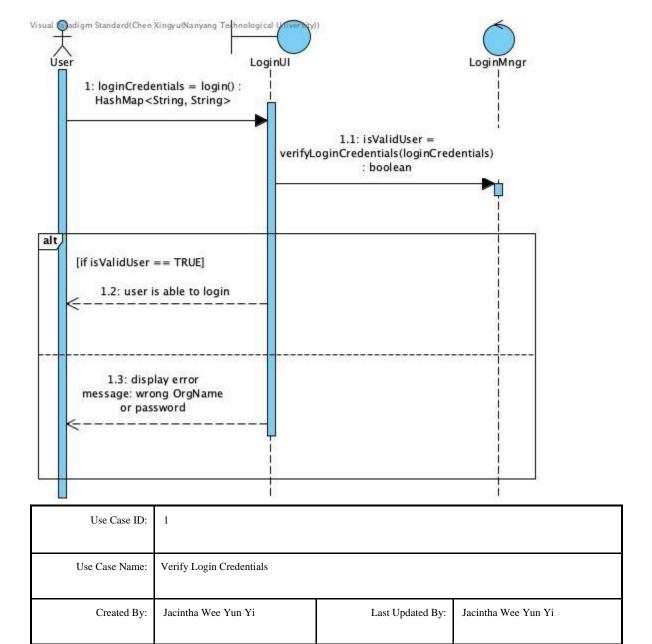
Use Case Diagram(s) + Descriptions

Date Created:

05/02/2022

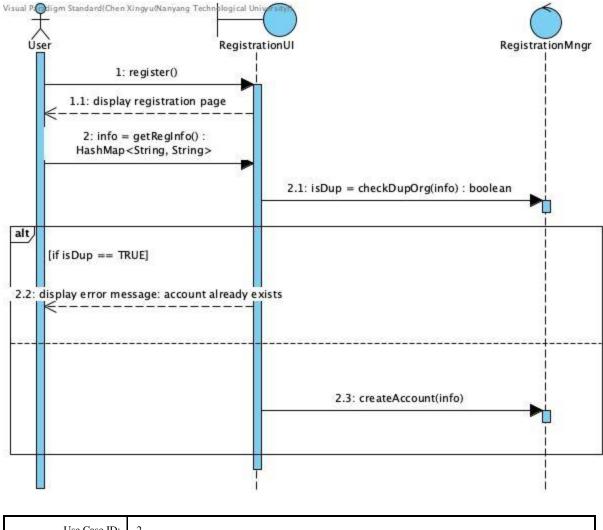


Actor:	Application, User(volunteer)
Description:	Verification of user's (volunteer) account through username and password.

28/02/2022

Date Last Updated:

Preconditions:	 User(volunteer) has an existing and verified account with the Stray Finder app and the account is stored within the database. An active and stable internet connection is required to access the app. Stray Finder database hosted on the cloud must be online.
Postconditions:	 User(volunteer) is able to view the noticeboard of injured stray cats. User(volunteer) is able to view the cat map. User(volunteer) is able to view all nearest vets with respect to the user's location.
Priority:	High
Frequency of Use:	Every time the user(volunteer) wants to access the app.
Flow of Events:	 User(volunteer) launches the Stray Finder app downloaded on their mobile phone. The app prompts the user(volunteer) for the organization name and password. The login credentials of the user(volunteer) is verified by the application. If the login credentials are valid, login is successful and the user(volunteer) is able to access functionalities as listed in the postconditions.
Alternative Flows:	AF-S1: The login credentials of the user(volunteer) is invalid 1. App will display an error message that login was unsuccessful. 2. App prompts user(volunteer) for password again, returning to step 2 of flow of events.
Exceptions:	EX1: Multiple consecutive unsuccessful attempts to login to a verified and registered user(volunteer) account 1. User(volunteer) consecutively inputs incorrect password three times in a row. 2. Application proceeds to Use Case 4 Forgot Password.
Includes:	Forgot Password (Use Case 4)
Special Requirements:	-
Assumptions:	User is a volunteer.
Notes and Issues:	-



Use Case ID:	2		
Use Case Name:	Account Registration		
Created By:	Hrishikesh Harish Pai	Last Updated By:	Jacintha Wee Yun Yi
Date Created:	05/02/2022	Date Last Updated:	28/02/2022

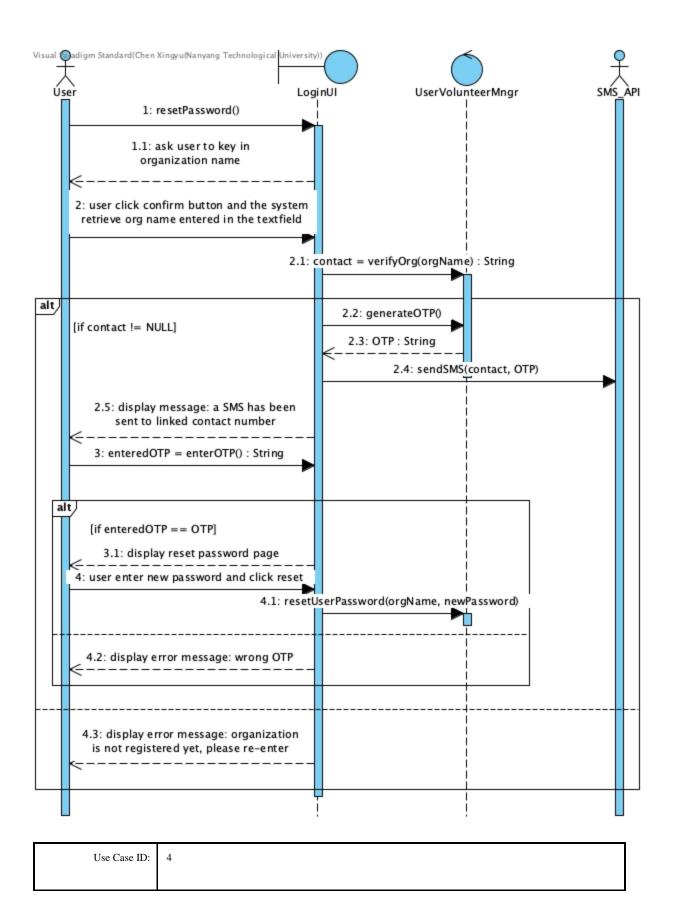
Actor:	User(volunteer), Database
Description:	Registration of a user(volunteer) with verifiable information e.g. organization name, phone number in order to access the volunteer pages within the mobile application.

Preconditions:	 User(volunteer) account does not already exist within the database. Active internet connection is required. User(volunteer) must have initiated the process by having pressed the 'Create Account' button present within the "Use Case 1:Verify Login Credentials" page if the user does not already have an existing account for the StrayFinder application.
Postconditions:	 User(volunteer) will now possess a verified StrayFinder account which has been stored within the application database. The user(volunteer) will no longer be required to create a new account in order for them to use the application, but will only need to login to their existing account.
Priority:	High
Frequency of Use:	Once, for each unique volunteer organization.
Flow of Events:	 User(volunteer) opens the mobile application after having downloaded it for the first time. The user(volunteer) will be brought to the login page as per "Use Case 1:Verify Login Credentials". User(volunteer) then clicks on the "Register" button to begin the process of creating an account. User(volunteer) will be redirected to the account registration page. The user(volunteer) will be prompted to fill in their particulars, chiefly "Organization Name", "Password", "Phone Number" and "Physical Address". A verification message will be sent via email to the user(volunteer). If verification is successful, the user(volunteer) will be granted permission to access the volunteer features of the application.
Alternative Flows:	AF-S2: Account already exists 1. App will display an error message notifying the user(volunteer) that an account using the organization's name has already been registered.
Exceptions:	-
Includes:	Validation of Account Availability (Use Case 3)
Special Requirements:	-
Assumptions:	Account registration is done by a verified volunteer organization.
Notes and Issues:	-

Use Case ID:	3		
Use Case Name:	Validation of account availability		
Created By:	Hu Zhuangyu	Last Updated By:	Jacintha Wee Yun Yi

Date Created:	05/02/2022	Date Last Updated:	06/02/2022

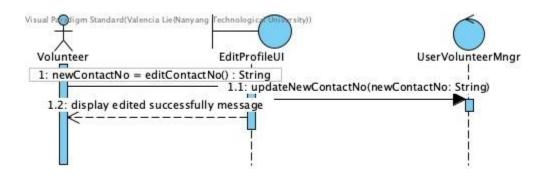
Actor:	Application
Description:	Application to validate availability of the account to be registered, send verification code to the email address and create the user (volunteer) account.
Preconditions:	The user (volunteer) account to be registered must not already exist in the database. Mobile must be connected to the Internet (eg. WiFi).
Postconditions:	 The user (volunteer) account is created successfully and is saved in the database. The user (volunteer) is able to login with the registered account.
Priority:	Medium
Frequency of Use:	High
Flow of Events:	Application will check that the user (volunteer) account to be registered does not exist in the database. Application will create the user (volunteer) account in the database.
Alternative Flows:	AF-S2: Application detects the user (volunteer) account to be registered has already existed in the database. 1. Application will show the error message: "Sorry, this account has already existed! ". 2. User (volunteer) needs to enter another username. 3. User (volunteer) taps the "Submit" button to re-attempt the registration. 4. Return to Step 1 of Flow of Events.
Exceptions:	-
Includes:	Validation of account availability (Use Case 3)
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-



Use Case Name:	Forgot Password		
Created By:	Jacintha Wee Yun Yi	Last Updated By:	Jacintha Wee Yun Yi
Date Created:	05/02/2022	Date Last Updated:	28/02/2022

Actor:	Application
Description:	After multiple and consecutive unsuccessful login attempts, the app will prompt the user(volunteer) to reset password for security purposes.
Preconditions:	Execution after Use Case 1 Verify Login Credentials if the exception case of three consecutive unsuccessful login attempts have been performed.
Postconditions:	User(volunteer) reset password for account.
Priority:	High. Prevents unauthorized access to a user(volunteer) account.
Frequency of Use:	Low
Flow of Events:	 A warning message is displayed to the user(volunteer), indicating that the user has to reset password. App will prompt the user(volunteer) to enter the organization name. After retrieving the contact number of the verified organization, the app will generate an OTP to be sent to the organization's registered contact number. A message is displayed to the user(volunteer), indicating that an OTP has been sent to the contact number of the organization and the user(volunteer) has to enter the OTP into the text field on the screen in order to proceed. Once the user(volunteer) has entered the OTP, the app will verify if it is the correct OTP. If the correct OTP was entered, the app will show the reset password page to the user(volunteer). Once the user(volunteer) has entered the new password and clicks submit, the new password will be stored with the corresponding organization name in the database.
Alternative Flows:	AF-S3: Wrong OTP entered 1. User(volunteer) enters the wrong OTP when prompted by the app. 2. App will display an error message indicating that the OTP is invalid. AF-S4: Organization name entered is unverifiable 1. App is unable to verify the organization name that was submitted by the user(volunteer) to reset password. 2. App will display an error message indicating that the organization does not have a registered account yet.
Exceptions:	-
Includes:	-

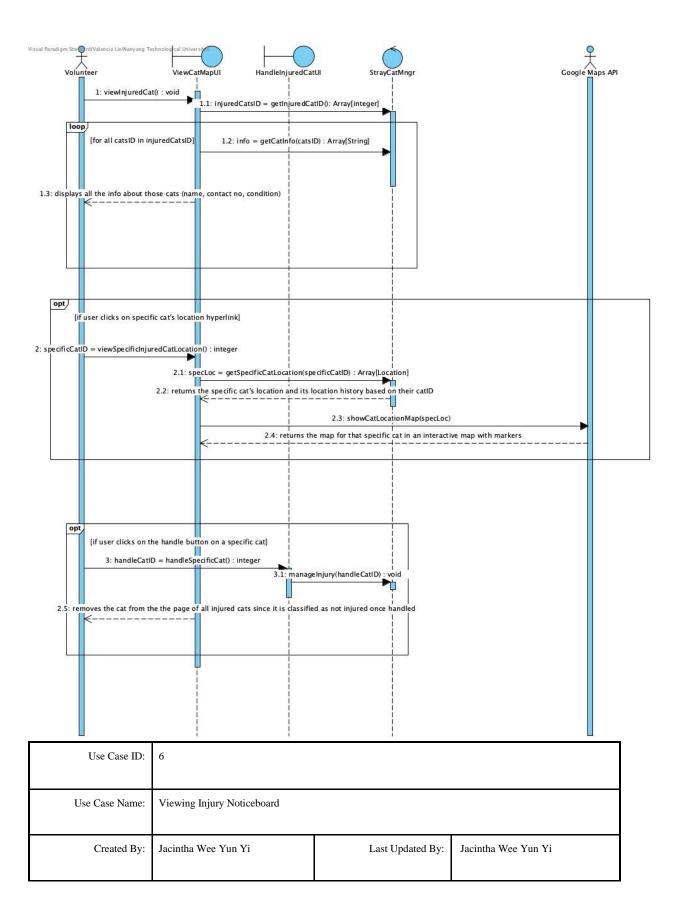
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-



Use Case ID:	5		
Use Case Name:	Edit User(volunteer) Profile Settings		
Created By:	Jacintha Wee Yun Yi	Last Updated By:	Jacintha Wee Yun Yi
Date Created:	05/02/2022	Date Last Updated:	28/02/2022

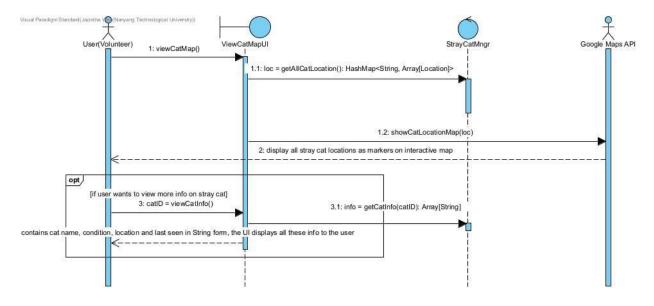
Actor:	User(volunteer), Database
Description:	User(volunteer) will be allowed to edit the address and/or contact number for the volunteer organization's account.
Preconditions:	 User(volunteer) account exists and is registered in the database (Use Case 3 Account Registration). An active and stable internet connection is required to access the app.

	User(volunteer) has successfully logged into the app.
Postconditions:	User(volunteer) account profile is updated and the new changes will be seen on subsequent logins.
Priority:	Low
Frequency of Use:	Low
Flow of Events:	 User(volunteer) clicks on the profile icon at the top right hand corner of the screen. User(volunteer) can choose to edit either the "Phone Number" or "Physical Address" data fields. User(volunteer) clicks on the "Save" button at the top right hand corner of the screen and the account profile is updated.
Alternative Flows:	AF-S5: User(volunteer) decides not to edit profile 1. User(volunteer) clicks on the back arrow button at the top left hand corner of the screen and any unsaved edits will be discarded.
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-



Date Created:	05/02/2022	Date Last Updated:	28/02/2022

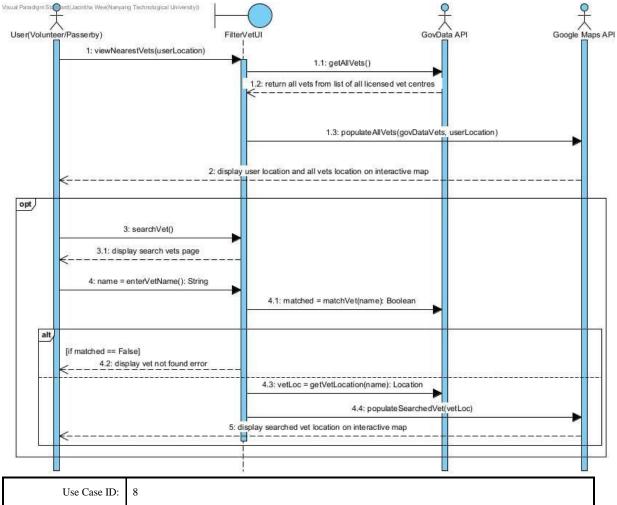
Actor:	User(volunteer), Database, Google Maps API
Description:	User(volunteer) can view the noticeboard feature which lists the injured stray cats which have been reported by other users(passerby).
Preconditions:	 Feature is made available after the user(volunteer) has logged in successfully (Use Case 1 Verify Login Credentials). There are reports made by users(passerby) on injured stray cats which were found, so that users(volunteer) can view and address the case. An active and stable internet connection is available to all users so that reports made by users(passerby) can be updated and seen by users(volunteer).
Postconditions:	 If the user(volunteer) chooses to handle an injured stray cat, the information of the injured stray cat being handled by the user(volunteer) is removed from the list. The notification sent to users(volunteer) on the injured stray cat also disappears.
Priority:	High
Frequency of Use:	High
Flow of Events:	 User(volunteer) clicks on the "Injury Noticeboard" button at the bottom of the screen. The app displays a list of all injured stray cats which have been reported by other users(passerby) and these injured stray cats have not been attended to yet. Information on the injured stray cats are provided such as "Name", "Condition", "Location", "Contact of passerby"(if applicable) and a photo of the cat. User(volunteer) can contact the user(passerby) who reported the injured stray cat, especially if the user(passerby) chooses to send the injured stray cat to the nearest vet clinic. User(volunteer) can check on the location of the injured stray cat on the map (Use Case 8 Viewing Cat Map). User(volunteer) can click on the "handle" button to confirm that he/she will be handling the case of the corresponding injured stray cat.
Alternative Flows:	 AF-S6: User(volunteer) wants to track the location of the injured stray cat User(volunteer) clicks on the location hyperlink of the corresponding injured stray cat he/she wants to check on. App retrieves the location history of the injured stray cat and its last seen location is displayed on the interactive map as a marker. AF-S7: User(volunteer) wants to handle the case of the injured stray cat User(volunteer) clicks on the "handle" button. The condition of the injured stray cat is changed to uninjured and its case is removed from the Injury Noticeboard. The notification to all other users(volunteer) on this particular injured stray cat will also be removed.
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-



Use Case ID:	7		
Use Case Name:	Viewing Cat Map		
Created By:	Hrishikesh Harish Pai	Last Updated By:	Jacintha Wee Yun Yi
Date Created:	05/02/2022	Date Last Updated:	28/02/2022

Actor:	User(volunteer), Google Maps API
Description	Users(volunteer) will be shown a map of Singapore on which the last seen locations of stray cats will be displayed on the map using drop pins.
Preconditions:	 Feature will be made available as a button on the bottom navigation bar upon successful login in "Use Case 1: Verify Login Details" An active and stable internet connection is required. Invocation of "Use Case 6: Viewing Injury Noticeboard" if the user(volunteer) decides to click the "handle" button. User(volunteer) must have granted current location access for the application on their device.
Postconditions:	User(volunteer) is able to identify the last seen locations of stray cats, and is able to distinguish between injured and uninjured cats.
Priority:	High
Frequency of Use:	High

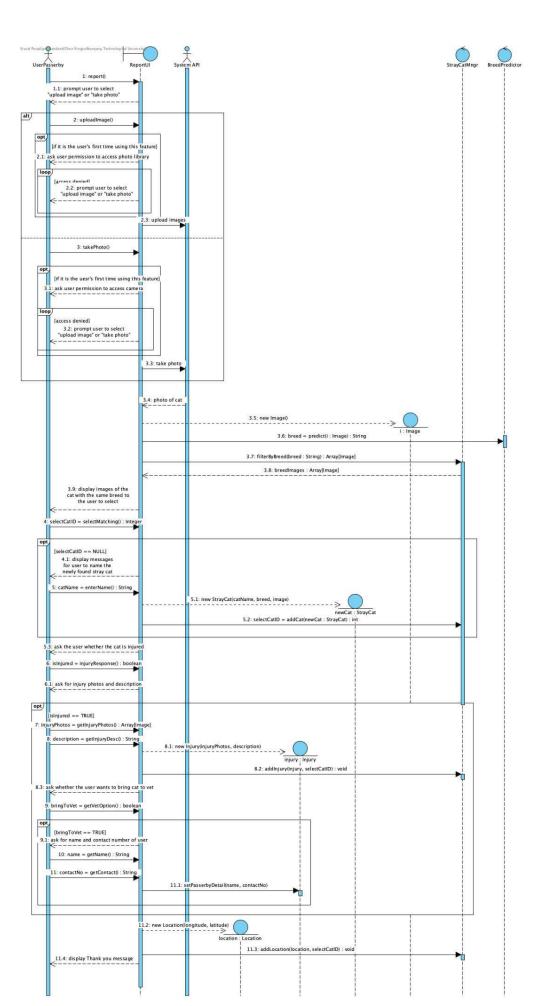
Flow of Events:	 User(volunteer) clicks on the "Cat Map" button on the bottom navigation bar. The application will display the map zoomed in to within a 2km radius of the user(volunteer). The map will display the last seen locations of all stray cats within a 2km radius of the user(volunteer), represented by drop pins. The stray cats will be categorized by injured/uninjured, with red and gray pins respectively, with this distinction being displayed in an information box labeled 'Legend'.
Alternative Flows:	 AF-S8: User(volunteer) wants to view more information on the stray cat Upon tapping on a gray pin (uninjured stray cat), a picture of the cat as well as information on that particular cat such as "Name", "Condition", "Location of Cat" will be displayed in an information box on the screen. The "Condition" data field will be filled in as "Uninjured". Upon tapping on a red pin (injured stray cat), a picture of the cat as well as information on that particular cat such as "Name", "Condition" and "Location of Cat" will be displayed in an information box on the screen. The "Condition" data field will be filled in as "Injured".
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-



Use Case ID:	8		
Use Case Name:	Viewing of Nearest Vet Clinics		
Created By:	Hu Zhuangyu	Last Updated By:	Jacintha Wee Yun Yi
Date Created:	05/02/2022	Date Last Updated:	28/02/2022
Date Created.	GUI EGEE	Date Last Optiated.	- E01 0 E1 E 0 E 0 E 0 E 0 E 0 E 0 E 0 E

Actor:	User (volunteer, passerby), Google Map API, Gov Data API
Description:	User (volunteer) can view the 5 nearest vet clinics nearby.
Preconditions:	 Feature is made available after the user (volunteer) has logged in successfully (Use Case 1 Verify Login Credentials). Mobile must be connected to the Internet. Mobile must grant the application access to the current location.

Postconditions:	-
Priority:	Medium
Frequency of Use:	Medium
Flow of Events:	 User (volunteer) clicks on the "vets" button at the bottom of the screen. Top 5 nearest vet clinics from list of licensed vet centers from Gov Data API will be displayed on a map with their ranking by distance.
Alternative Flows:	AF-S9: If user (volunteer) wants to search for a vet clinic manually: 1. On the page showing the top 5 nearest vet clinics, user (volunteer) clicks on the "search" button at the top left corner of the screen. 2. User (volunteer) enters the name of the vet clinic to be searched for. 3. The vet clinic being found will be shown on the map. If no vet clinic is found, an error message will be displayed: "Sorry, no result found!"
Exceptions:	
Includes:	-
Special Requirements:	
Assumptions:	-
Notes and Issues:	-



Use Case ID:	9		
Use Case Name:	Report Stray Cat Found		
Created By:	Jacintha Wee Yun Yi	Last Updated By:	Jacintha Wee Yun Yi
Date Created:	05/02/2022	Date Last Updated:	05/02/2022

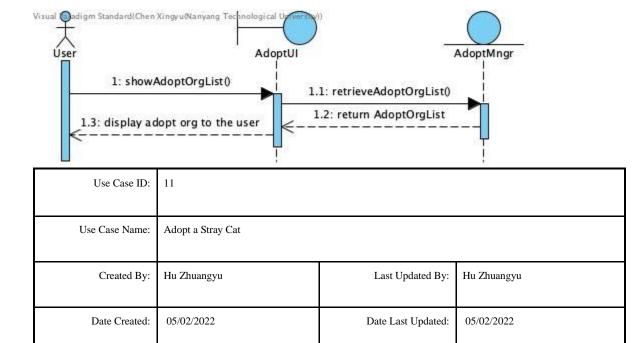
Actor:	User(passerby), Database
Description:	When a user(passerby) comes across a stray cat, he/she may choose to upload a photo of it and check if its identity has been established in the database.
Preconditions:	Feature is made available after the user(passerby) clicks on the "I am a passerby" button on the main landing page of the app. User(passerby) grants the app access to the mobile phone's camera and photo library. An active and stable internet connection is required to access the app.
Postconditions:	A new entry for the reported stray cat will be created in the database if the reported stray cat does not exist in the database prior to reporting.
Priority:	High
Frequency of Use:	High
Flow of Events:	 User(passerby) clicks on the "Report" button on the bottom left hand corner of the screen. User(passerby) is shown two buttons, "Take a photo" and "Upload a photo" which represents the two modes that the user(passerby) can upload their photo of the stray cat in the app. Clicking on the former button opens the user's(passerby) camera while clicking on the latter button opens the user's(passerby) photo library. If it is the user's(passerby) first time using this feature, he/she will be prompted by the app to allow access to his/her phone camera or photo library. Subsequently, as his/her preferences are saved by the app, he/she will not be prompted again. After the photo of the stray cat has been processed, a collection of photos of stray cats existing within the database is displayed to the user(passerby). These stray cats have a similar breed to the cat which was reported and are matched by a pre-trained machine learning algorithm within the app. User(passerby) can select one of the cat photos displayed if he/she thinks that is the cat he/she is currently reporting on. Once selected, a tick icon will appear on the selected photo to indicate selection. Clicking on the "continue" button on the bottom right of the screen will lead to step 7. If the user(passerby) is unable to identify any of the cats displayed as the cat he/she is reporting on, he/she does not need to select any of the cat photos and proceed to click on "continue". He/she will be led to a page to name the cat he/she found according to guidelines for appropriate names. Selecting "confirm" will save and create a new entry of the newly reported stray cat into the database. The user(passerby) is prompted to confirm if the stray cat is injured.

Alternative Flows:	AF-S10: The reported stray cat is injured 1. Proceed to Use Case 10 Report Injured Stray Cat Found. AF-S11: The reported stray cat is not injured 1. A thank you message is displayed (Use Case 12 Confirmatory Page After Responding)
Exceptions:	EX2: User(passerby) does not adhere to naming guidelines 1. User(passerby) is shown a message reminding of the naming guidelines to adhere to. 2. User(passerby) has to input another name which adheres to the naming guidelines.
Includes:	 Report Injured Stray Cat Found (Use Case 10) Confirmatory Page After Responding (Use Case 12)
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	10		
Use Case Name:	Report Injured Stray Cat Found		
Created By:	Hrishikesh Harish Pai	Last Updated By:	Hrishikesh Harish Pai
Date Created:	05/02/2022	Date Last Updated:	05/02/2022

Actor:	User(Passerby), Database
Description:	When the stray cat that a user(passerby) has come across is injured, this information will be updated in the database and user(passerby) will be prompted on their decision to take the cat to a nearby vet themselves.
Preconditions:	Feature is invoked as an included case from Use Case 9: Report Stray Cat Found
Postconditions:	Information pertaining to the cat's injuries will be updated within the application database and will assign the condition of the cat as "Injured"
Priority:	High
Frequency of Use:	Medium
Flow of Events:	 The user(passerby) is prompted to confirm if the cat is injured, and two options a green circle with a tick indicating yes, and a red circle indicating no - will be displayed. The user(passerby) clicks the green circle, redirecting them to a page prompting them to take a picture of the injury as well as a text box requesting for further information to describe the injury.
Alternative Flows:	AF- S12: User(passerby) DOES NOT take the cat to a nearby vet themselves. 1. User(passerby) is directed to Use Case 12 (Confirmatory Page After Responding). AF- S13: User(passerby) DOES take the cat to a nearby vet themselves. 1. User(passerby) is directed to Use Case 13 (Request for Particulars of Passerby).
Exceptions:	EX3: User(passerby) does not include picture and/or description of injury 1. User(passerby) will be prompted to take a picture of the injury and enter a brief description before being allowed to continue.

Includes:	Report Stray Cat Found (Use Case 9)
Special Requirements:	-
Assumptions:	The stray cat found is in fact injured.
Notes and Issues:	-



Actor:	User (passerby), Database
Description:	User (passerby) can view the list of adoption centers if he or she wants to adopt a cat.
Preconditions:	 Feature is made available after the user (passerby) clicks on the "I am a passerby" button on the main landing page of the app. Mobile must be connected to the Internet.
Postconditions:	-
Priority:	Low

Frequency of Use:	Low
Flow of Events:	 User (passerby) clicks on the "Adopt" button at the bottom of the screen. The list of adoption centers will be displayed with information about address, email and telephone number.
Alternative Flows:	-
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	12		
Use Case Name:	Confirmatory Page After Respondin	g	
Created By:	Hrishikesh Harish Pai	Last Updated By:	Jacintha Wee Yun Yi
Date Created:	05/02/2022	Date Last Updated:	05/02/2022

Actor:	User(Passerby)
Description:	User is displayed a confirmatory message thanking them for locating a stray cat
Preconditions:	Feature is invoked as an alternate case from Use Case 10: Report Stray Cat Found and Use Case 11: Report Injured Stray Cat Found
Postconditions:	-
Priority:	Medium
Frequency of Use:	High
Flow of Events:	User has entered the relevant details about the stray cat and has chosen not to take it to a nearby vet themselves. A message thanking the user for having found that particular stray cat will be displayed in an information box. OR User(passerby) found a stray cat which may or may not exist in the database and the stray cat is not injured. A message thanking the user for having found that particular stray cat will be displayed in an information box.
Alternative Flows:	-
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	13		
Use Case Name:	Request for Particulars of Passerby		
Created By:	Hrishikesh Harish Pai	Last Updated By:	Jacintha Wee Yun Yi
Date Created:	05/02/2022	Date Last Updated:	05/02/2022

Actor:	User(Passerby), Database
Description:	User(Passerby) is prompted to enter their particulars in the event that they take an injured stray cat to the vet so as to allow a user(volunteer) to follow up on the stray cat.
Preconditions:	This feature is invoked as an alternative case from Use Case 11: Report Injured Stray Cat Found.
Postconditions:	Information submitted by user(passerby) will be uploaded onto the database for the user(volunteer) to retrieve and follow up upon.
Priority:	High
Frequency of Use:	Medium
Flow of Events:	 User(passerby) is prompted to input his/her name and contact number so that the user(volunteer) taking over the case of the injured stray cat can contact the user(passerby) for more information on the injured stray cat and which vet clinic the injured stray cat is being taken to. After inputting name and contact number, user(passerby) clicks on the "Confirm" button to save the information to the database. A thank you message is displayed to the user(passerby).
Alternative Flows:	AF-S10: The user(passerby) decides not to take the injured cat to the vet 1. User(passerby) clicks on the back arrow and any information input into the data fields for "Name" and "Contact number" will not be saved.
Exceptions:	EX4: User(passerby) does not enter a valid contact number 1. User(passerby) will be prompted to input a valid contact number and has to submit his/her information again.
Includes:	-
Special Requirements:	-
Assumptions:	-

Notes and Issues:	-