CEBU INSTITUTE OF TECHNOLOGY UNIVERSITY

COLLEGE OF COMPUTER STUDIES

Software Design Description

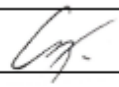
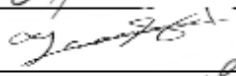
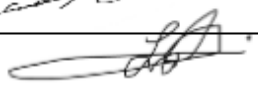
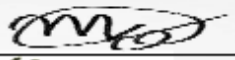
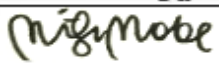
for

Lucky Paws

(A Pet Adoption Application)

Signature

Table 1: Signature

Name	Role	Signature
Amadeo, Carl Marlo M.	Project Manager / Senior Programmer	
Camandona, Tristan Ace M.	Quality and Assurance Tester	
Dela Cerna, Lyndon Kirk R.	Process Manager	
Flores, Michael B.	Risk Manager / Assistant	
Mobe, Mita S.	Documentation / Assistant	

Change History

Table 2: Change History

Revision No.	***Revised by***	***Revision***	***Date***
1	*The Team*	*Creating the SDD*	*July 20, 2022*
2	*Carl Marlo M. Amadeo*	*Arguments in Module Detailed Design and add entity in Entity-Relationship Diagram*	*July 21, 2022*
3	*Carl Marlo M. Amadeo*	*Modified Module Decomposition, Class Diagram, Sequence Diagram, Process Interface, User Interface Design and Data Detailed Design*	*August 3, 2022*

Preface

The proposed plan for completing the Lucky Paws project is laid out in detail in the preceding Software Design Document (SDD). In order to properly document software designs, a comprehensive, reasonable, and adaptable template has been created. This paper provides guidelines about what should be in as many sections and subsections as possible.

Please be advised that this paper does not contain parts that outline administrative or corporate duties or that suggest strategies or timelines for testing or development. Software design is the only topic covered in the parts of this document. Although there are some areas in this document where it is appropriate to explain the impact of such plans on software design, the author suggests that the majority of the specifics pertaining to such plans will belong in one or more distinct publications.

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1. Introduction

1.1. Purpose

The purpose of this project is to plan and develop a system for overseeing pet adoptions. Animal shelters and rescue groups will be able to oversee the adoption process and monitor each pet's development. It will also provide a way to manage records and report on adoptions. Through this application, adopting a pet will be simple, useful, and efficient. Everyone can use this program, but it can only be used on desktop computers with internet access.

1.2. Scope

This program is accessible to everyone, but it can only be used on desktop computers with internet connectivity. This is convenient for those who love pets or are looking for pets that are available for adoption. Access to the internet is required. Once the installation is complete, the user can access the app. It can only be run on the Windows operating system. This app is beneficial for stray animals, people who love pets, people who want to spend time with animals, pet owners who can't meet their pets' needs, and people who just care about animals in general.

1.3. Definitions and Acronyms

TERMS	DEFINITIONS
Users	These are the individual(s) who use or otherwise directly engage with the product.
Adopter	A person who adopts a pet.
SDD	(Software Design Description) The process by which an agent creates a specification of a software artifact intended to accomplish goals, using a set of primitive components and subject to constraints.
Adopt	To take on the legal responsibilities as parent of a pet.
SRS	(Software Requirements Specifications) A document that completely describes all of the functions of a proposed system and the constraints under which it must operate.

Table 1.3.1 Definitions and Acronyms

2. References

https://artsandculture.google.com/entity/software-design/m025s6d_?hl=en
https://www.thefreedictionary.com/adopter#:~:text=adopter%20%2D%20a%20person%20who%20adopts.adoptive%20parent

3. Decomposition Description

3.1. Module Decomposition

3.1.1. Get Started Module Description

Name: Get Started

Type: Module

Description:

The get started is the loading screen of the application. It will be seen on the start up once you click and open the application.

3.1.2. Login Module Description

Name: Login

Type: Module

Description:

The user would then be prompted by the application to provide their username and password in order to continue. To continue, the user must first register for an account.

3.1.3. Create Account Module Description

Name: Create Account

Type: Module

Description:

The application would ask the user for their personal information, including profile picture, and for their log-in details, username and password.

3.1.4. Home Module Description

Name: Home

Type: Module

Description:

The application would give the user the option to either proceed to pet feed and browse pets or post a pet for adoption.

3.1.5. Look For Shelter Module Description

Name: Look For Shelter

Type: Module

Description:

The application would request all relevant information from the user as well as a picture of the animal they want to advertise for adoption.

3.1.6. Pet feed Module Description

Name: Pet Feed

Type: Module

Description:

The application will direct the user to the pet feed panel where the user can choose from a variety of pets posted by another user to be adopted.

3.1.7. Pick Me Module Description

Name: Pick Me!

Type: Module

Description:

The application will allow the user to scroll through a list of pets that other users have posted as being available for adoption.

3.1.8. Pet Successfully Adopted Module Description

Name: Pet Successfully Adopted!

Type: Module

Description:

The application will let the user or pet owner who has already secured foster care for the animal, which will allow them to remove it from the pet feed panel.

3.1.9. Profile Module Description

Name: Profile

Type: Module

Description:

The application would let the user view the information entered when creating their account.

The user might then choose to log out from within this panel.

3.1.10. Logout Module Description

Name: Logout

Type: Module

Description:

The application would let the user log out from their own account, and the login panel will be displayed.

3.2. Concurrent Process Decomposition

3.2.1. Database Process Description

Name: Database Process

Type: Microsoft SQL File

Description: The process accesses the database to perform all queries done by the application.

Function: Accepts query requests from the system

Subordinate:

- Microsoft SQL

3.2.2. Controller Process Description

Name: Controller Process

Type: Application Files and other Resources

Description: Based on user interaction, the system's behavior is regulated.

Function:

- Select Operation/s to perform
- Prepare and display interface on requested command.

Subordinate:

- Windows Form Application

3.3. Data Decomposition

3.3.1. Client Entity Description

The client can view the current client/establishments, apply to become a partner with Lucky Paws, and download the ".exe" file.

3.3.2. Developer Entity Description

Display the Lucky Paws developers' personal data that was supplied by the client.

3.4 Class Diagram

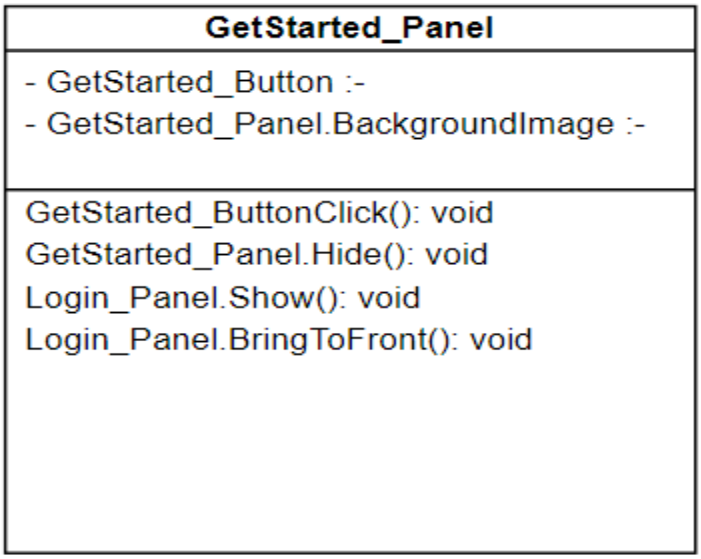

Fig 3.4.1 - Get Started Panel

Figure 3.4.1 shows the class diagram of the Get Started Panel.

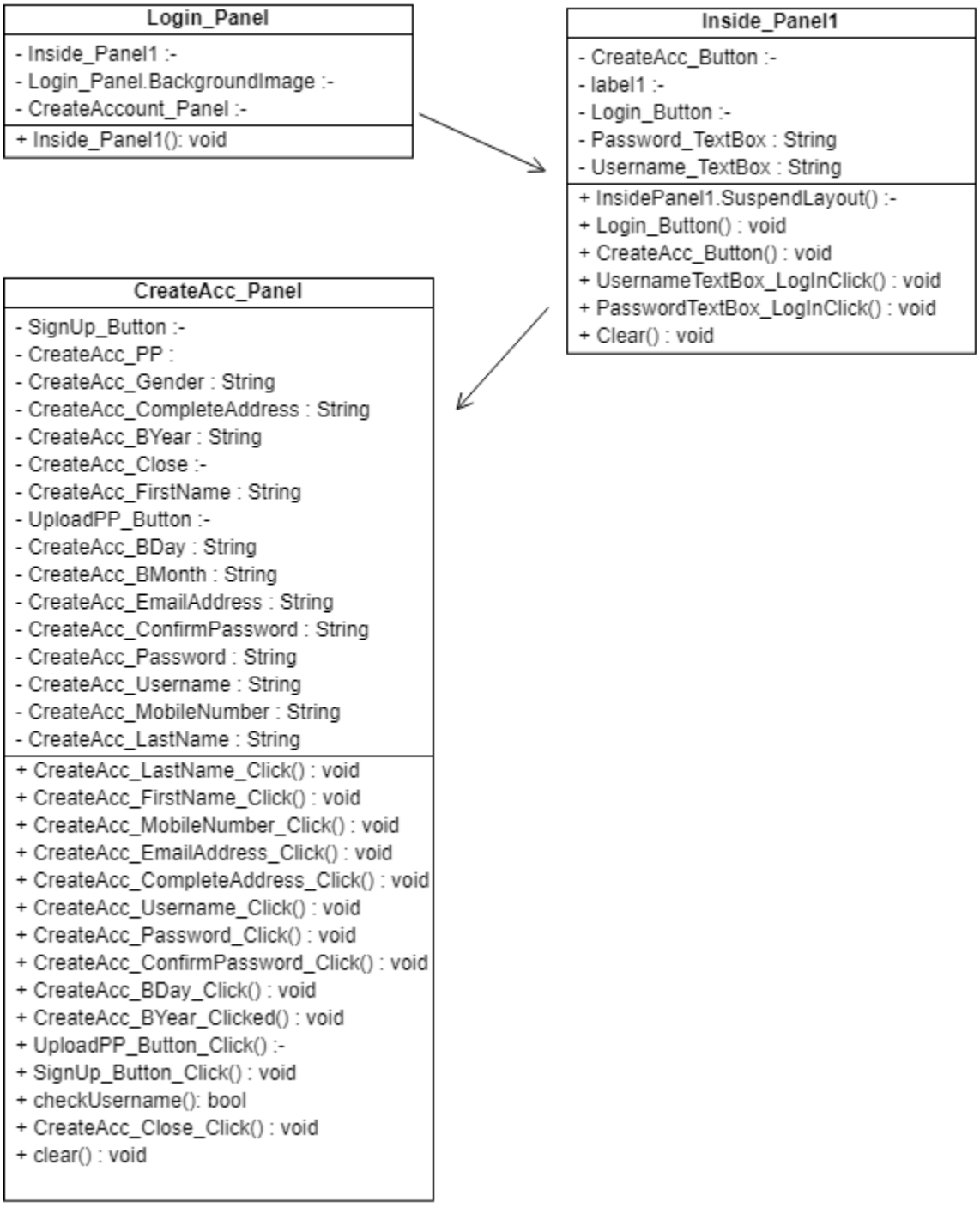

Figure 3.4.2 - Login Panel

Figure 3.4.2 shows the class diagram of 3 classes: Login, Inside Panel 1 or Inside Login Panel and Create Account Panel. Login Panel is the parent class of Inside Panel 1 and Create Account Panel.

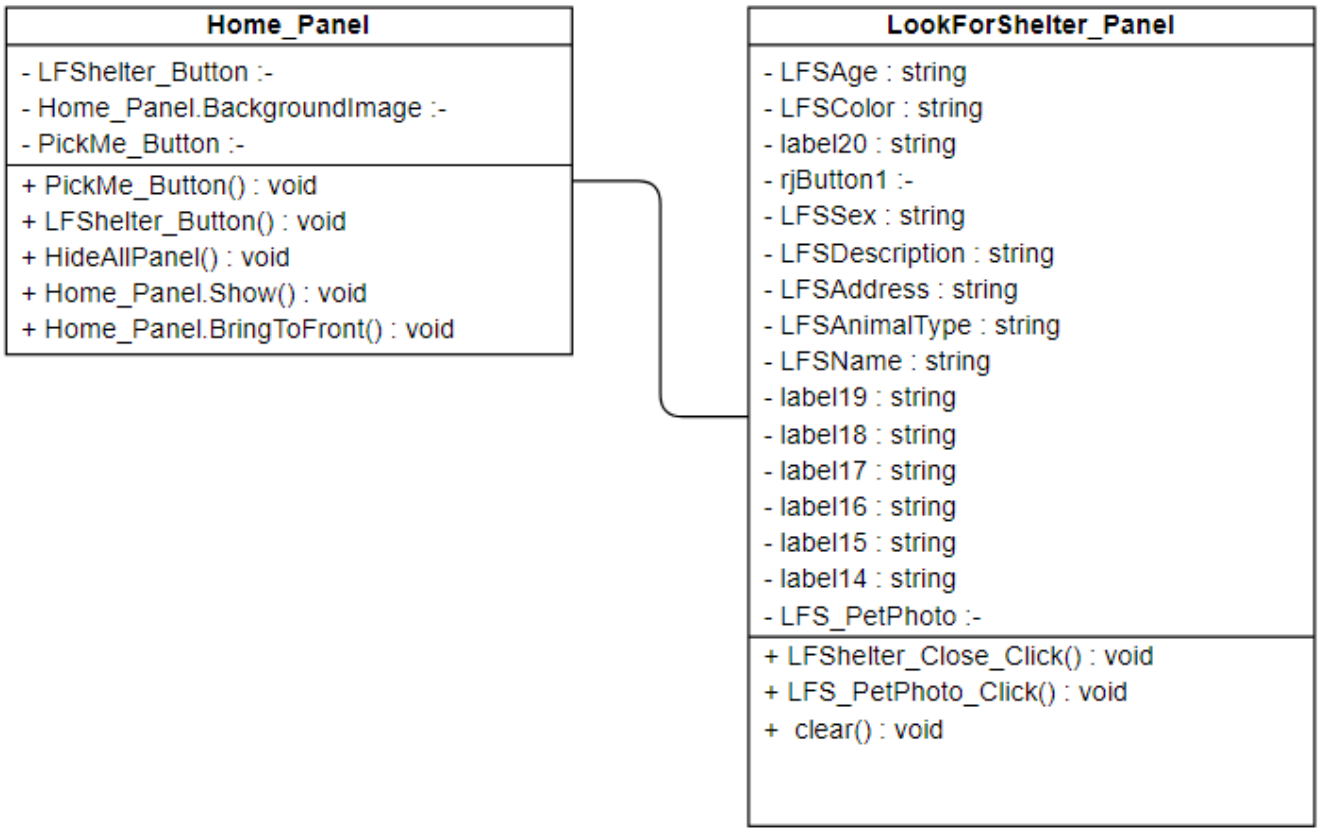

Figure 3.4.3 - Home Panel

Figure 3.4.3 shows the class diagram of Home Panel and Look for Shelter Panel, where Home Panel is the Parent Class.

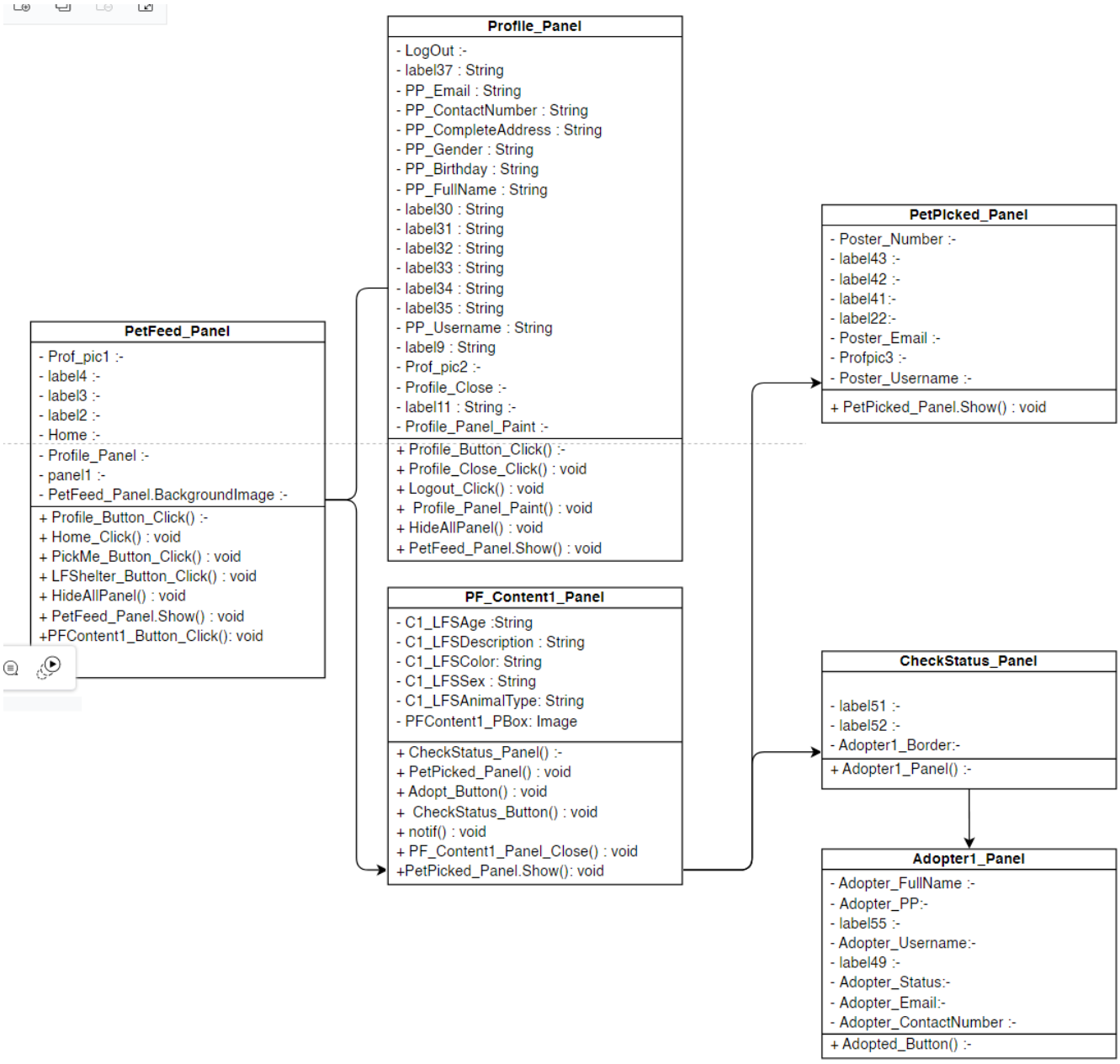

Figure 3.4.4 - Pet Feed Panel

Figure 3.4.4 This shows the class diagram of Pet Feed Panel and Profile Panel, where Pet Feed Panel is the parent class.

3.5 Architectural Design

3.5.1 Entity-Relationship Diagram

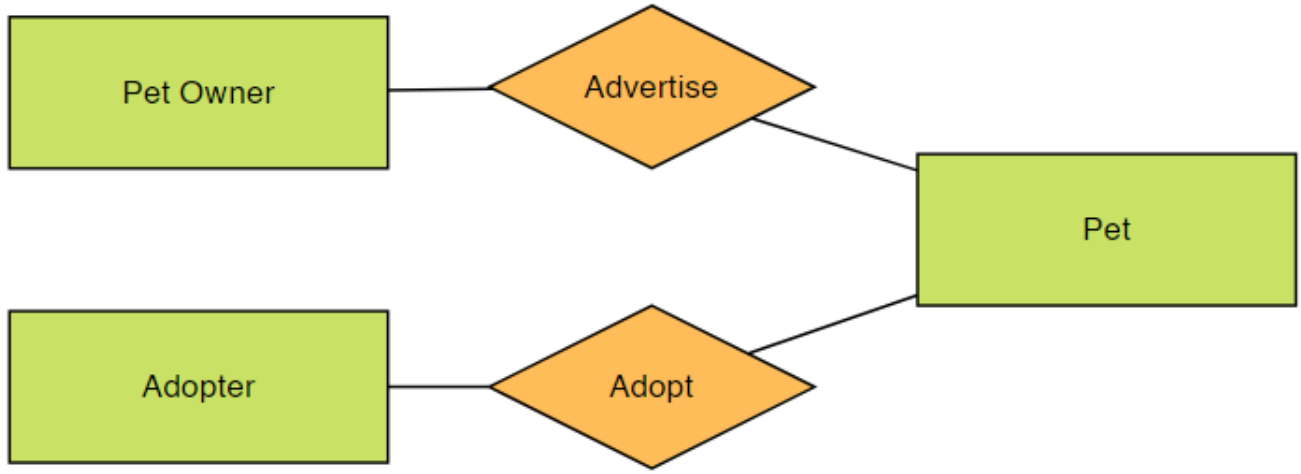

Fig 3.5.1 - ERD

Fig 3.5.1 shows the entity - relationship diagram of Lucky Paws.

3.6 Sequence Diagram

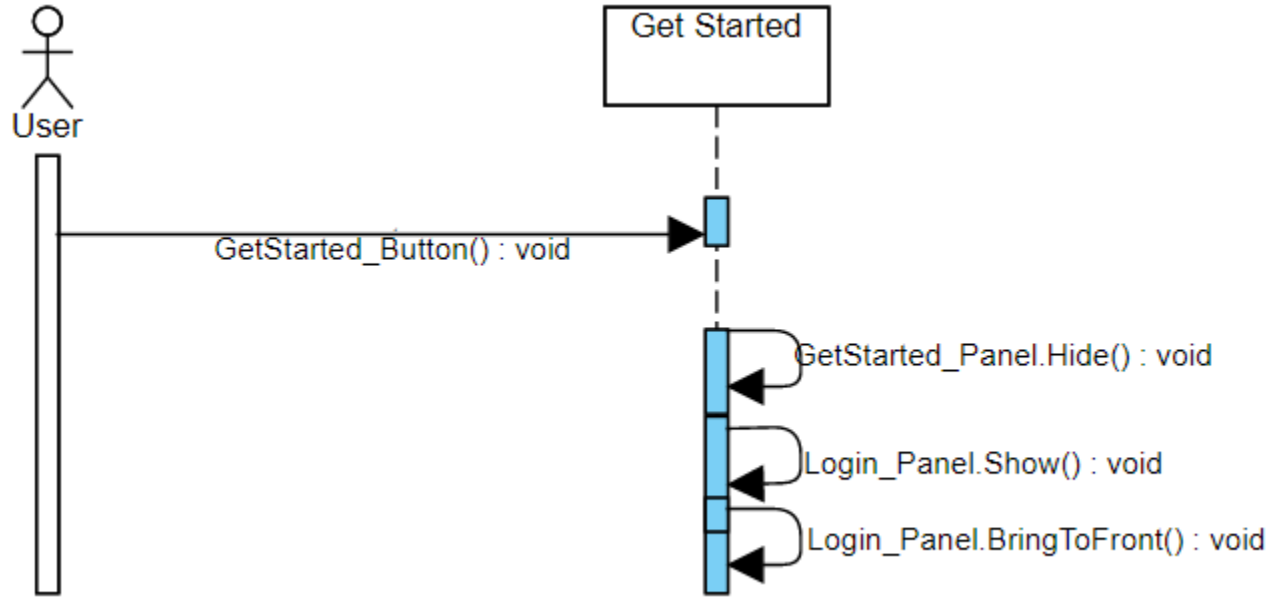

Figure 3.6.1 Get Started Sequence Diagram

Shows the Sequence Diagram of the Get Started Panel.

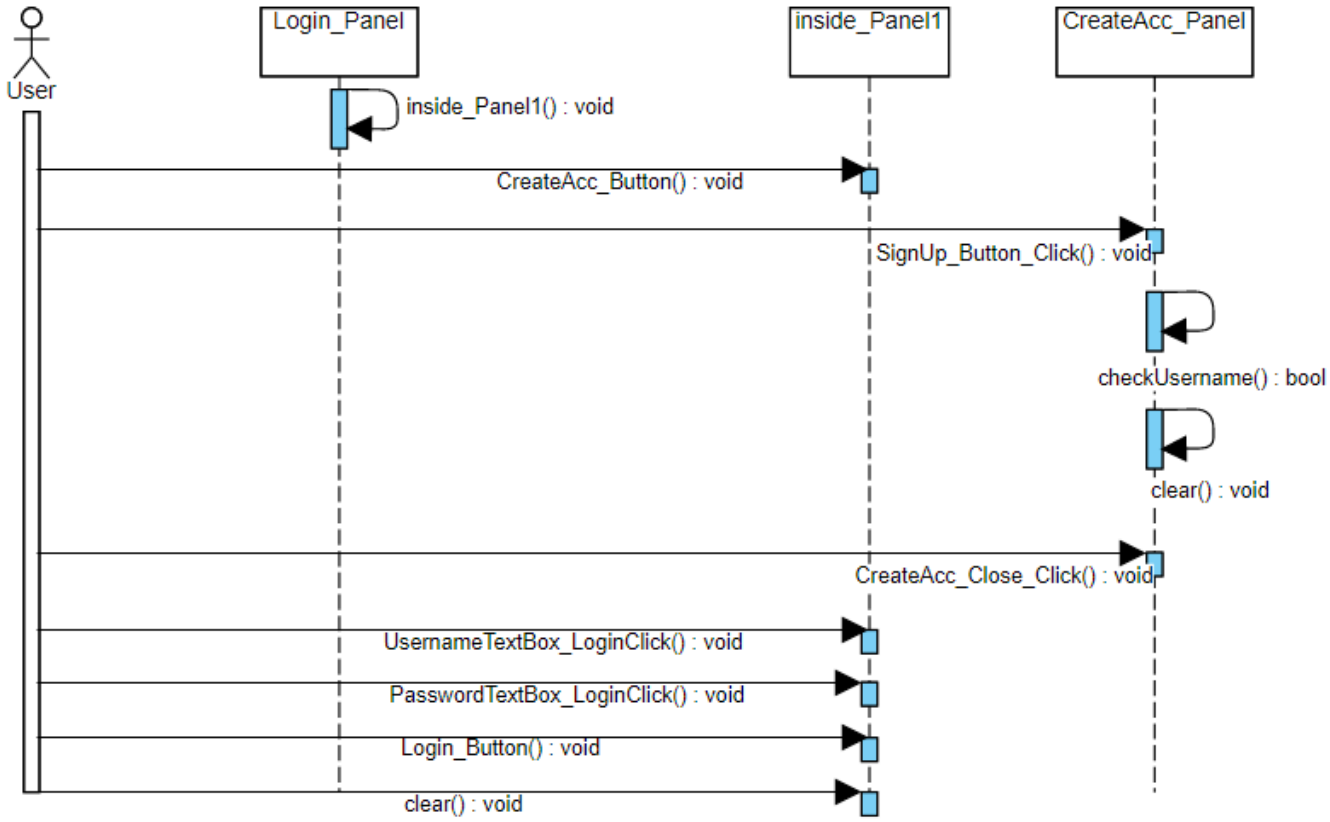

Figure 3.6.2 Login Panel Sequence Diagram

This shows the Sequence Diagram of the Login Panel with its subclass: Inside Panel 1, and the Create Account Panel

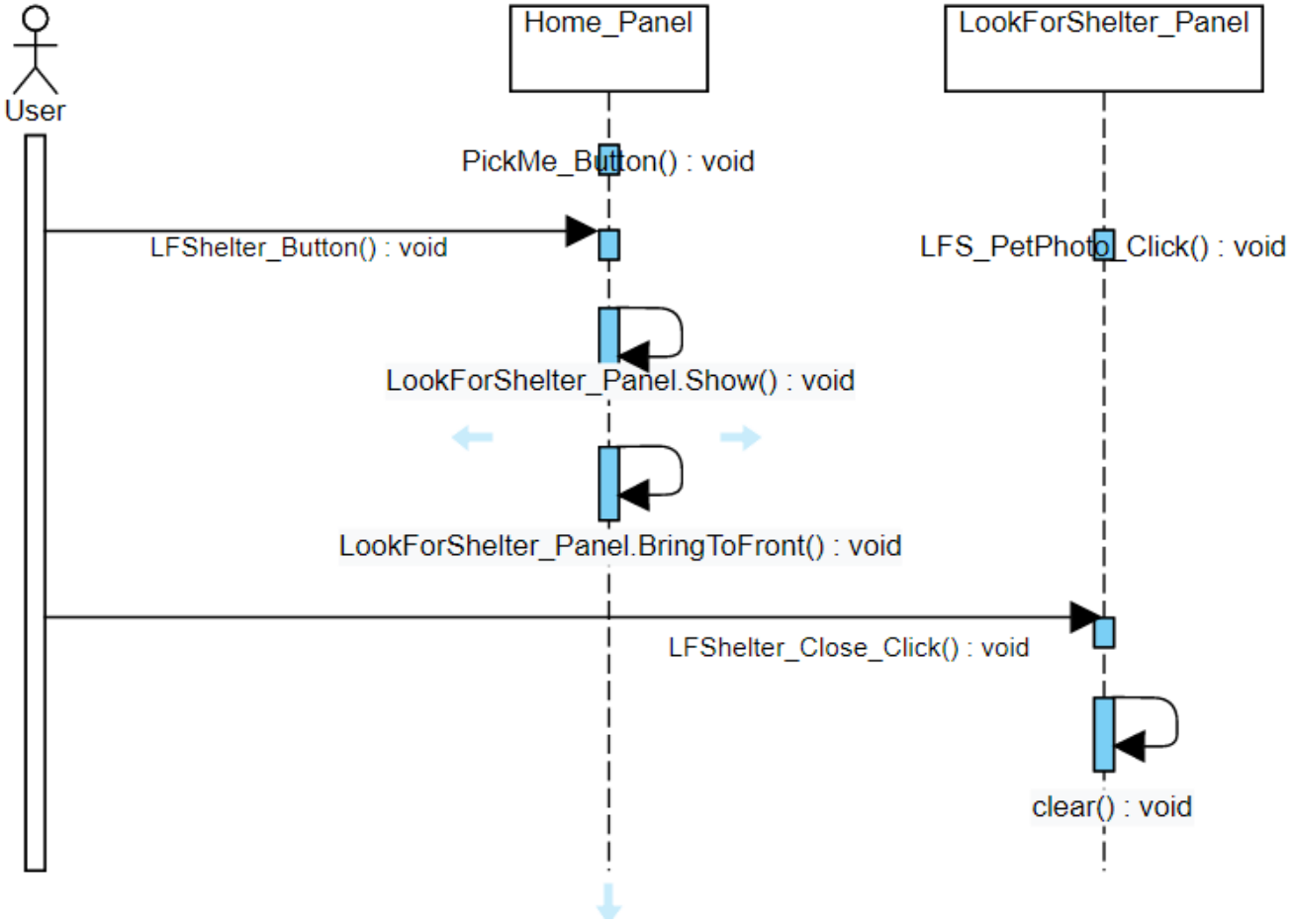

Figure 3.6.3 Home Panel Sequence Diagram

Shows the Sequence Diagram for the Home Panel and it's subclass Look for Shelter Panel.

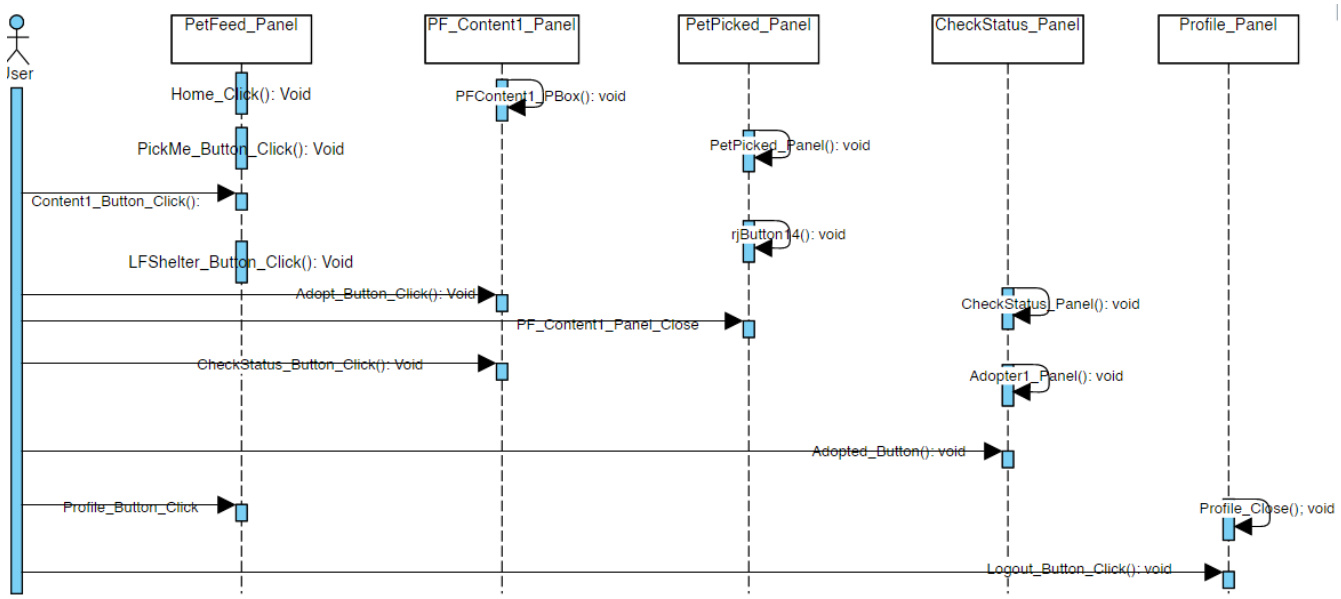

Figure 3.6.4 Pet Feed Sequence Diagram

This shows the Pet Feed Sequence Diagram together with the Profile Panel.

4. Dependency Description

4.1. Inter-module Dependencies

- The home module includes the profile module, the look for shelter module, and the pick me module. It shows all of the buttons that lead to the different things that the software application can do.

4.2. Inter-process Dependencies

- The main features of the program are to adopt a pet and look for a shelter for the pet. The displayed data is dependent on the input of the users. If no data is posted, then the program will have no content.

4.3. Data Dependencies

- The user will be able to post regarding the pet he or she wants to look for shelter for.
- The user may also be able to freely delete what he or she posted.
- The information about a pet that has already been adopted will be taken out of the system by itself.
- Information about the pet will be posted in the database.

5. Interface Description

5.1. Module Interface

5.1.1. Application Description

Display the contents and information of certain pets that is available for adoption posted by other users.

5.2. Process Interface

5.2.1. Get Started Home Screen Process Description

Name: *Get Started*

Description: This is the orientation part that the user can see after downloading the app. The user will press the button to start.

(Refer on Section 5.3 for the Desktop app UI)

5.2.2. Log In Process Description

Name: *Log In*

Description: This is the part where the user will be asked to input their username and password. If they are already in the database, then the user may proceed.

(Refer on Section 5.3 for the Desktop app UI)

5.2.3. Create Account Process Description

Name: *Create Account*

Description: This is where the user creates their account. Once done creating an account, it will be sent to the database and the user may now be able to log in to the app.

(Refer on Section 5.3 for the Desktop app UI)

5.2.4. Home Process Description

Name: *Home*

Description: Here, the user is able to choose whether to post a pet that is up for adoption or to look for pets that they want to adopt.

(Refer on Section 5.3 for the Desktop app UI)

5.2.5. Look For Shelter Process Description

Name: *Look For Shelter*

Description: In this part, the user can post a pet for adoption by inputting the specific details asked by the app. Once done and posted, it will be sent to the pet feed.

(Refer on Section 5.3 for the Desktop app UI)

5.2.6. Pet Feed Process Description

Name: *Pet Feed*

Description: The user can scroll through a variety of available pets up for adoption that have been posted by other users.

(Refer on Section 5.3 for the Desktop app UI)

5.2.7. Pick Me Process Description

Name: *Pick Me*

Description: The user can select a pet they want and, once picked, the contact details of the pet owner will appear for them to communicate about pet adoption.

(Refer on Section 5.3 for the Desktop app UI)

5.2.8. Pet Successfully Adopted Process Description

Name: *Pet Successfully Adopted*

Description: The user or pet owner who has already found foster care for the pet can then take it off the pet feed panel.

(Refer on Section 5.3 for the Desktop app UI)

5.2.9. Profile Process Description

Name: *Profile*

Description: In this part, the user can see their personal information inputted during account creation. The user can also log out from inside this panel.

(Refer on Section 5.3 for the Desktop app UI)

5.2.10. Logout Process Description

Name: *Profile*

Description: The user can log out of their own account, which will take them to the login screen.

(Refer to Section 5.3 for the Desktop app UI).

5.3 User Interface Design

Figure 5.3.1 - Get Started

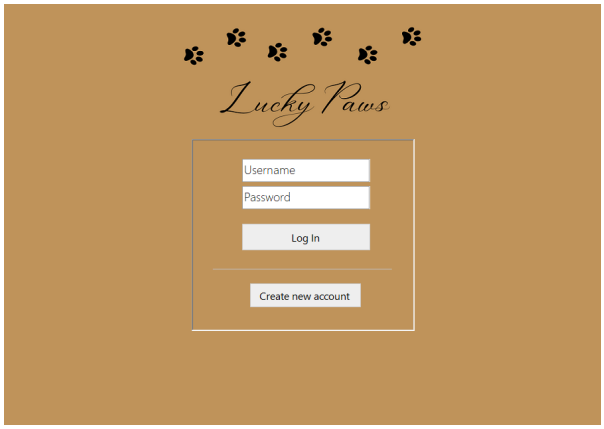

Figure 5.3.2 - Login Panel

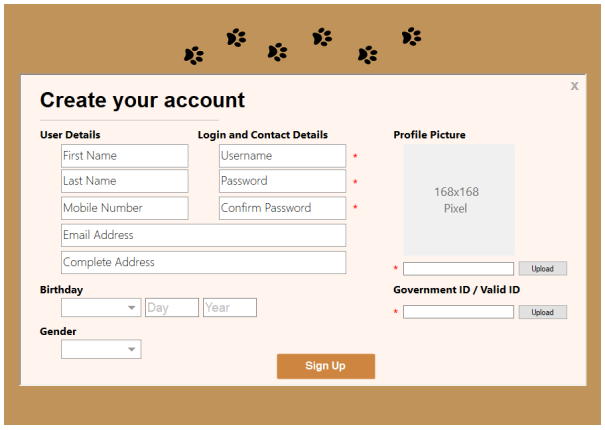

Figure 5.3.3 - Create Account

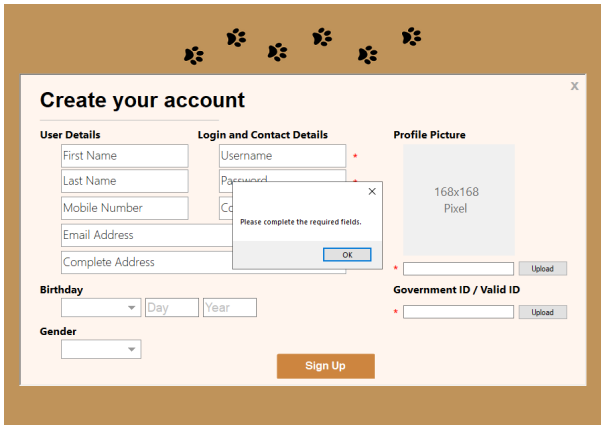

Figure 5.3.3.1 - Create Account Prompt 1

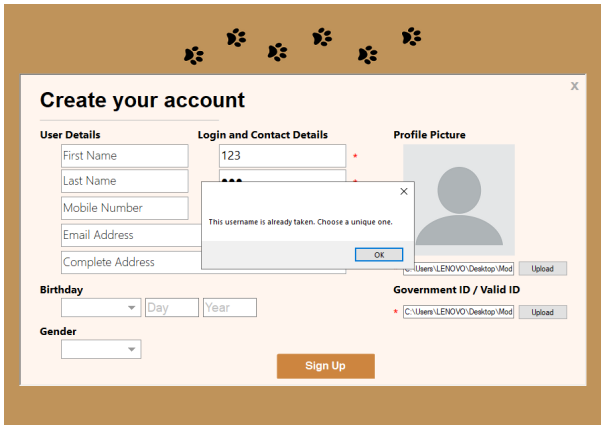

Figure 5.3.3.2 - Create Account Prompt 2

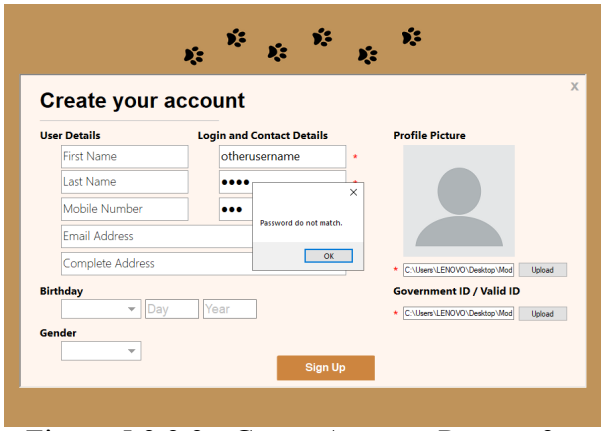

Figure 5.3.3.3 - Create Account Prompt 3

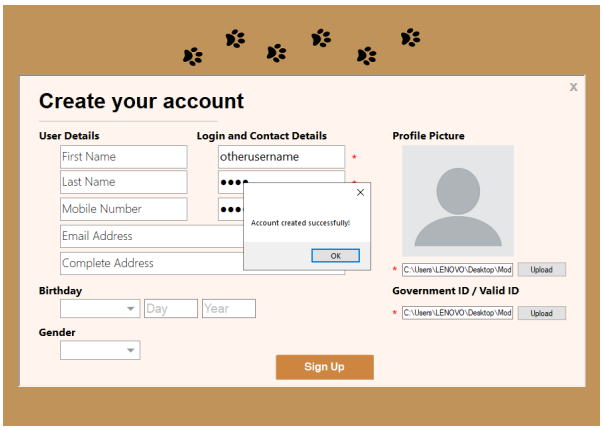

Figure 5.3.3.4 - Create Account Successful

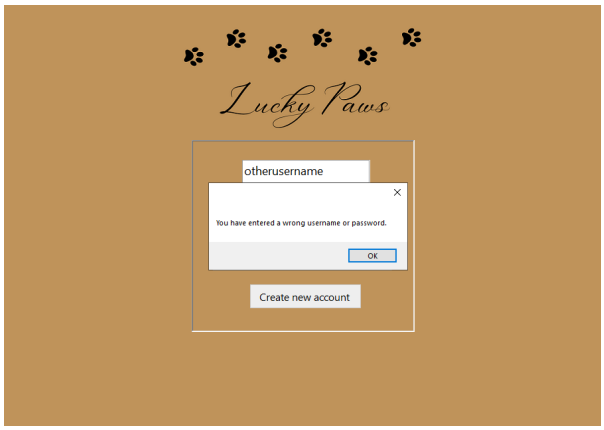

Figure 5.3.2.1 - Login Prompt

Figure 5.3.4 - Home

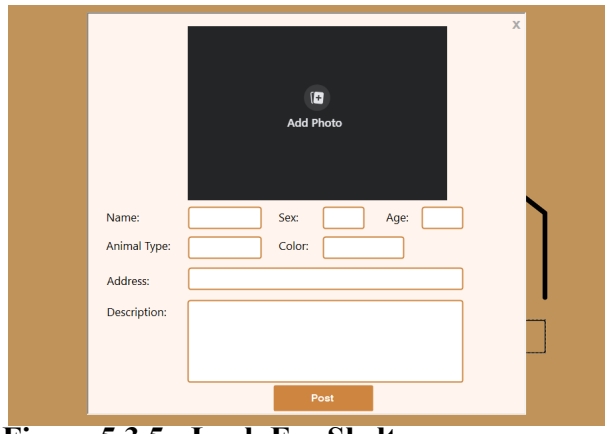

Figure 5.3.5 - Look For Shelter

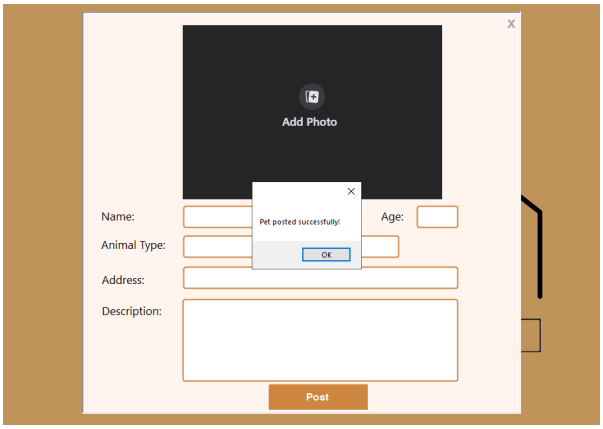

Figure 5.3.5.1 - Pet Posted Successfully

Figure 5.3.6 - Pet Feed

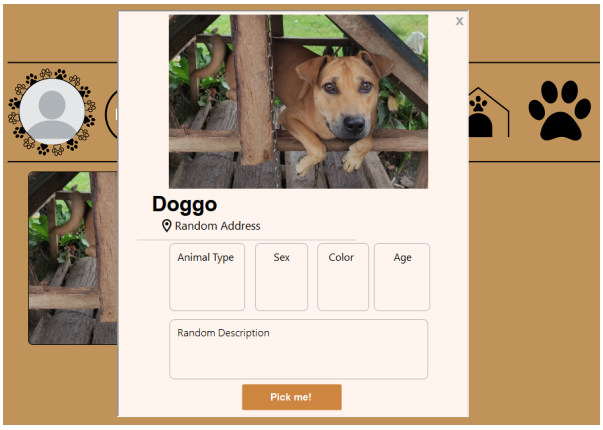

Figure 5.3.7 - Pet Feed Content

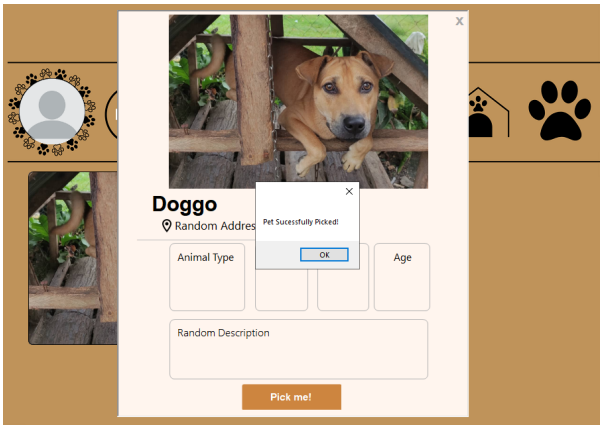

Figure 5.3.7.1 - Pick Me

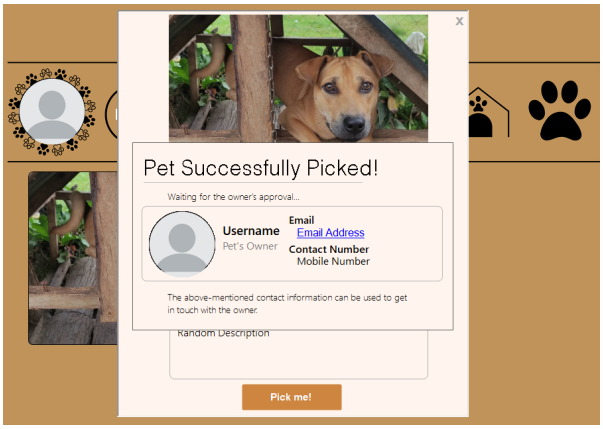

Figure 5.3.7.2 - Pick Me Owner Details

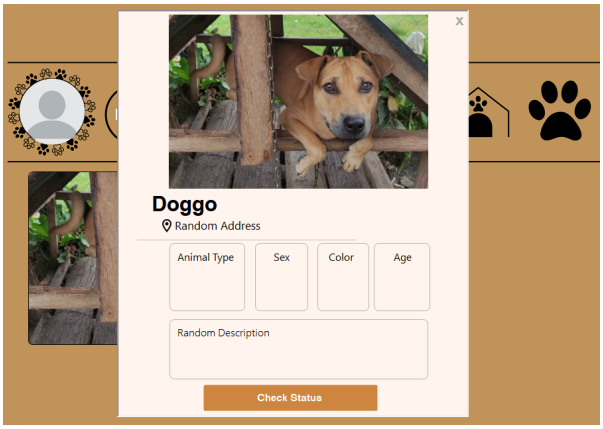

Figure 5.3.8 - Owner Content

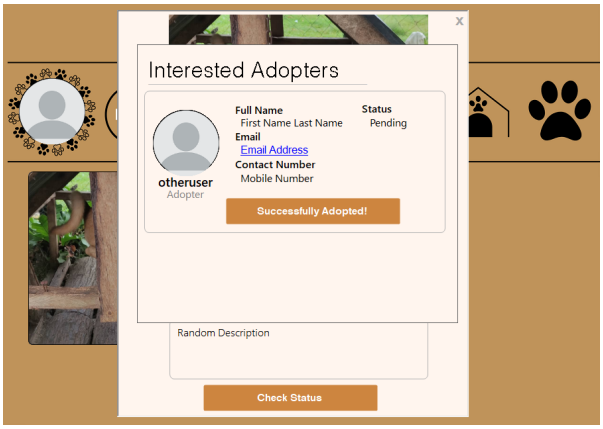

Figure 5.3.8.1 - Check Status

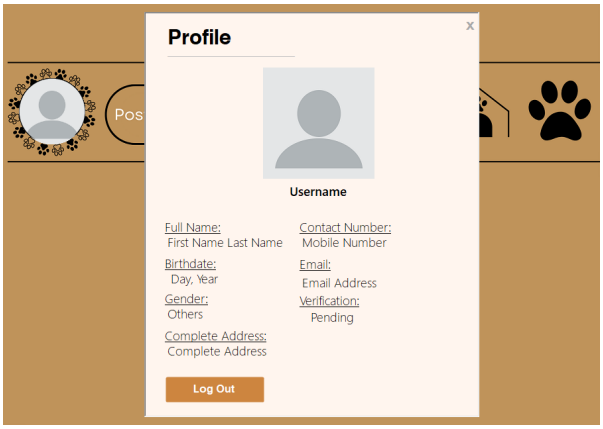

Figure 5.3.9 - User Profile

6. Detailed Design

6.1. Module Detailed Design

6.1.1. Server Module Detail

Not applicable. A server is not used in this application.

6.1.2. Application Module Detail

Name: Lucky Paws

Type: Desktop Application

Description: This will display all the functions and operations of the application.

Operation(s):

Name: GetStarted

Arguments: There are no arguments.

Condition: As the application will be used for the first time

Flow: The user will enter the specified data into the text input boxes available.

Result: The user will now use the application.

Name: Login

Arguments: Username and Password.

Condition: Application is running.

Flow: The user will input their username and password in order to enter the application. If the user has no account, they will be required to register.

Result:The user now uses the main interface of the application.

Name: Create Account

Arguments: First name, Last name, Mobile number, Email Address, Complete Address, Username, Password, Confirm Password, Birthday, Gender and Profile Picture.

Condition: Application is running.

Flow: The user would be asked to fill up their personal information, which includes a profile picture and their log-in details such as username and password, in order to prove the legitimacy of the user.

Result: The user can now log-in to the application.

Name: Home

Arguments: There are no arguments.

Condition: The application is running.

Flow: The app would let the user choose between going to pet feed to look at pets or putting up a pet for adoption.

Result: The user can now have the freedom to post or choose pets in that interface.

Name: Look for Shelter

Arguments: Pet Photo, Name of pet, Sex, Age, Type of Animal or Breed, Color, Address and Description.

Condition: The application is running.

Flow: The application wants the user to post relevant information, such as a picture of a pet that they want to advertise for adoption.

Result: The user successfully posted a pet for adoption in the feed.

Name: Pick me

Arguments: There are currently no arguments.

Condition: The application is running.

Flow: The application will now let adopters choose from a variety of pets posted in the pet feed by other users.

Result: Adopters will successfully adopt pets by using this application.

Name: Profile

Arguments: There are no arguments.

Condition: The application is running.

Flow: The application will let users view their personal information or change it, and then choose to logout from this panel.

Result:The users now have to make sure that their information matches their correct personal information so that they don't get mistakenly identified.

6.2. Data Detailed Design

6.2.1. User Entity Detail

Storage Medium: Microsoft Sql Server

Attribute	Data Type	Purpose
Username	varchar(50)	primary key for querying purposes
ProfilePic	image	indicates the profile of the user
FirstName	varchar(50)	indicates the first name of the user
LastName	varchar(50)	indicates the last name of the user
MobileNumber	varchar(50)	indicates the contact number
EmailAddress	varchar(50)	indicates the email address
CompleteAddress	varchar(100)	indicates the complete address
Password	varchar(50)	indicates the password of the user
BMonth	varchar(50)	indicates the Birth Month of the User
BDay	varchar(50)	indicates the Birth Day of the User
BYear	varchar(50)	indicates the Birth Year of the User
Gender	varchar(50)	indicates the Gender of the User

Table 6.2.1.1 User Entity Detail Table

Attribute	Data Type	Purpose
id	int	primary key for querying purposes
ProfilePic	image	indicates the profile of the Adopter
Username	varchar(50)	indicates the username of the Adopter
FullName	varchar(50)	indicates the full name of the Adopter
Email	varchar(50)	indicates the email of the adoper
ContactNumber	varchar(50)	indicates the contact number of the adopter
Verification	varchar(50)	indicates the status of the adopter

Table 6.2.1.2 Adopter Entity Detail Table

Attribute	Data Type	Purpose
Name	varchar(50)	indicates the name of the pet
Pet_Photo	image	indicates the image of the pet
Sex	varchar(50)	indicates the sex of the pet
Age	varchar(50)	indicates the age of the pet
Animal_Type	varchar(50)	indicates the type of the pet
Color	varchar(50)	indicates the color of the pet
Address	varchar(200)	indicates the address of the pet
Description	varchar(500)	indicates the pet description
Username	varchar(50)	indicates the username of the owner
Email	varchar(50)	indicates the email address of the owner
Contact_Number	varchar(50)	indicates the contact number of the owner

PP	image	indicates the profile picture of the owner
id	int	primary key for querying purposes

Table 6.2.1.3 Pet Owner Entity Detail Table

7. Appendices

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9. Annexes

9.1. Data flow diagram (if any)

9.2. Class diagram (if any)

9.3. Architectural Design

9.4. Sequence diagram / Communication diagram (if any)

9.5. User interface design

9.6. Entity-relationship diagram (if any)