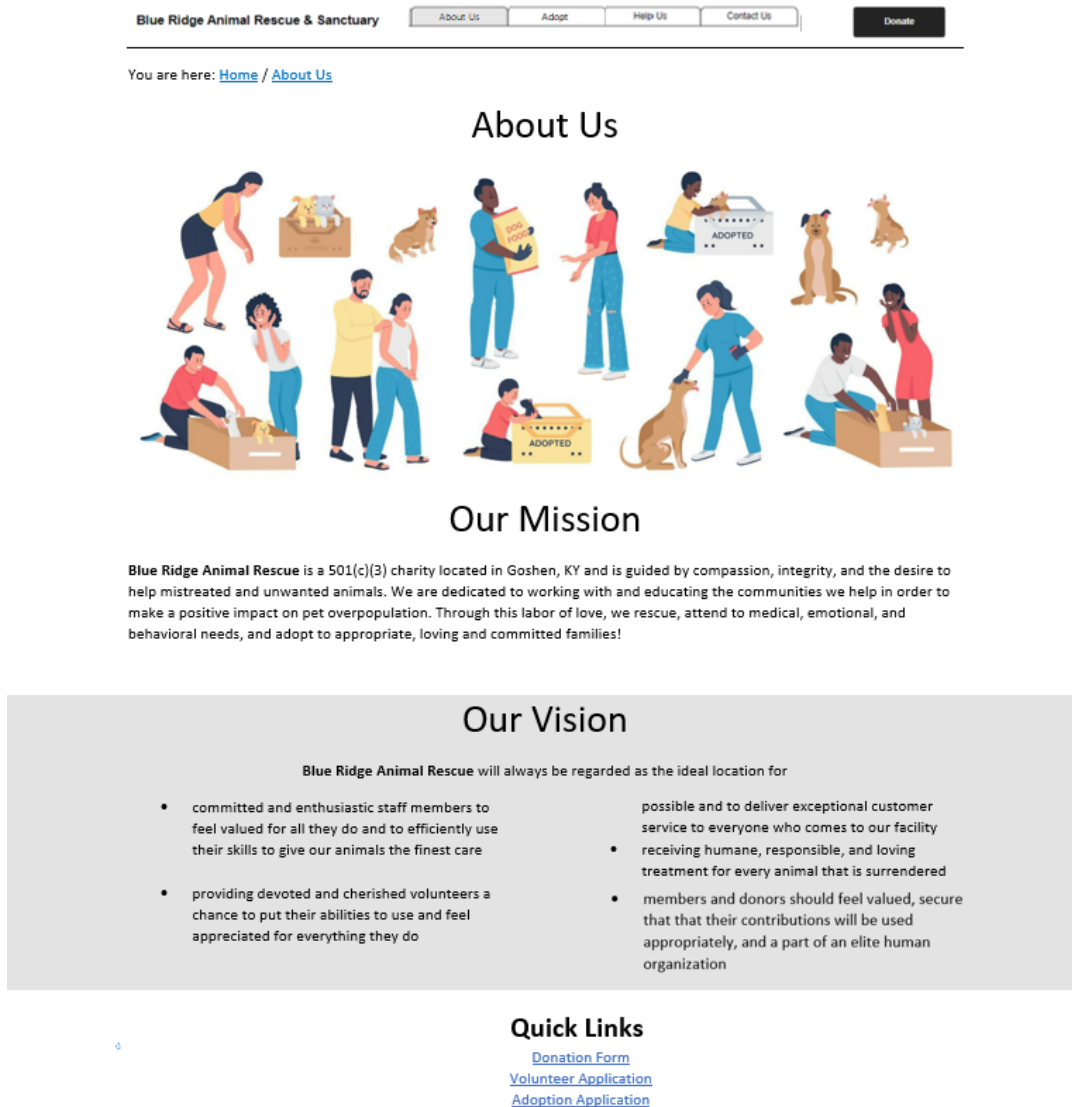
					The Gantt Chart is not directly dependent on tasks, but each task needs to be completed in order to complete this step.	
9	Gantt Chart		17-Nov-22	29-Nov-22	Patrick	
					User interface prototypes are mockups representing the data needs and process flow of use cases. Use cases need to be completed for this step.	
10	User interface Prototype		29-Nov-22	30-Nov-22	Lizzie & Abby	
Elaboration Spec						
						System Requirements are dependent on product features/requirements in the Vision Document. This task is dependent on previous iterations
11	System Requirements		29-Nov-22	30-Nov-22	Patrick	
						Use Case diagrams display business processes within the system. Use cases need to be written out in order to complete this step.
12	Use Case Diagrams		30-Nov-22	30-Nov-22	Everyone	
						The trace matrix is dependent on the use cases and system requirements
13	Trace Matrix		1-Dec-22	1-Dec-22	Lizzie	

	13	Trace Matrix	1-Dec-22	1-Dec-22	Lizzie	The trace matrix is dependent on the use cases and system requirements
	14	Use Cases	2-Dec-22	4-Dec-22	Everyone	Use cases capture business processes within the system and are essentially actions of the system. System requirements need to be finished for this step.
	15	Sequence Diagrams	6-Dec-22	6-Dec-22	Everyone	Sequence diagrams are a diagram depicting a flow of actions to achieve a goal. For this step to be completed, use cases, use case diagrams, and the class diagram will need to be completed
	16	Class Diagram	7-Dec-22	8-Dec-22	Everyone	The class diagram is dependent on the individual assignments for class. It represents a set of classes, objects, and methods within the system.

## User Interface Prototype:

### Use Case 1 – 10: About Us Prototype

The following image represents the About Us tab. From this page, users can view all the information about the organization on this page and have access/click to the links in Quick Links section to jump to the items of the organization want to focus on which are donation, volunteer, and adoption form. From the backend, the client can add, edit, create, design, and delete all the information on this tab and create, add, and delete navigate links in the Quick Links section.



### Use Case 14 & Use Case 15: Adoption Application

This is a prototype of the adoption application. A user will be able to access this through Blue Ridge's webpage and will be able to create and apply. They will be required to input information for the organization, and, and the discretion of the organization, they can delete it.

# Adoption Application

We're so excited that you're interested in adopting from us! First we need some information from you.

\*First Name

\*Last Name

\*Email Address

\*Phone Number

\*Address

Apt/Suite

\*City

\*State

Select

\*Zip Code

## Housing Information

\*Please describe your living arrangements (select all that apply)

☒ Own
 ☒ Rent
 ☒ Live with Family
 ☒ House
 ☒ Apartment
 ☒ Condo
 ☒ Duplex
 ☒ Mobile Home

\*How long have you lived at this residence?

\*Are there children under 10 that live in this residence or visit frequently?

Select

\*Is anyone allergic to pets?

Select

\*Please describe your household using one of the options below.

☒ Calm
 ☒ Noisy
 ☒ Active
 ☒ Quiet

## Other Information

Veterinary Name

Vet Address

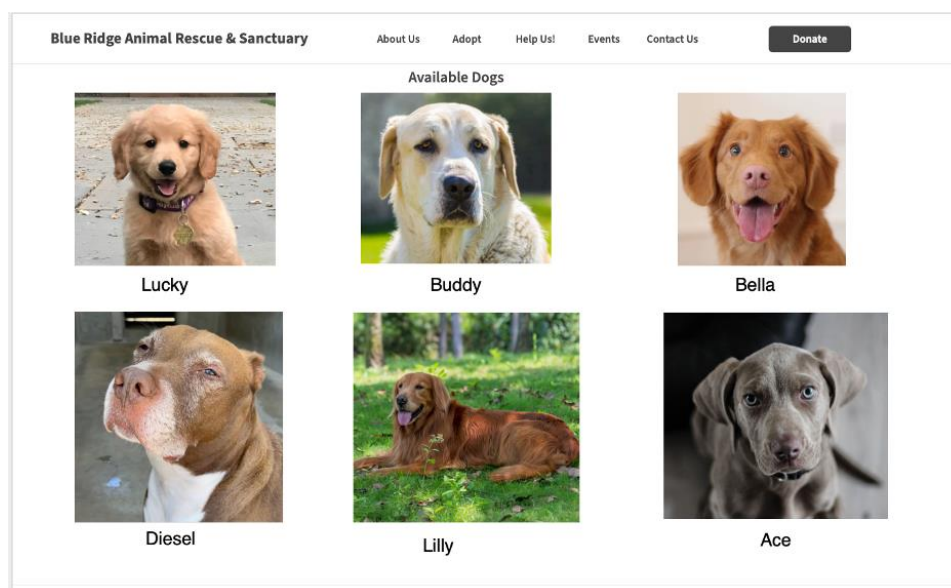
Vet Phone Number

\*Please give us a short biography of who you are and why you would like to adopt a pet.

SUBMIT

## Use Case 11-13 & Use Case 16-17

The Prototype shown below involve adding pets, editing pets, and deleting pets. These are from the administrative side, and the admin can do so as pleased. This is the user view and what we expect the user will see when viewing Blue Ridge's webpage. This will more than likely involve the adopt tab.





## Use Case 18-20: Animal Biography

The use cases involved in this prototype display the user view of pet information. When the user visits the web page, we expect that they will view animal information as they look to adopt. Information here is added through the admin and can be changed as needed.

Blue Ridge Animal Rescue & Sanctuary

[About Us](#)[Adopt](#)[Help Us!](#)[Events](#)[Contact Us](#)

Donate



About this Pet

Name: Diesel

Sex: Male

Breed: Pitbull

Age: 1Y/6M/17D






Biography:

Diesel is a sweet, social boy who is looking for a place to call home. Traveling to us all the way from Tallahassee, Diesel has been on a long journey! But that hasn't stopped us from seeing his adorable personality! Diesel loves to go on long walks and hikes with his people (and even a calm canine friend!) but also enjoys hanging out and tossing around a few tennis balls! At around a year old, Diesel still has some of that puppy energy to work off, but once he does, he's ready to hunker down on the couch for some Netflix!

If you think this handsome man could be your new best friend, please start the process today!

Apply for Adoption

Donate



## Use Case 21-29: Donation Form

The prototype below shows the user view of the donation form. Users can create and submit donations to the organization, and, if needed, they can remain anonymous. The organization will be able to view these donations on their end and manage them as necessary.

Donate To:  
Blue Ridge Animal Rescue and Sanctuary

Would you like to make your donation?

☐ Yes

☐ No

☒ Monthly Donation?

☐ Anonymous?

Select Area

Donate with PayPal

## Use Case 32, 33, 37, & 41-43: Volunteer Information


The first prototype displayed involves use cases 32, 33, 37, and 41-43. It displays the user view of the website, and the information that the client may provide within the Help Us! Page. From here, the user will be able to see information regarding volunteering within the organization, positions and potential availability for volunteering. From the administrative point of view, the client will be able to alter information on this portion of the website. Once altered, changes will be made to the user's end.

Blue Ridge Animal Rescue & Sanctuary

About Us Adopt Help Us Contact Us Donate

You are here: [Home](#) / [Help Us!](#) / [Volunteer](#) / [Volunteer Information](#)

### Volunteering Information



Here at Blue Ridge Animal Rescue & Sanctuary, we need all the help we can get. As a growing organization, we intend on bringing in more at-risk animals to help find homes. As a result, we need more help than ever. There are many ways to support our cause, and, if interested, please fill out our [Online Volunteer Application](#). If you have any concerns, please email us directly at: [blueridgerescue@aol.com](mailto:blueridgerescue@aol.com)

**Volunteer Availability:**

Blue Ridge Animal and Rescue Sanctuary varies in volunteering times. Availability will be dependent on the position chosen. We will work with your schedule to the best of our abilities.

**Positions:**

**Adoption Center:**  
With the various animals we bring in, we need assistance in maintaining the living spaces. This may require cleaning and social enrichment within the pets!

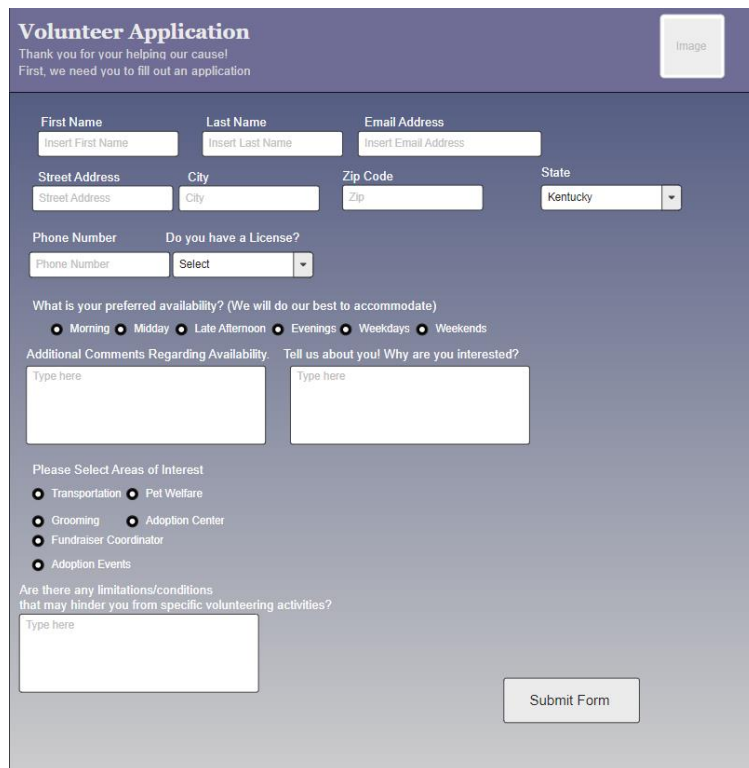
**Transport**  
With the duties that our staff carries, we need assistance in transporting animals. Many animals need to visit the vet or go to boarding. There are variations within this position.

**Adoption Events**  
Adoption events are something that require as much help as we can get. An individual may walk dogs, speak to prospective adopters about the various animals or general questions.

**Fundraising**  
Fundraising is one of the most important aspects to keep our organization functioning. There are many opportunities to fundraise for this organization, and we need someone to assist with these.

## Use Cases 34-35, 36, 38, 40, 41-43, 44, & 45-47: Volunteer Application

This prototype displays the user view of the volunteer application. Accessing this will be through the first prototype displayed or through Help Us! Tab. Once the user accesses this tab, they will be able to fill out the form and submit when finished. This prototype involves use cases 34-35, 36, 38, 40, 41-43, 44, and 45-47. From the backend, the client should be able to receive these submitted applications and view/delete them as necessary.



**Volunteer Application**

Thank you for your helping our cause!  
First, we need you to fill out an application

Image

First Name:  Last Name:  Email Address:

Street Address:  City:  Zip Code:  State:

Phone Number:  Do you have a License?:

What is your preferred availability? (We will do our best to accommodate)

☐ Morning ☐ Midday ☐ Late Afternoon ☐ Evenings ☐ Weekdays ☐ Weekends

Additional Comments Regarding Availability:  Tell us about you! Why are you interested?:

Please Select Areas of Interest

☐ Transportation ☐ Pet Welfare

☐ Grooming ☐ Adoption Center

☐ Fundraiser Coordinator

☐ Adoption Events

Are there any limitations/conditions that may hinder you from specific volunteering activities?

Submit Form

## Use Case 48-50: Events

The following image represents the Event tab prototype. This prototype includes a 7-day calendar with time slots on each day to allow the system administrator to add, edit, and delete events as needed. It also allows users to access important event information and RSVP if necessary.

## Week Events October 2 - October 8

	Sun 2	Mon 3	Tue 4	Wed 5	Thu 6	Fri 7	Sat 8
7 AM							
8 AM							
9 AM							
10 AM		10 AM Pet Meetup			10 AM Pet Meetup	10 AM Pet Meetup	
11 AM							11 AM Sawyer Dog Park Community Day
NOON							
1 PM			1 PM Puppy Play-Date	1 PM Volunteer			
2 PM							
3 PM							
4 PM							
5 PM							
6 PM							

## Use Case 58-67

The prototype below shows a mockup of the contact form on the user end. On the back end, the admin will be able to manage their contact information displayed and managed frequently asked questions. Users can manage their information as necessary and change their contact preferences if needed.

## Contact us

We love questions and feedback – and we're always happy to help!  
Here are some ways to contact us.

### Send us a message

Send us a message and we'll respond within 24 hours.

**Full Name**

**Email**

**Telephone**

SUBMIT

### Contact information

177 Huntington Ave Ste 1703

contact-us@company.com

+1-617-555-0108

