

**Pets4Life**

**Assignment 3:  
Analysis Modeling**

**Version 1.0**

# Table of Contents

<b>1. User Interacts with Chatbot (Use Cases 1-2)</b>	<b>4</b>
<b>1.1 Use Case Descriptions:</b>	<b>4</b>
1.1.A. Use Case 1: Ask Pet Care Questions	4
1.1.B. Use Case 2: Create Ticket for Further Help	5
<b>1.2 Associated System Requirements &amp; Traceability Matrix:</b>	<b>6</b>
1.2.A System Requirements	6
1.2.B Traceability Matrix	6
<b>1.3 Use Case Diagram &amp; Narrative</b>	<b>7</b>
1.3.A Use Case Diagram	7
1.3.B Use Case Narrative	7
<b>1.4 Sequence Diagram</b>	<b>8</b>
1.4.A Use Case 1: Ask Pet Care Questions	8
1.4.B Use Case 2: Create Ticket for Further Help	9
<b>1.5 Prototypes</b>	<b>10</b>
1.5.A Use Case 1: Ask Pet Care Questions	10
1.5.B. Use Case 2: Create Ticket for Further Help	11
<b>2. Administrator Manages List of Predefined Responses (Use Cases 3-4)</b>	<b>14</b>
<b>2.1 Use Case Descriptions:</b>	<b>14</b>
2.1.A. Use Case 3: Create List of Predefined Responses	14
2.1.B. Use Case 4: Update Predefined Responses	15
<b>2.2 Associated System Requirements &amp; Trace Matrix:</b>	<b>16</b>
2.2.A System Requirements	16
2.2.B Trace Matrix	16
<b>2.3 Use Case Diagram &amp; Narrative</b>	<b>17</b>
2.3.A Use Case Diagram	17
2.3.B Use Case Narrative	17
<b>2.4 Sequence Diagram</b>	<b>18</b>
2.4.A Use Case 3: Create List of Predefined Responses	18
2.4.B Use Case 4: Update Predefined Responses	19
<b>2.5 Prototypes</b>	<b>20</b>
2.5.A. Use Case 3: Create List of Predefined Responses	20
2.5.B. Use Case 4: Update Predefined Responses	23
<b>3. User Views Donation Options (Use Case 21)</b>	<b>24</b>
<b>3.1 Use Case Descriptions:</b>	<b>24</b>
3.1.A. Use Case 21: View Donation Options	24
<b>3.2 Associated System Requirements &amp; Traceability Matrix:</b>	<b>25</b>
3.2.A System Requirements	25
3.2.B Traceability Matrix	25
<b>3.3 Use Case Diagram &amp; Narrative</b>	<b>26</b>

3.3.A Use Case Diagram .....	26
3.3.B Use Case Narrative.....	26
<b>3.4 Sequence Diagram .....</b>	<b>27</b>
3.4.A Use Case 21: View Donation Options .....	27
<b>3.5 Prototypes.....</b>	<b>28</b>
3.5.A Use Case 21: View Donation Options .....	28
<b>4. Class Diagram &amp; Narrative.....</b>	<b>33</b>
<b>4.1 Class Diagram.....</b>	<b>33</b>
<b>4.2 Class Diagram Narrative .....</b>	<b>33</b>

# 1. User Interacts with Chatbot (Use Cases 1-2)

## 1.1 Use Case Descriptions:

### 1.1.A. Use Case 1: Ask Pet Care Questions

<b>Use Case Name:</b> Ask Pet Care Questions	<b>ID:</b> 1	<b>Importance Level:</b> High
<b>Primary Actor:</b> User		<b>Use Case Type:</b> Detail, Essential
<b>Stakeholders and Interests:</b> <ul style="list-style-type: none"><li>– <b>User:</b> wants to ask pet care questions and receive accurate, timely answers.</li><li>– <b>Administrator:</b> wants to ensure that users are able to receive the help they need when they need it.</li></ul>		
<b>Brief Description:</b> This describes how a user can ask the chatbot pet care related questions and receive automated responses.		
<b>Trigger:</b> User clicks on the chatbot icon on the bottom right of all pages and asks a question. <b>Type:</b> External		
<b>Relationships:</b> <ul style="list-style-type: none"><li>Association: User</li><li>Include:</li><li>Extend: Use Case 2</li><li>Generalization:</li></ul>		
<b>Normal Flow of Events:</b> <ol style="list-style-type: none"><li>1. User enters chatbot widget.</li><li>2. Chatbot asks the user what they need help with.</li><li>3. User sends a pet care question.</li><li>4. Chatbot searches the predefined knowledge base for matching keywords.</li><li>5. Chatbot provides an automated response.</li><li>6. User determines whether it resolves their needs.</li><li>7. If the User is fully satisfied, the Chatbot thanks them and ends the interaction.</li></ol>		
<b>SubFlows:</b>		
<b>Alternate/Exceptional Flows:</b> <ol style="list-style-type: none"><li>1a. User fails to respond.</li><li>4a1. Chatbot cannot provide an accurate answer and escalates the question to a representative through ticket creation.</li><li>4a2. System is unable to process the question and fails to respond.</li></ol>		

- 5a. User asks follow-up questions.
- 6a. User is not satisfied and requests further assistance.

#### 1.1.B. Use Case 2: Create Ticket for Further Help

<b>Use Case Name:</b> Create Ticket for Further Help	<b>ID:</b> 2	<b>Importance Level:</b> High
<b>Primary Actor:</b> User		<b>Use Case Type:</b> Detail, Real
<b>Stakeholders and Interests:</b> <ul style="list-style-type: none"> <li>– <b>User:</b> wants to create a support ticket to receive further assistance for their pet-related query.</li> <li>– <b>Administrator:</b> wants to ensure that users can receive the needed help for their more severe query when they need it.</li> </ul>		
<b>Brief Description:</b> This describes how users can create a support ticket to escalate chatbot inquiries, which then gets sent to a representative for further help.		
<b>Trigger:</b> User requests assistance via the chatbot widget, which then determines it is unable to resolve the issue automatically and prompts the user to create a ticket. <b>Type:</b> Internal		
<b>Relationships:</b> <ul style="list-style-type: none"> <li>Association: User</li> <li>Include:</li> <li>Extend:</li> <li>Generalization:</li> </ul>		
<b>Normal Flow of Events:</b> <ol style="list-style-type: none"> <li>1. User enters the chatbot widget.</li> <li>2. User sends a pet care question.</li> <li>3. Chatbot determines escalation is needed.</li> <li>4. Chatbot prompts user through creating an escalation ticket.</li> <li>5. User provides the required information.               <ol style="list-style-type: none"> <li>a. S-1: Complete Support Ticket Details subflow is performed.</li> </ol> </li> <li>6. Chatbot generates a ticket with a unique ID and stores it into the ticketing system.</li> <li>7. User receives confirmation of escalation ticket.</li> </ol>		
<b>SubFlows:</b> <p><b>S-1: Complete Support Ticket Details</b></p> <ol style="list-style-type: none"> <li>1. User provides first and last name.</li> <li>2. User provides email address.</li> <li>3. User provides their phone number.</li> <li>4. User provides the concerned pet species.</li> </ol>		


5. User describes the issue.
<b>Alternate/Exceptional Flows:</b>  <b>3a.</b> User exits the chatbot, canceling the ticket creation process. <b>5a.</b> User provides invalid or incomplete information. <b>6a.</b> System is unable to generate a ticket due to server issues.

## 1.2 Associated System Requirements & Traceability Matrix:

### 1.2.A System Requirements

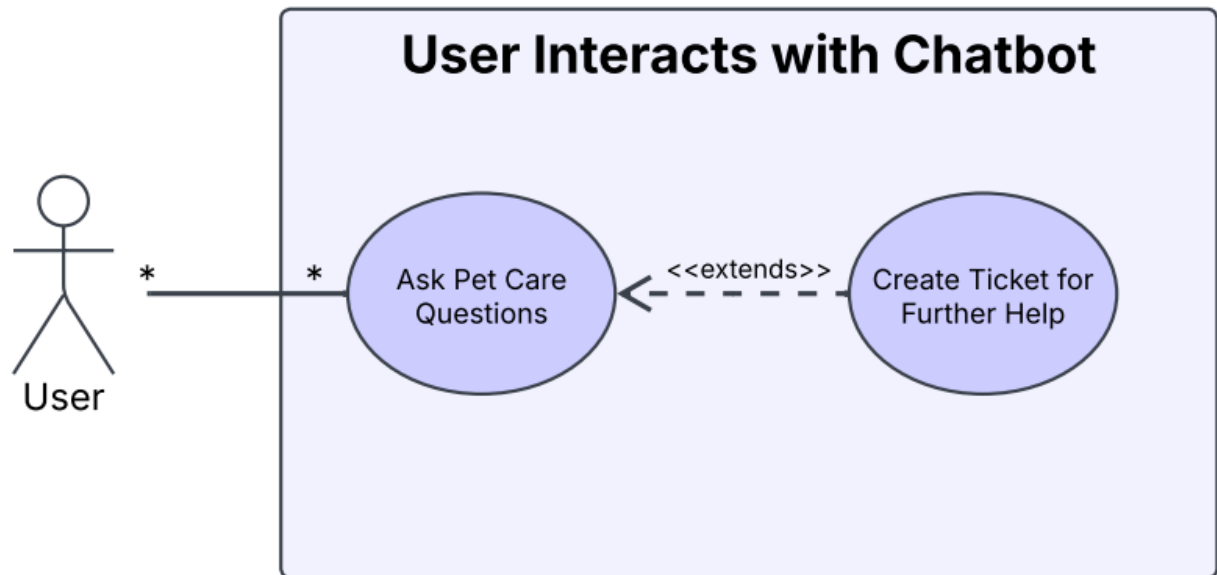
- ID: SR001 - The Chatbot will allow generate automated responses to frequently asked questions.
- ID: SR002 - The Chatbot will allow users to create support tickets and send them to an escalation system for further assistance.
- ID: SR003 - The Chatbot will allow a facilitation of user needs through a conversational interface

### 1.2.B Traceability Matrix

	Use Case 1: Ask Pet Care Questions	Use Case 2: Create Ticket for Further Help
	X	
		X
ID: SR001 - The Chatbot will allow generate automated responses to frequently asked questions.	X	
ID: SR002 - The Chatbot will allow users to create support tickets and send them to an escalation system for further assistance.		X
ID: SR003 - The Chatbot will allow a facilitation of user needs through a conversational interface.	X	

## 1.3 Use Case Diagram & Narrative

### 1.3.A Use Case Diagram

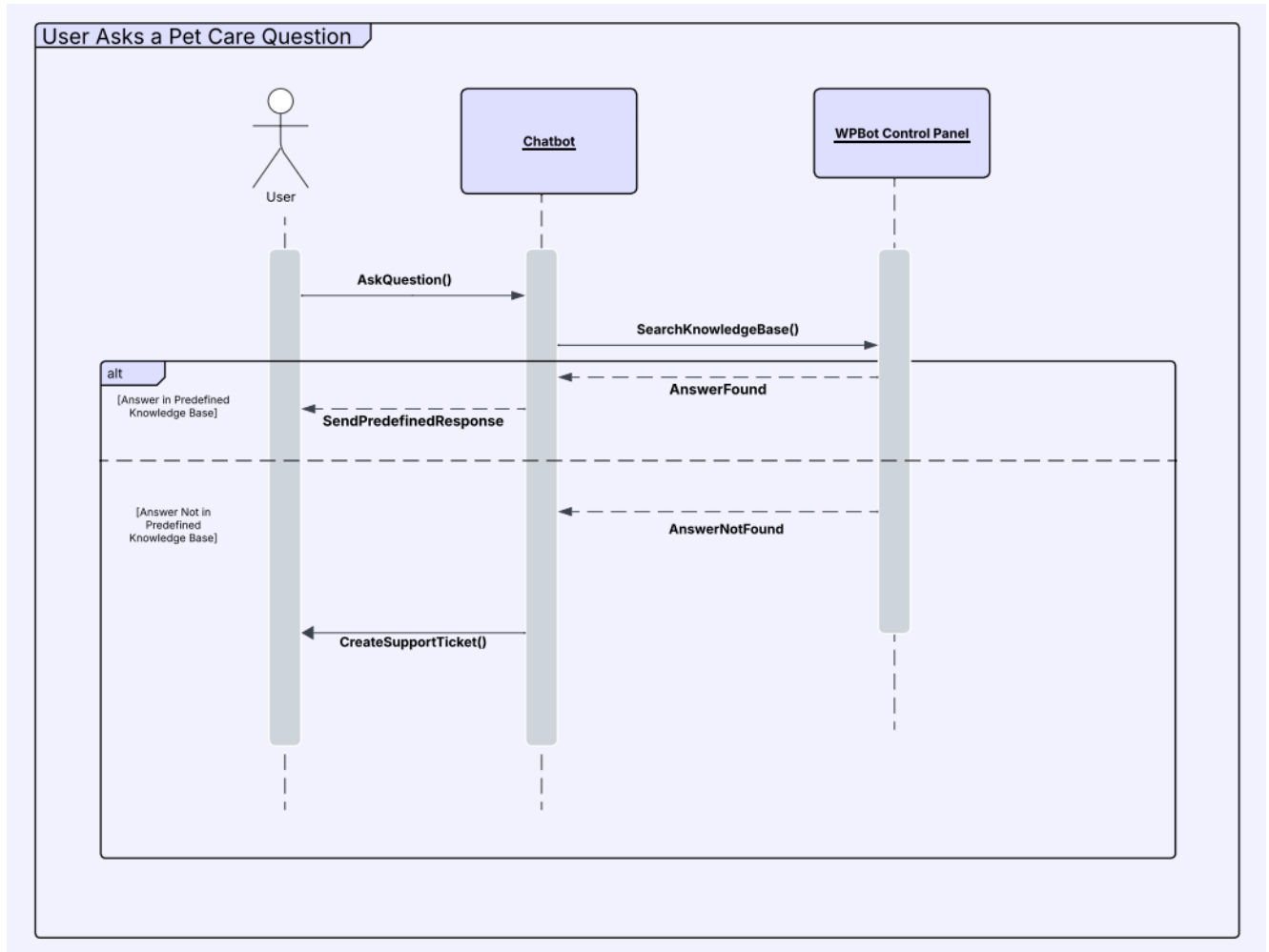


### 1.3.B Use Case Narrative

In the chatbot widget, the user is able to interact with the chatbot through asking pet care related questions. If needed, a support ticket can be created for further help. The user can ask pet care questions many times, and pet care questions can be asked by many users. The “Ask Pet Care Questions” use case extends to the “Create Ticket for Further Help” use case, as it is an optional flow that depends on user input, which in this case is if their question cannot be answered by predefined responses, then they will need a support ticket for individualized help from the Pets4Life team.

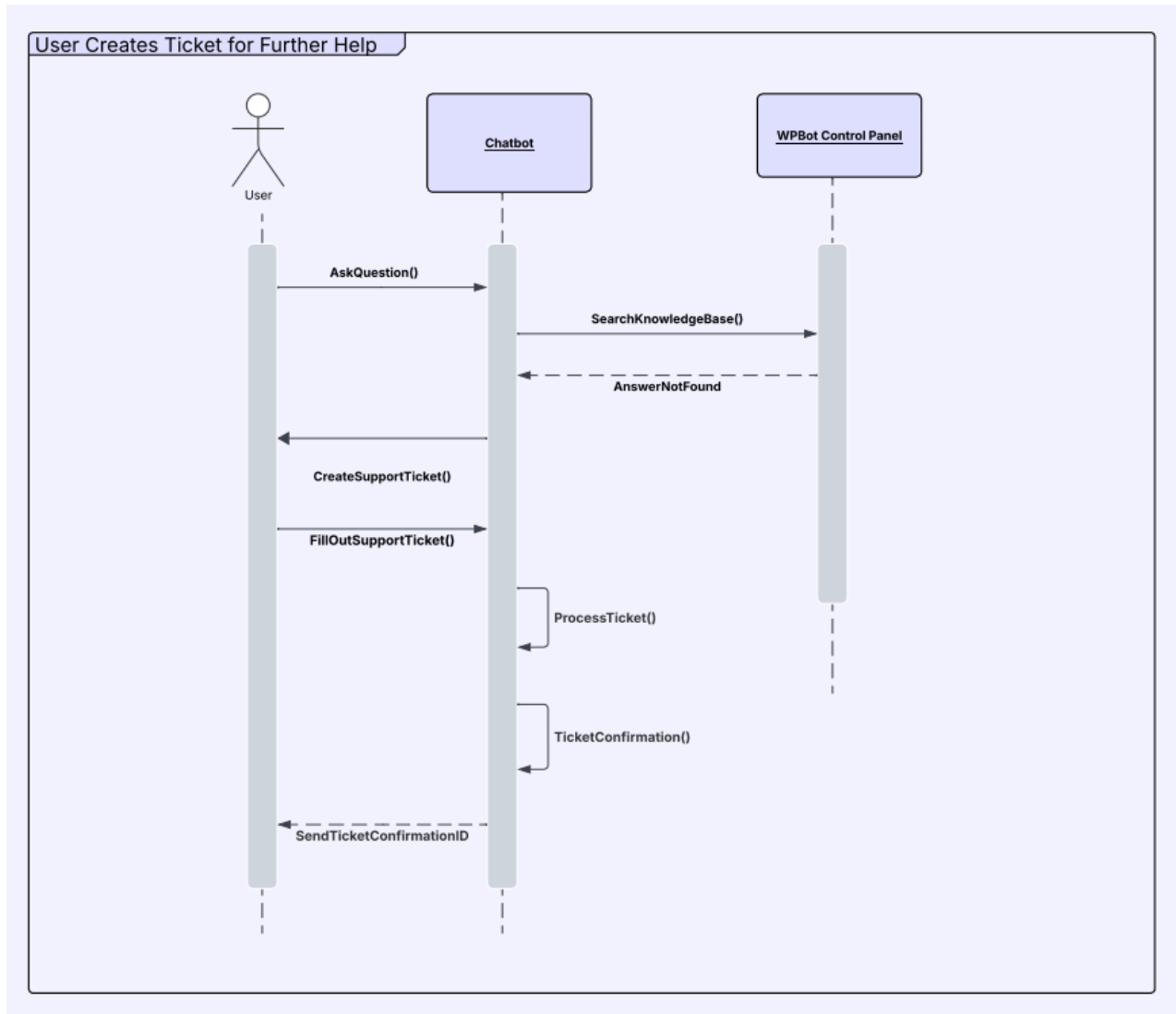
## 1.4 Sequence Diagram

### 1.4.A Use Case 1: Ask Pet Care Questions





#### 1.4.B Use Case 2: Create Ticket for Further Help

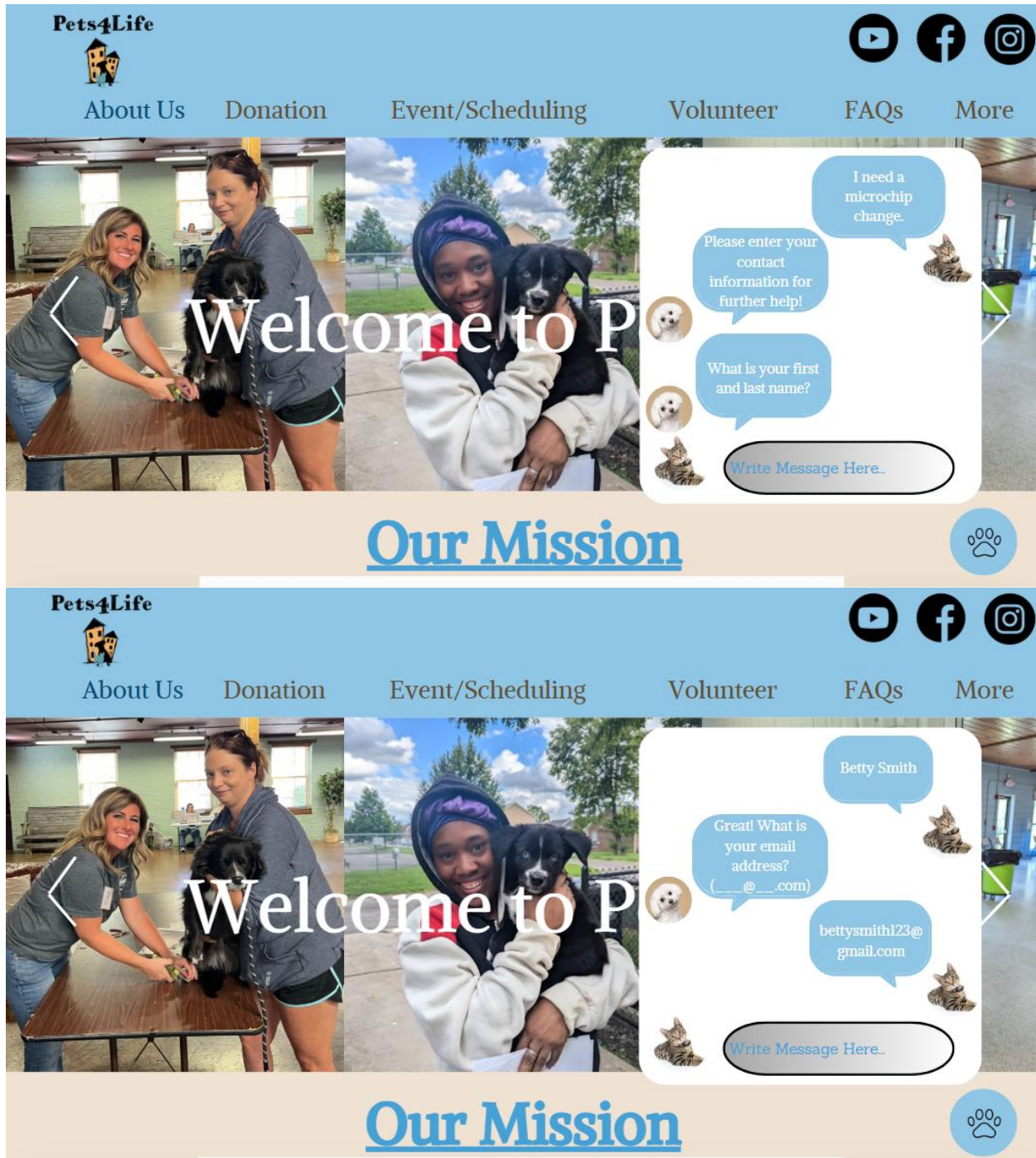


## 1.5 Prototypes

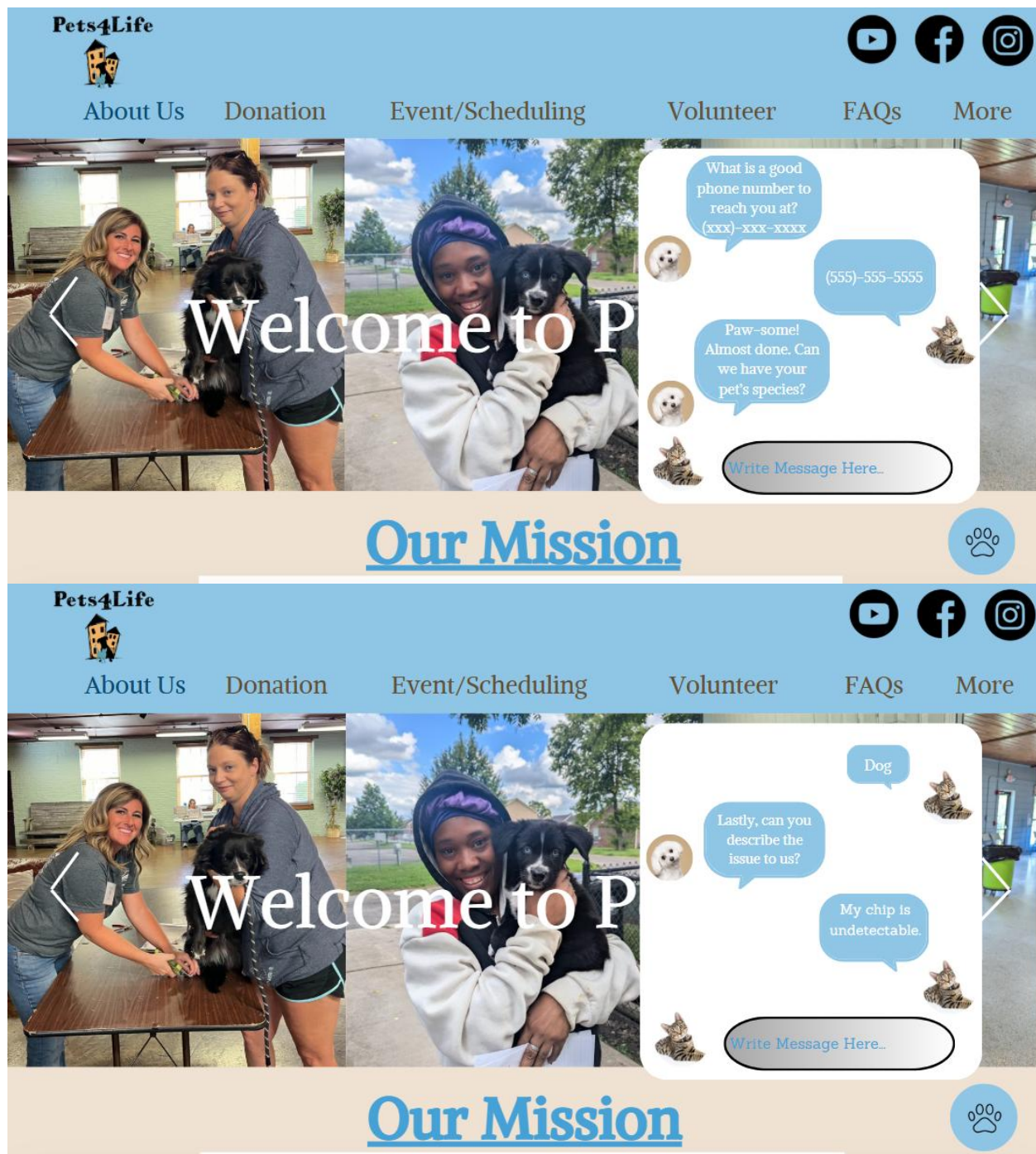
### 1.5.A Use Case 1: Ask Pet Care Questions

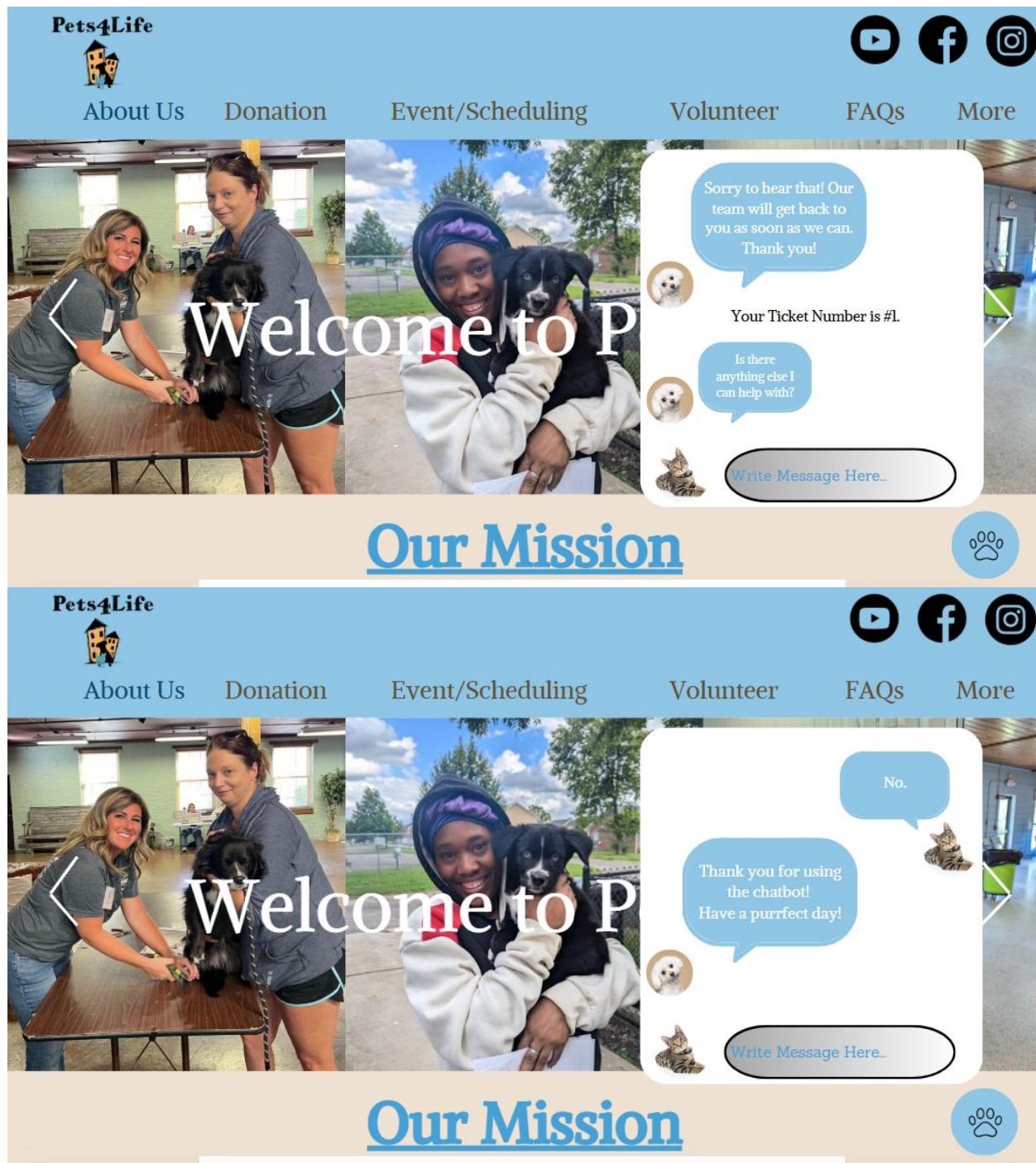


### 1.5.B. Use Case 2: Create Ticket for Further Help









## 2. Administrator Manages List of Predefined Responses (Use Cases 3-4)

### 2.1 Use Case Descriptions:

#### 2.1.A. Use Case 3: Create List of Predefined Responses

<b>Use Case Name:</b> Create List of Predefined Responses	<b>ID:</b> 3	<b>Importance Level:</b> High
<b>Primary Actor:</b> Administrator		<b>Use Case Type:</b> Detail, Essential
<b>Stakeholders and Interests:</b> <ul style="list-style-type: none"><li>– <b>User:</b> wants to be able to receive accurate and relevant answers to their problems.</li><li>– <b>Administrator:</b> wants to ensure that all relayed information to the user is accurate, recent, and relevant to the Pets4Life organization.</li></ul>		
<b>Brief Description:</b> This describes how a Pets4Life administrator creates their list of predefined responses for the chatbot to respond with.		
<b>Trigger:</b> Administrator clicks on “Add New Response” in the WPBot Control Panel. <b>Type:</b> External		
<b>Relationships:</b> <ul style="list-style-type: none"><li>Association: Administrator</li><li>Include:</li><li>Extend:</li><li>Generalization:</li></ul>		
<b>Normal Flow of Events:</b> <ol style="list-style-type: none"><li>1. Administrator navigates to the Predefined Knowledge Base in the WPBot Control Panel.</li><li>2. Administrator clicks on “Add New Response.”</li><li>3. The Administrator fills in required fields.<ol style="list-style-type: none"><li>a. S-1: Input Required Fields subflow is performed.</li></ol></li><li>4. The Administrator clicks on “Save Response.”</li></ol>		
<b>SubFlows:</b> <b>S-1: Input Required Fields</b> <ol style="list-style-type: none"><li>1. The Administrator adds Query Name.</li><li>2. The Administrator adds Response to associated query.</li><li>3. The Administrator adds Keyword(s) to be detected by the chatbot that helps it send a response.</li><li>4. The Administrator adds Intent (optional).</li></ol>		
<b>Alternate/Exceptional Flows:</b>		

- 2a. The System is not able to process the request to create a new item.
- 4a1. The Administrator cancels the process.
- 4a2. The Administrator leaves required fields blank.
- 4a3. The Administrator creates a conversational form.
1. In the Chatbot Form Builder, the Administrator clicks “Create Conversation.”
  2. The Administrator clicks “Blank Form.”
  3. The Administrator fills out fields as needed.
  4. The Administrator clicks “Save Conversational Form.”

## 2.1.B. Use Case 4: Update Predefined Responses

<b>Use Case Name:</b> Update Predefined Responses	<b>ID:</b> 4	<b>Importance Level:</b> High
<b>Primary Actor:</b> Administrator		<b>Use Case Type:</b> Detail, Essential
<b>Stakeholders and Interests:</b> <ul style="list-style-type: none"> <li>– <b>User:</b> wants to benefit from receiving accurate and up-to-date responses.</li> <li>– <b>Administrator:</b> wants to update responses to reflect current information.</li> </ul>		
<b>Brief Description:</b> This describes how a Pets4Life administrator can update existing predefined chatbot responses to ensure accurate and up-to-date information is provided to users.		
<b>Trigger:</b> Administrator clicks on “Edit Response” in the WPBot Control Panel. <b>Type:</b> External		
<b>Relationships:</b> <ul style="list-style-type: none"> <li>Association: Administrator</li> <li>Include:</li> <li>Extend:</li> <li>Generalization:</li> </ul>		
<b>Normal Flow of Events:</b> <ol style="list-style-type: none"> <li>1. The Administrator navigates to the Predefined Knowledge Base in the WPBot Control Panel.</li> <li>2. The Administrator selects “Manage Predefined Responses.”</li> <li>3. The Administrator selects the response they wish to update.</li> <li>4. The Administrator updates needed fields.               <ol style="list-style-type: none"> <li>a. S-1: Input Updated Fields subflow is performed.</li> </ol> </li> <li>5. The Administrator clicks Save Response.</li> </ol>		
<b>SubFlows:</b> <p><b>S-1: Input Updated Fields</b></p> <ol style="list-style-type: none"> <li>1. The Administrator updates the Query Title.</li> <li>2. The Administrator updates the Response.</li> </ol>		


<p>3. The Administrator updates the Keyword(s).</p> <p>4. The Administrator updates the Intent.</p>
<p><b>Alternate/Exceptional Flows:</b></p> <p>5a1. The Administrator cancels the update process.</p> <p>5a2. The Administrator leaves required fields blank.</p> <p>6a. The System fails to save the response due to system issues.</p>

## 2.2 Associated System Requirements & Trace Matrix:

### 2.2.A System Requirements

- ID: SR004 - The Chatbot will allow administrators to manage a list of predefined responses.

### 2.2.B Trace Matrix

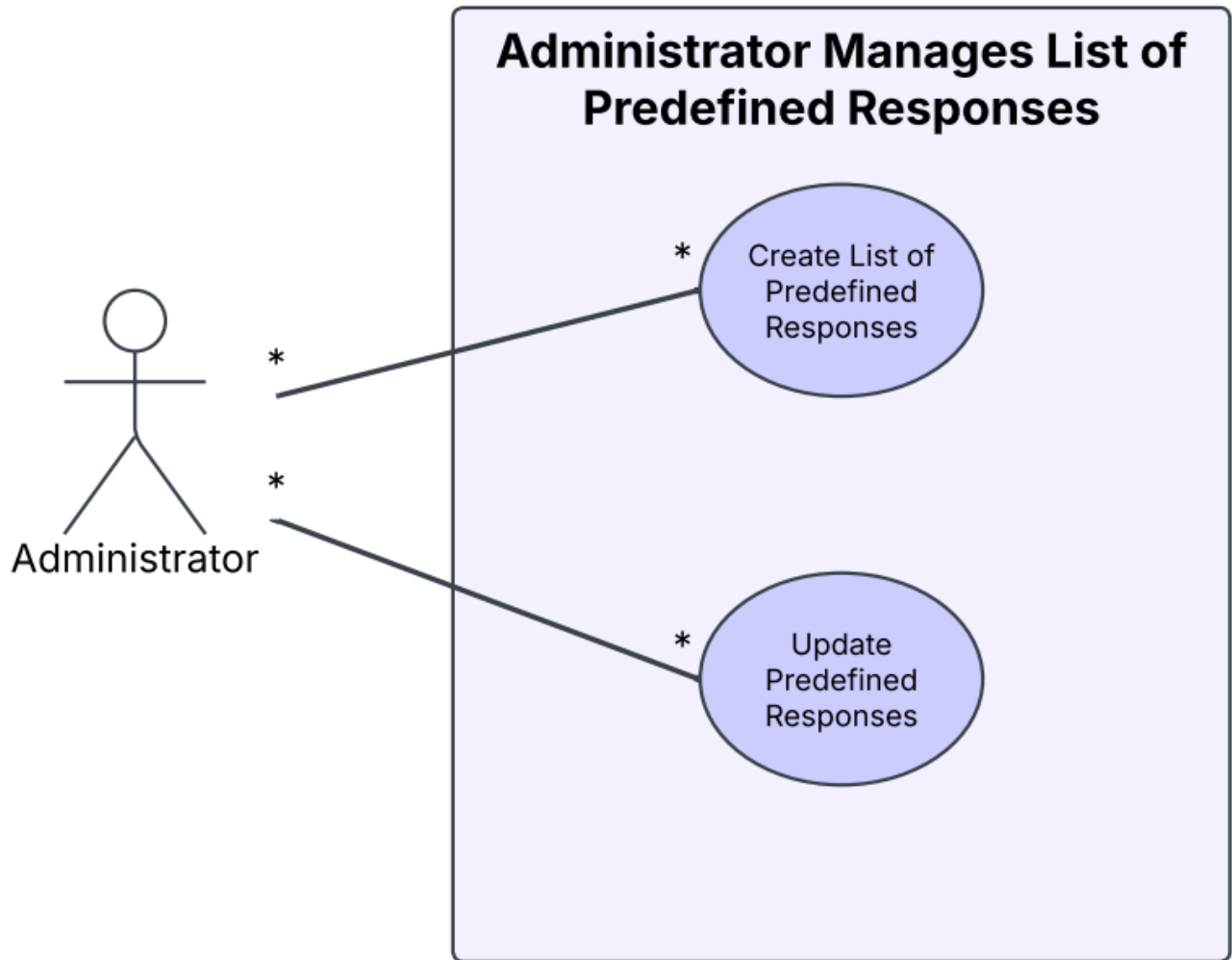
	Use Case 3: Create List of Predefined Responses	Use Case 4: Update Predefined Responses
	X	X

ID: SR004 - The Chatbot will allow administrators to manage a list of predefined responses.



## 2.3 Use Case Diagram & Narrative

### 2.3.A Use Case Diagram

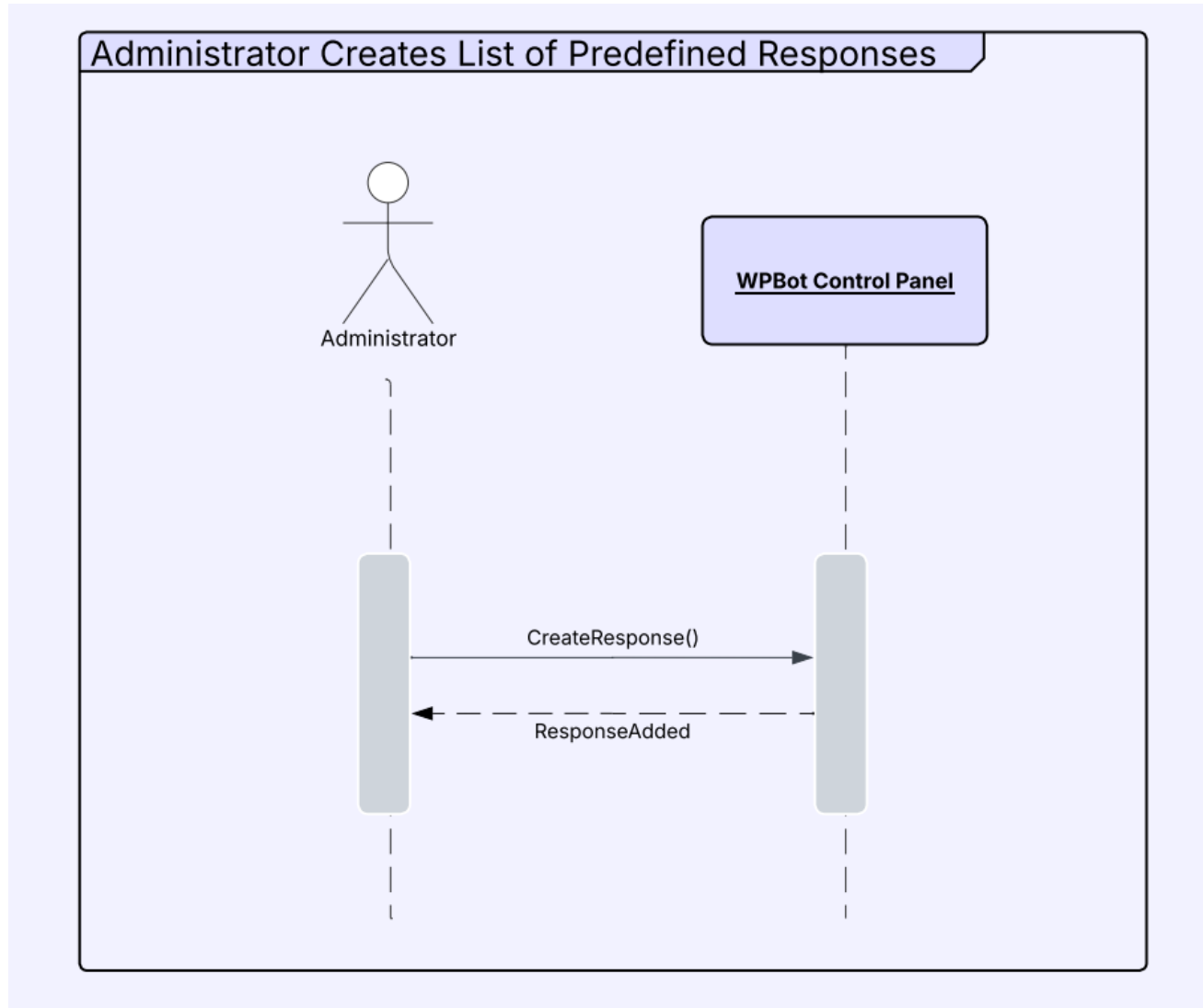


### 2.3.B Use Case Narrative

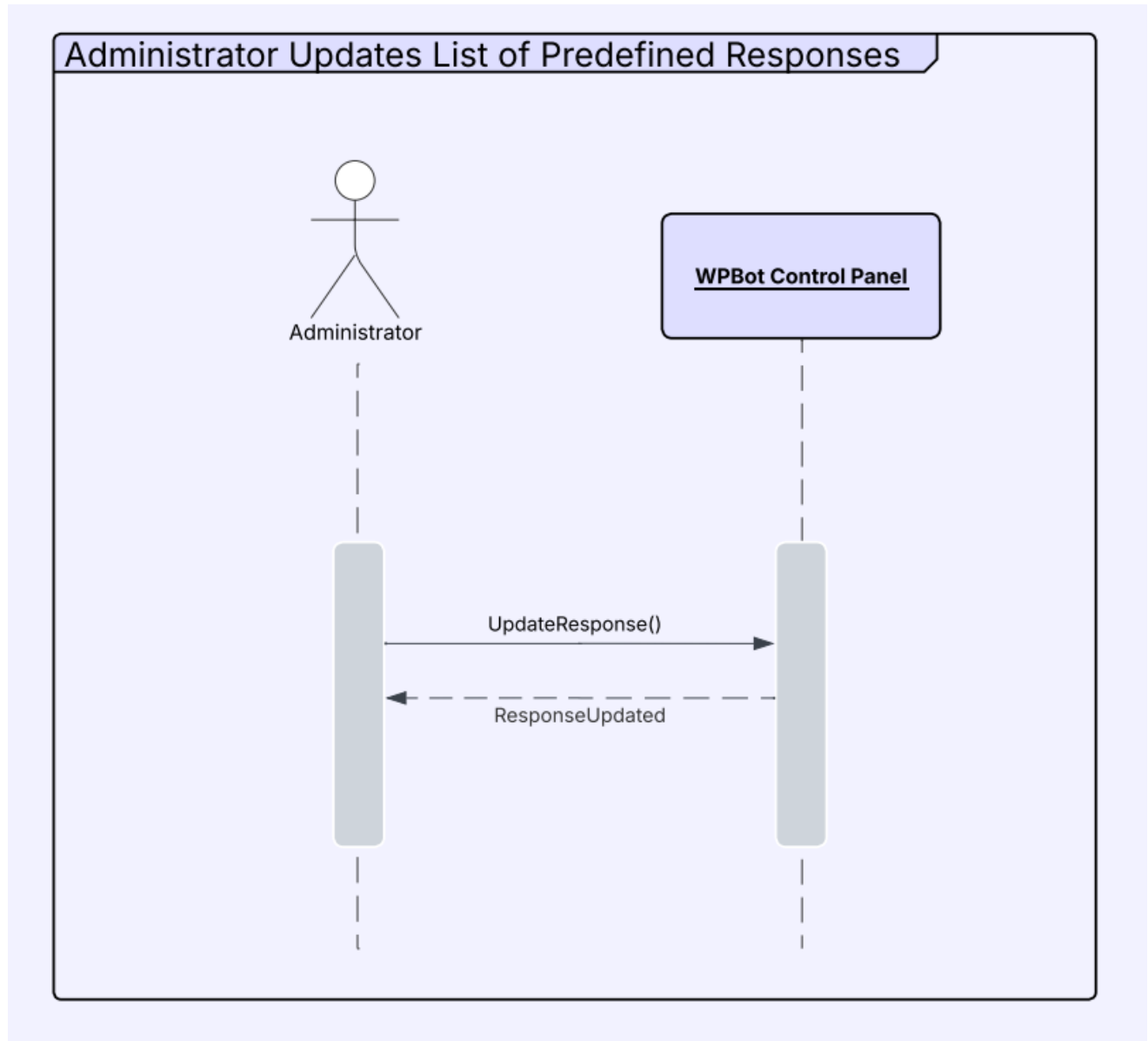
On the WPBot control panel, the administrator can either create predefined responses or update those predefined responses. The administrator can create many predefined responses, and the predefined responses can be made by many administrators. The administrator can update many predefined responses, and predefined responses can be updated by many administrators. This is with the assumption that there will be many administrators handling Pets4Life's chatbot plugin and response queries.

## 2.4 Sequence Diagram

### 2.4.A Use Case 3: Create List of Predefined Responses



#### 2.4.B Use Case 4: Update Predefined Responses



## 2.5 Prototypes

### 2.5.A. Use Case 3: Create List of Predefined Responses

here to navigate to our volunteer tab. You will find our link to sign-up there!'. The second entry has the query 'I need to schedule a vet exam for my pet.' and the answer 'Click [here](#) to navigate to the Event/Scheduling tab, where you can sign-up for your request!'. At the bottom right, there is a green button 'Add More Questions and Answers' and a blue button 'Save Settings'."/>

**WPBot Control Panel** THE LITE VERSION UPGRADE TO PRO

- GETTING STARTED
- GENERAL SETTINGS
- CHANGE LANGUAGE
- ICONS & THEMES
- PREDEFINED KNOWLEDGE BASE**
- START MENU
- DIALOGFLOW
- OPENAI SETTINGS
- CUSTOM CSS
- CONVERSATIONAL FORM

[Reset all options to Default](#)

### Build FAQ Query and Answers

FAQ query ✕

How can I volunteer?

FAQ answer

Visual Text

**B I U**

Click [here](#) to navigate to our volunteer tab. You will find our link to sign-up there!

FAQ query ✕

I need to schedule a vet exam for my pet.

FAQ answer

Visual Text

**B I U**

Click [here](#) to navigate to the Event/Scheduling tab, where you can sign-up for your request!

[Add More Questions and Answers](#)

[Save Settings](#)

FAQ Builder – Structured, dynamic, interactive FAQ system

## Edit Response

Please note the following

1. The Query, Response and Keywords fields will be searched. Add Keywords for best matches
2. Please clear browser Cache and Cookies both before testing new responses

Query

\*Required. Add the query here.

Response

+ Add Media

Paragraph

**B** *I*

[List Icons]
 

 [Quote Icon]

[Link Icon]
 

 [Image Icon]

[Table Icon]
 

**SLD**

There are many ways to help! We are in need of **volunteers** and **donations**. Please refer to the [Volunteer Tab](#) and the [Donation Tab](#) for more information!

\*Required. Add the response here.

Keyword

Optional. Add multiple keyword or phrases as comma(,) seperated value. It will help to find the best match result.

Intent

Optional. Single keyword or Phrase. Leave it empty if you do not need to use this response as a intent. This will add as a custom intent in every intent selection field in wpbot settings. Also the intent can be used as system command to trigger the response.

Save Settings

Create Simple Text Responses – Static responses to a simple query; no follow up questions supported

Chatbot Form Builder

Contact Form

Form Settings

Save Conversational Form

Layout

Email

Processors

Conditions

Variables

Revisions

Layout

Please enter your contact information for further help!

What is your first and last name?

Great! What is your email address? (\_\_\_\_@\_\_.com)

What is a good phone number to reach you at? (xxx)-xxx-xxxx

Paw-some! Almost done. Can we have your pet's species?

Lastly, can you describe the issue to us?

Sorry to hear that! Our team will get back to you as soon as we can! Thank you!

Conversational Forms Builder

## 2.5.B. Use Case 4: Update Predefined Responses

### Edit Response

Please note the following

1. The Query, Response and Keywords fields will be searched. Add Keywords for best matches
2. Please clear browser Cache and Cookies both before testing new responses

Query

\*Required. Add the query here.

Response

Add Media

VisualText

Paragraph

**B***I*

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SLD

There are many ways to help! We are in need of **volunteers** and **donations**. Please refer to the [Volunteer Tab](#) and the [Donation Tab](#) for more information!

\*Required. Add the response here.

Keyword

Optional. Add multiple keyword or phrases as comma(,) seperated value. It will help to find the best match result.

Intent

Optional. Single keyword or Phrase. Leave it empty if you do not need to use this response as a intent. This will add as a custom intent in every intent selection field in wpbot settings. Also the intent can be used as system command to trigger the response.

Save Settings

Edit Previously Made Predefined Responses

### 3. User Views Donation Options (Use Case 21)

#### 3.1 Use Case Descriptions:

##### 3.1.A. Use Case 21: View Donation Options

<b>Use Case Name:</b> View Donation Options	<b>ID:</b> 21	<b>Importance Level:</b> High
<b>Primary Actor:</b> User		<b>Use Case Type:</b> Detail, Essential
<b>Stakeholders and Interests:</b> <ul style="list-style-type: none"><li>– <b>User:</b> wants to view the various ways they can support the organization.</li><li>– <b>Administrator:</b> wants to ensure that donation options are correctly displayed.</li></ul>		
<b>Brief Description:</b> This describes how users can view the options of sponsoring a specific pet or donating through various methods.		
<b>Trigger:</b> User clicks on the Donation tab in the Navigation Bar. <b>Type:</b> External		
<b>Relationships:</b> <ul style="list-style-type: none"><li>Association: User</li><li>Include:</li><li>Extend: Use Case 22: Make a General Donation and Use Case 23: Sponsor a Specific Pet</li><li>Generalization:</li></ul>		
<b>Normal Flow of Events:</b> <ol style="list-style-type: none"><li>1. The User navigates to the Donation tab in the Navigation Bar.</li><li>2. The System displays the various ways users can give to the organization.</li></ol>		
<b>SubFlows:</b>		
<b>Alternate/Exceptional Flows:</b>  <b>2a.</b> The System fails to display the donation options.		



## 3.2 Associated System Requirements & Traceability Matrix:

### 3.2.A System Requirements

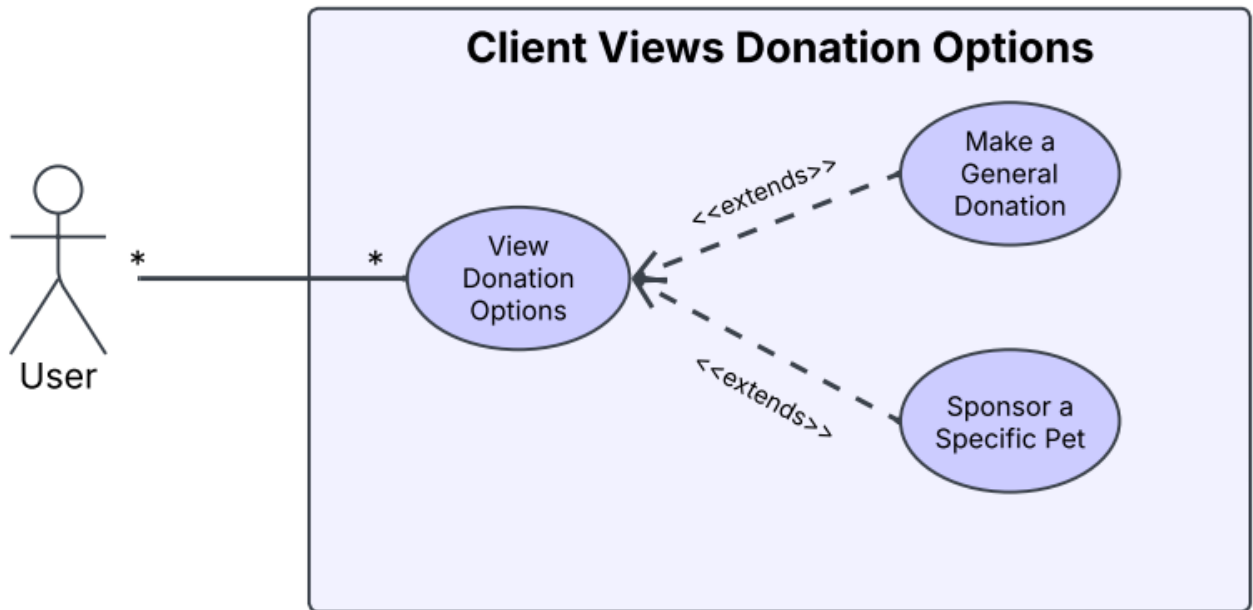
- ID: SR020 - The Sponsor a Pet system will allow users access to the options for various ways they can help through donating.

### 3.2.B Traceability Matrix

	Use Case 21: View Donation Options
ID: SR020 - The Sponsor a Pet system will allow users access to the options for various ways they can help through donating.	X

### 3.3 Use Case Diagram & Narrative

#### 3.3.A Use Case Diagram

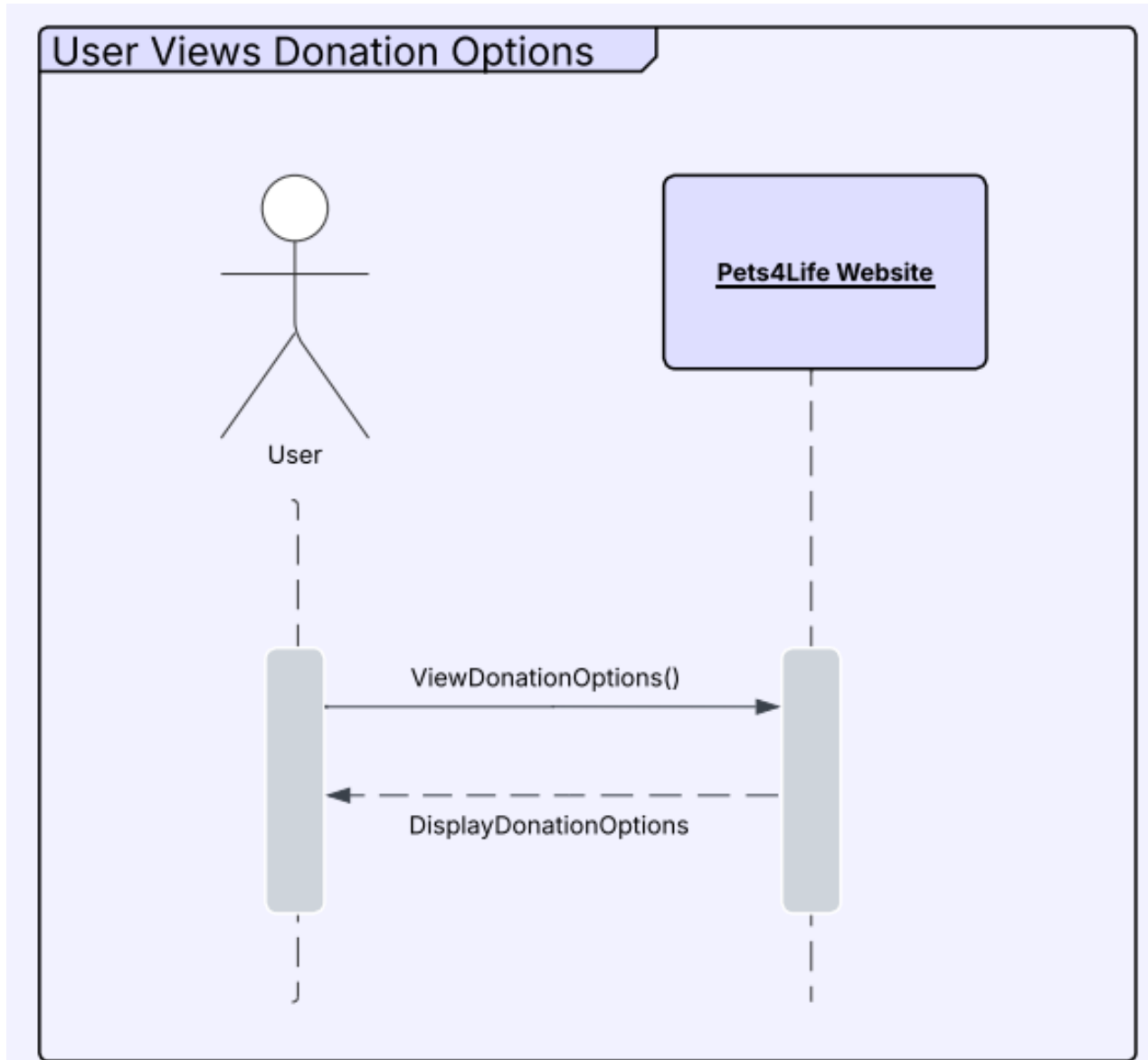


#### 3.3.B Use Case Narrative

On the donation tab, the user can view the various donation options that exist for Pets4Life, such as making a donation, whether it be through a monetary amount or items, or sponsoring a specific pet through the program Pets4Life has in place. Users can view the donation options many times within the donation tab, and donation options can be viewed by many users. The “View Donation Options” use case extends to the “Make a Donation” and “Sponsor a Specific Pet” use cases as this is an optional flow that depends on user actions, which in this case is if they proceed with making a donation or sponsoring a specific pet.

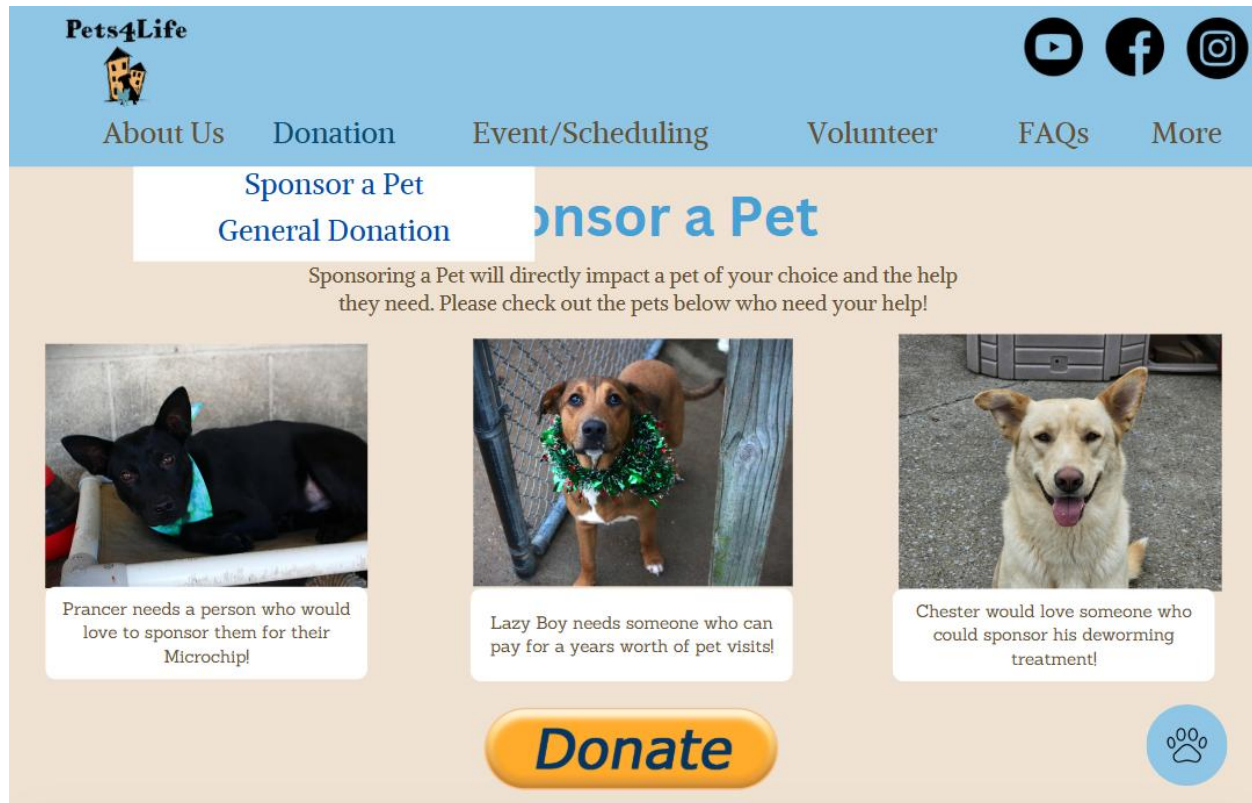
### 3.4 Sequence Diagram

#### 3.4.A Use Case 21: View Donation Options



## 3.5 Prototypes

### 3.5.A Use Case 21: View Donation Options





## Sponsor a Pet

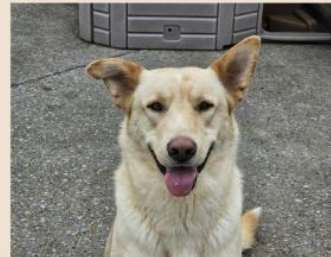
Sponsoring a Pet will directly impact a pet of your choice and the help they need. Please check out the pets below who need your help!



Prancer needs a person who would love to sponsor them for their Microchip!



Lazy Boy needs someone who can pay for a years worth of pet visits!



Chester would love someone who could sponsor his deworming treatment!

**Donate**



## Sponsor Success Stories

At Pets4Life Louisville, we provide wellness care to over 400 pets each year. This could not be possible without the help of our generous vets, vet techs, volunteers, and donors. See how donors have been able to impact pet lives!



Connie H. sponsored a full year's vaccinations, vet exams, microchip, and nail trim for Eve.



Cindy R. sponsored a full year's vaccinations, vet exam, microchip, and nail trim for Princess Bella.



Joanne B. sponsored a vet follow-up visit and medications for this sweetie Jake.





## Donations

Donations are the way we operate our business! Just 1 donation can buy pet food, supplies, and treats for those dogs who are in need. These donations can also pay for veterinarian visits, microchipping, and much more! Any donation helps!

**Donate**



With our \$25 Sponsor a Pet program, we were able to help this puppy with his deworming and microchip!



**\$10 donation:** Provides a microchip to reunite a lost pet with owner

**\$25 donation:** Provides a wellness exam for a cat or dog

**\$50-\$85 donation:** Provides a spay/neuter to reduce unwanted births

**\$500 donation:** Sponsor a spay/neuter clinic for 8-10 pets

**\$750 donation:** Sponsor a wellness clinic for up to 50 pets



With our \$25 Sponsor a Pet program, we were able to help Little Man get vet exams, vaccinated, microchipped, and trimmed for a whole year!







## More Ways to Donate

### Wishlist

We are always in need of supplies for our wellness clinics. This includes both administrative supplies, as well as pet and medical supplies.

If you would like to donate supplies:

- Bring them to one of our clinics
- Mail to 291 N. Hubbards Ln. Suite 176, Box 105, Louisville, KY 40207
- Email AWClouisville@gmail.com for delivery arrangements



### Wishlist Items

- **Amazon Wishlist Link**
- **Gift Cards:** Amazon, Walmart, Target, Feeder Supply
- **Restaurant Gift Cards** (to give to vets/techs as a thank you)
- **Slip leads, leashes, and collars**
- **Flea Medicines:** medium size dogs and all cat sizes
- **Dog Harnesses:** all different sizes
- **Paper:** 8.5 x 11 ink jet paper
- **Ink Cartridges:** 62 Black, 62 Tri-color, and 902 Black
- **Anti-bacterial Wipes:** Clorox preferred
- **Hand sanitizer**
- **Paper towels**





## More Ways to Help

### Kroger

Register your Kroger card! Kroger will give Pets4Life a percentage of your purchases. Registration is one-time only at [this link](#). **Choose Pets4Life Louisville** as your charity!

### Igive

Go to [www.igive.com](http://www.igive.com) and **select Pets4Life Louisville**. Start online shopping through their site or their FREE app. Shop at hundreds of stores including Chewy, Macy's, Target, Walmart, Academy Sports, and Oriental Trading Company!

### Amazon Smile

Start ALL Amazon shopping at [www.smile.amazon.com](http://www.smile.amazon.com). **Choose Spay Neuter Coalition of Louisville** as your charity. Amazon will donate directly to Pets4Life Louisville!

### Facebook

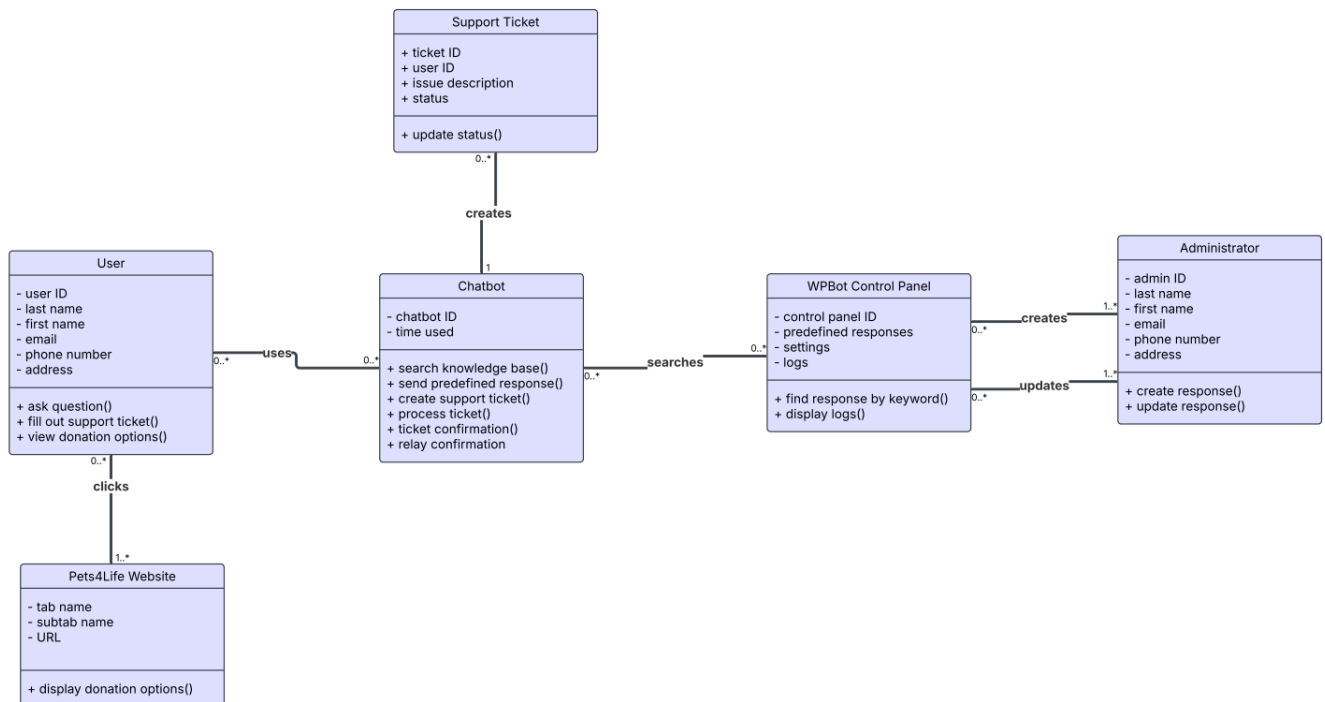
'Like' and 'Follow' us on the [Pets4Life Louisville](#) Facebook page!





## 4. Class Diagram & Narrative

### 4.1 Class Diagram



### 4.2 Class Diagram Narrative

Each user can use the chatbot zero or many times, and the chatbot can be used by users zero or many times. The chatbot can create zero or many support tickets, and support tickets can be created by one and only one chatbot, as there is only one chatbot in this environment. The chatbot can search the predefined knowledge base in the WPBot control panel zero or many times, and the predefined knowledge base in the WPBot control panel can be searched by the chatbot zero or many times. The minimum multiplicity of zero would be the case where no users use the chatbot at all. Each administrator is then able to create a response in the predefined knowledge base in the WPBot control panel zero or many times. This is with the assumption that not all administrators on the Pets4Life team will be managing the chatbot's knowledge base. However, the predefined knowledge base in the WPBot control panel must be created by at least one or many administrators. The minimum multiplicity is one due to at least one administrator needing to manage the predefined knowledge base in the WPBot control panel in order for it to function. Similarly, an administrator can update the predefined knowledge base in the WPBot

control panel zero or many times, and the predefined knowledge base in the WPBot control panel must be updated by at least one or many administrators. It must be updated by at least one administrator to ensure that all information is relevant and accurate, but not all administrators must update the knowledge base. For instance, given that new information is given about the PetSmart grant as time goes on, the chatbot's predefined knowledge base must reflect that. Lastly, each user can navigate the Pets4Life website at least once or many times, and the Pets4Life website can be navigated by users zero or many times. In this case, users must be anyone who has navigated to the Pets4Life website at least once to be considered a user. The Pets4Life website then has an aggregate relationship with the donation tab, as the donation tab is a part of the Pets4Life website, but not fully independent.