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Pet Adoption App To Free Animal Shelters

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Abstract – Adopting a pet from a shelter helps to save more than one life. By adopting, people help free up space in the shelter, giving more space to rescue more animals. Adopting an animal means people are getting a pet that has received appropriate medical care. This study aimed to develop a web and mobile-based application that allows animal shelters and pet owners to post animals for adoption. Using the system will help them look for potential adopters who can pass the requirements for adoption. The study utilized the descriptive developmental type of research and administered two sets of the survey questionnaire. The respondents were the animal shelters, pet owners, and adopters in Cebu City, Philippines. Frequency, simple percentage, and weighted mean were used to treat the collected data. The study revealed that the system users are very satisfied with using the application. Also, they agreed that the system was very capable and very accessible to use in adopting pets. The researchers strongly recommend conducting the study on a larger scale to strengthen the preliminary findings.

Keywords – Technology, animal adoption, developmental method, Philippines.

1. Introduction

Dogs and cats have been popular household pets for thousands of years. Countless families have shared their homes with these animals and formed close emotional bonds. The essence of having these animals alongside people is to give comfort and accompany them. Pets are known to reduce stress levels, anxiety, and depression. Moreover, these animals can also share their loyalty to protect and obey their owners with the guidance of proper training and discipline.

One core media for adoption are shelters, pounds, neighbors, and friends that can be classified as pet owners [1]. According to the Humane Society of the United States Organization, adoption not only gives more animals a second chance, but its cost directly helps shelters better care for the animals they take in [2], [3], [4].

Adoption is taking full responsibility for an animal abandoned in a shelter by its previous owner or rescued by an animal organization. Adopting a living being is not a child-play but rather a duty and obligation to provide the love, trust, and patience they deserve.

Dogs and cats purposely being left alone in the wild and abused are rampant nowadays. Due to the immense increase of abandoned animals and lost pets, they are hardly taken care of in animal shelters or animal pounds, making it a huge problem to cater to all the animals in one place. This also results in the number of animals being euthanized dramatically. Overpopulation, limited resources, inadequate staff, volunteer training, and high turnover are common in animal shelters [5], [6], [7]. In other instances, due to overcrowded shelters, different pets will be overlooked and may not be given the love and care it expects.

Moreover, twelve million stray cats and dogs roamed the nation in 2019, according to the Philippines Animal Welfare Society [8]. Thousands of animals are euthanized or die of disease, hunger, or wounds resulting from fighting each year. Domesticated animals, once family pets, are frequently thrown out onto the streets when their owners can no longer earn enough to support them or

as they become ill, and their pet owner does not want to deal with making them better because finding a potential adopter is difficult. However, just like any other animal shelter's problems, since this is only a temporary place for animals to stay, shelters are limited in resources. Prone to overpopulation of unwanted animals that leads to euthanasia, less acknowledged shelters, difficulties in managing animals, updating their vaccinations and deworming, donations, and adoption [9], [10], [11].

2. Related Literature

The pace of people's lives has accelerated in recent years, and the pressure has increased the number of abandoned pets. The increasing number of displaced animals has had an impact not only on the animals of nature but also on the lives of humans. Furthermore, stray animals have posed a significant hidden threat to the city's surrounding environment, public transportation, and public health security. Animal rescue by humans is still in its early stages. There are issues such as restrictions on rescue locations, the remoteness of rescue locations, high investment demand, updates of relevant news, and publishing difficulties. These circumstances, directly or indirectly, contribute to receiving more and fewer pets from animal rescue facilities. This situation forces the rescue team to deal with numerous serious issues, including the economy and the location. Second, you will realize that animal adoption has a more natural and profound meaning after having a pet. To begin with, adopting animals raises people's awareness of the need to care for animals, reducing the occurrence of the magical behavior of unscrupulous pets, not to mention the horrible human beings who enjoy animal meat. Adopting a pet can also help children develop an awareness of the importance of animal and environmental protection.

Children raised in today's world are surrounded by reinforced concrete and high-rise buildings. They can rediscover the love they have lost since childhood by adopting animals, and we can help them acknowledge the beauties of life and recapture the childlike innocence they should have at this age. People are becoming more fond of e-commerce as computer technology advances, from selling daily necessities to selling houses, which can be traded through e-commerce. People are becoming more accustomed to completing many personal tasks without leaving their homes. As a result, utilizing the benefits of the Internet, animal adoption, as well as the development and design of a web-based pet adoption system, is imminent [12].

Pet overpopulation has been a significant issue for a long time. Hundreds of thousands of dogs in shelters all over the country desperately need homes. When looking up these dogs on shelters web sites, it is common to find a small blurb and a low-quality photograph in a poorly designed environment about a dog needing a home. Most of the time, these postings are insufficiently informative to assist potential owners in making an informed decision when selecting the right dog. Dogs in these shelters would have a much better chance of being adopted if they had a more prominent web presence than they do now. The purpose of the project is to create a digital shelter dog adoption center to make dogs up for adoption more appealing, interactive, and geared toward a more accurate fit for the potential owner. This method is best suited for dogs with a more challenging time finding a home, such as older dogs, dogs of a specific breed and size, physically or mentally handicapped dogs, or dogs with other special needs [13].

Cats and dogs are among the common domesticated animals for human companionship, and their bonds with humans generally provide mutual psychosocial health benefits. Following the global spread of COVID-19 pneumonia, social distancing measures such as working from the home policy have been reinforced worldwide. Abandonment of pet dogs and animal cruelty have also been reported amidst the pandemic, probably due to rumors of animals as potential reservoirs of COVID-19. Stray dogs were starved and subsequently euthanized of them. Animal cruelty is widespread and reported in developed and developing nations [14].

For some companion animal guardians, the animal-human bond is as strong as the bond with any other family member. It argues that the emotional attachment many humans have for their pets not only equals but transcends the emotional attachment they form with other humans. Upon the first glimpse, the number of people deeply attached to their pets may be significant. Studies report a high percentage of companion animal guardians who state that the pet is a family member. The pet is a family member [15].

The pet's personality, compatibility, and behavior are attributed to satisfaction and retention rather than demographic differences among adopters or adoption

settings. Health issues first plagued half of the adopted pets, but most were resolved within a year. Roughly one-fourth of adopters who no longer have their companion animal said their pet died. Characteristics of dead pets support the contention that spaying and neutering profoundly affect a companion animal's life span. Although retention is similar for dogs and cats, mortality is higher among cats in the first year after adoption [16].

Many animals are put up for adoption. Many available animals can overburden shelters if this number rises above a shelter's maximum capacity. Pet adoption websites need to identify which characteristics or general information about the animals are most salient to potential pet adopters to increase adoption speed and avoid overcrowding [17].

Across species and age groups, the top reasons for adoption were the animal's appearance, social behavior with adopters, and personality. Most adopters said information about the animal provided by an employee or volunteer was more crucial than data on cage cards, and health and habits information was critical. Adopters valued interaction with the animal more than viewing it in its kennel. Shelters can use the results of this study to create better adoption matches, prioritize shelter resources and staff training, and potentially increase adoptions. Simple training techniques are also suggested to facilitate adopter-friendly behaviors from sheltered dogs and cats [18].

[19] Explain the latest pet adoption trend in Indonesia and introduce e-dopt, a mobile application designed to encourage more pet adoption in Indonesia. The benefit of conducting this research is that pet adoption mobile applications are not yet widely available in Indonesia. A mobile application to aid in the pet adoption process was developed as part of this study. The mobile application is created using the Android platform, and the requirements are gathered from interviews, surveys, and research that have been conducted. The developed mobile application provides convenience for those who want to adopt or give out pets and allows businesses in the pet product industry to use the mobile application as a sales channel.

The process is broken down into four components: user handling module, pet handling module, pet adoption module, and pet statistics module. Eclipse and MySQL using SSM framework, bootstrap framework, various plug-ins, and related JSP technology. Among them is the modal box in the bootstrap framework to reduce the number of JSP pages. When browsing pets, I chose a plug-in written in pure CSS to complete the waterfall stream layout for users to browse. In adopting the pet statistics module, the plug-in provided by Echarts is used to complete the production of the chart, making the data look more vivid and intuitive. It also can download the image to the local system for administrators to download and use. When a user logs in, the username is determined by the username logged in, and the user's identity is determined by whether the user is an ordinary member or an administrator. To identify the permission and navigate to the appropriate page. When you log in, you can remember your password; you can log in to two functions to make the design more user-friendly [20].

Privacy is an increasingly important issue for Internet users, especially in e-commerce, where they must disclose large amounts of personal information to make purchases. Various privacy-enhancing technologies (PETs) are currently available, including the platform for privacy preference projects, privacy seals, and human-readable privacy policies. In particular, P3P has been the subject of considerable interest; however, it's also highly dependent on the symbiotic deployment of P3P user agents and policies on vendors' Websites. Internet users and vendors must commit time and resources to deploy P3P agents or procedures, thus requiring evidence that the technology won't stagnate or become obsolete [21].

With the rise of online shopping, animal shelters can use websites to allow potential adopters to view adoptable animals, thereby increasing the number of adoptions. However, little research has been conducted to assess this user group's information needs. This study used a user needs analysis to determine what information potential adopters want when looking for a new pet, specifically a cat or dog. Twenty-six people ranked various behavioral and physical characteristics in order of importance and identified their top five overall factors. In general, cat adopters ranked the cat's personality and behavior as very important, and dog adopters found physical characteristics highly important. This study shows the importance of understanding potential adopters' needs to provide relevant and valued information on online pet adoption profiles. The recommendations and insights can be used to develop pet profiles that meet

adopters' needs and help adopters find the right pet [22].

[23] Investigated the relationship between dog-owner personality match and pet satisfaction. Previous research indicates that dog owners abandon their pets at a greater incidence. New guidelines for matching owners with future pets may help reduce the number of homeless pets. These were created after reviewing the literature to determine all possible dog traits and conducting structured interviews to test for various features. After doing this, 45 characteristics were determined and created in two surveys. One survey assessed the dog's personality traits, and the other evaluated the owners. Comparisons between dog overall satisfaction and dog–owner personality match revealed four characteristics significantly associated with happiness: the proclivity to share possessions, the desire to run outside, the tendency to be destructive, and the ability to get along with others. These findings suggest that prospective dog owners should consider adopting dogs that match their personality on these traits. A few characteristics shared by dogs and their owners may predict owner satisfaction. This is significant because it can reduce the number of dogs relinquished by owners and the number of dogs left homeless each year.

3. Objectives of the Study

The study aimed to develop an online web and mobile-based application for Animal Adoption. Specifically, it sought to 1] determine how the application be analyzed and designed as to their functionalities; and 2] assessment on the application as to its satisfaction, system capabilities, and accessibility.

4. Scope and Limitations

This study focuses on developing a web and mobile-based application that allows animal shelters and pet owners to post animals for adoption. This will help them look for potential adopters who can pass the requirements for adoption. This will be conducted first in Cebu City but can apply to the Philippines.

The limitations include 1] The system will only cater to registered users; 2] The animals to be adopted limited to cats and dogs; 3] In the mobile app, they can use third-party applications for money transactions such as PayPal and GCash and need to send the proof of transaction; 4] In the web platform, the money transactions are through PayPal only; 5] The mobile application does not support iOS; 6] The mobile application is for adopters only; 7] The system does not support the delivery of pets to adopters; 8] The system will cover Cebu City area only for the meantime but will surely expand to other regions and the whole Philippines.

5. Methodology

The study utilized the descriptive developmental method to gather data about pet adoption in Cebu City, Philippines. The incremental developmental methodology was used to develop the system consisting of modules with specific functionality. They must go through a systematic process to successfully apply all the necessary features being planned by the researchers. With the help of the Incremental Model, it can quickly identify potential problems and risks during the testing period. In this manner, the researchers will address issues during the iteration of the system process. The researchers developed two sets of questionnaires administered to the respondents: a questionnaire on systems procedures and functionalities and a system user acceptance test. The study's respondents were the pet owner, adopters, and animal shelters. Statistical treatments used in the data analysis were frequency, simple percentage, and weighted mean.

6. Results and Discussions

System Analysis as to Web and Mobile Functionalities

As shown in Figure 1, animal shelters can log in and must first subscribe to the next subscription promos provided by the system. After subscribing, animal shelters can now manage their account, pet, and selections were in selection has category, breed, and adoption fee. They can also view manage petbook, where they can view and generate pet books and allocate vaccines and deworming to the animal. They can also have access to adoption where they add adoption policy, confirm payments for adoption, and accept or reject requests for adoption. They can also view donations and confirm whether they have received them. For some of these features, they can receive notifications.

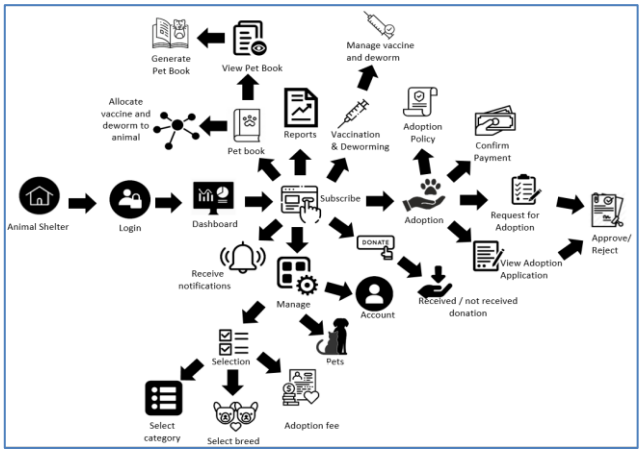

Figure 1. Program Workflow – Animal Shelter (Web)

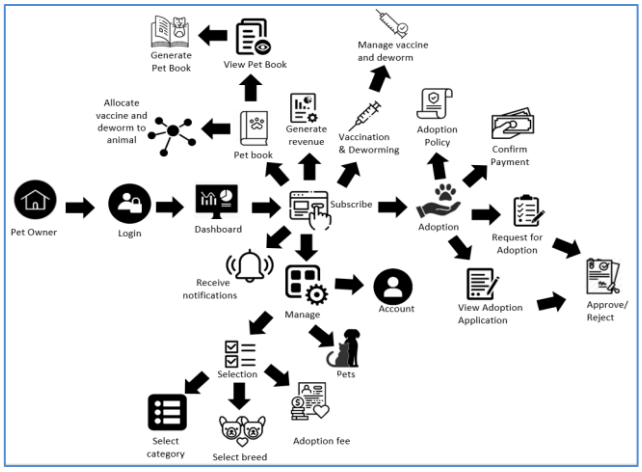

Figure 2. Program Workflow – Pet Owner (Web)

Figure 2 shows that the pet owners can log in and must first subscribe to the following subscription promos provided by the system. After subscribing, pet owners can now manage their account, pet, and selections were in selection has category, breed, and adoption fee. They can also view manage pet book, where they can view and generate pet books and allocate vaccines and deworming to the animal. They can also have access to adoption where they add adoption policy, confirm payments for adoption, and accept or reject requests for adoption. For some of these features, they can receive notifications. Lastly, they can generate revenue.

Figure 3 shows that the adopter can log in to the system. They must first subscribe to any subscription promos provided so that they can view animals, donate, apply for adoption and pay the adoption fee. They can also locate animal shelters and pet owners who provide the animals to be adopted. Additionally, they can manage their profile and receive notifications. They can view vaccines and deworm products used for pets. They can also view adoption status, payment history, and receipts.

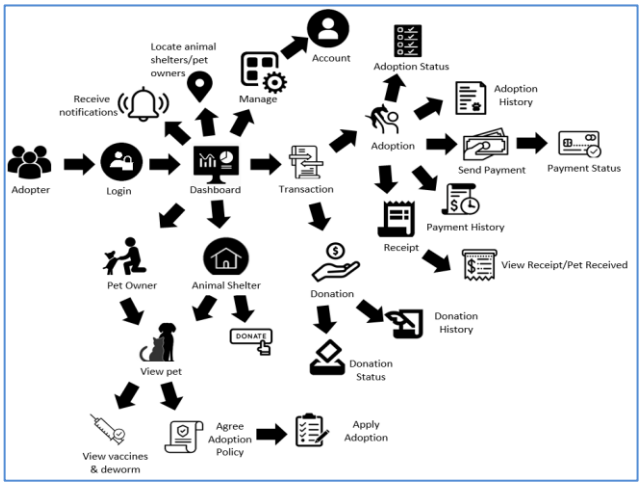

Figure 3. Program Workflow – Adopter (Mobile)

As shown in Figure 4, the admin can log in to the system using the default username and password. The admin can access the dashboard, manage subscriptions, approve or reject account application requests, generate revenue, view reports, and approve account reactivation requests from animal shelters, pet owners, and adopters. They can also see they receive notifications from user requests, and they can also approve subscriptions and adoption fees.

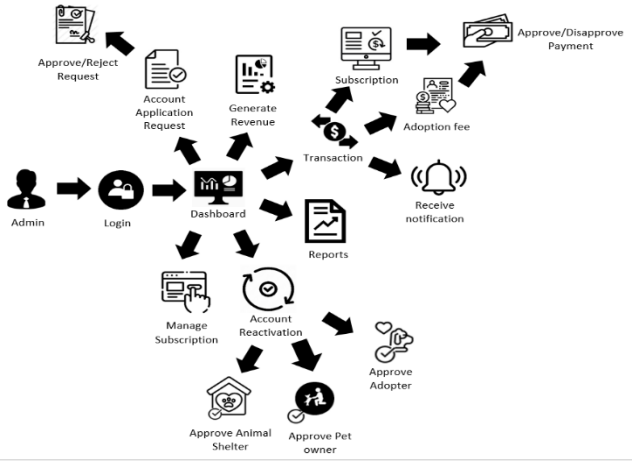

Figure 4. Program Workflow – Admin (Web)

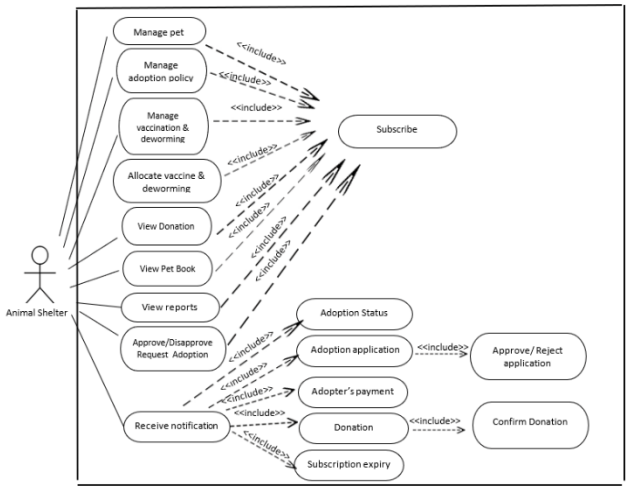

Figure 5. Use Case Diagram – Animal Shelter (Mobile)

Figure 5 illustrates that the shelter should have an adoption policy, required vaccination, and pet deworming to manage the animals. The shelter must first subscribe to any promos available in the system. After subscribing, the system allows them to use these privileges for a particular time, depending on the subscription. Additionally, they can view donations and receive notifications like adoption applications, adopter's payments, donations, and subscription expiry. Upon receiving, the shelter can approve or reject applications and confirm the adopter's payment.

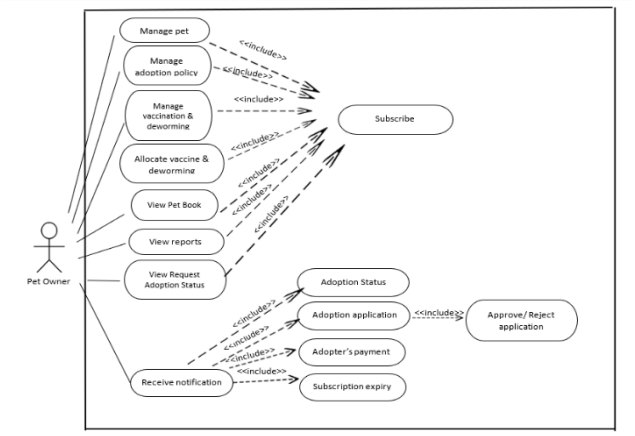

Figure 6. Use Case Diagram – Pet Owner

As shown in Figure 6, pet owners must subscribe to a promo available in the system. After subscribing, they can now manage animals, create adoption policies, vaccination, and deworming. They can also allocate vaccines and deworming to an animal being added. Additionally, they can receive notifications like adoption applications from adopters, adopters' payments to the pet being adopted, and subscription expiry. Upon receiving, the pet owner can approve or reject applications and confirm the adopter's payment.

Figure 7 illustrates that the admin can view shelters, a list of pet owners, transactions, and income. They can also approve or reject shelters and pet owners by reviewing their application forms. They can also receive notifications like payments from pet owners and animal shelters and then go directly to the transaction section to confirm subscription payment and view payment history. The admin can also manage subscriptions providing affordable and reasonable prices for pet owners and shelters.

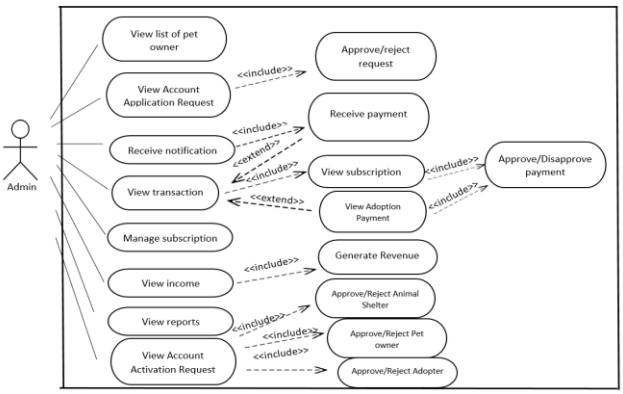

Figure 7. Use Case Diagram– Admin

Figure 8 illustrates that the adopter can manage an account and then select their animal preferences. Upon viewing animals, they can apply for adoption and must thoroughly follow the given adoption policy provided by shelters and pet owners. Once done, adopters can view the application status while waiting for approval. In addition, adopters can also apply for donations and then view the application status once it has been submitted to the shelter. Moreover, they can view transactions like payment history and receive notifications for payment confirmation.

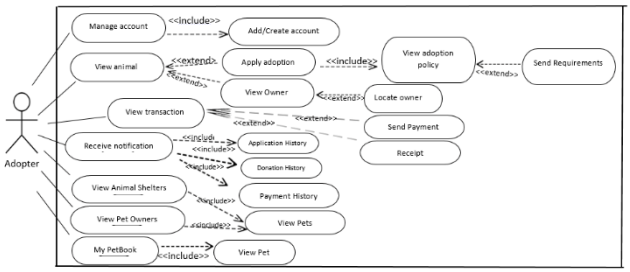

Figure 8. Use Case Diagram– Adopter

System Design as to Web and Mobile Functionalities

Database Design. It is the process of producing a detailed data model of a database. This data model includes all the logical and physical design options, and storage device criteria are taken to produce a design in a data dictionary which can then be used to create a database.

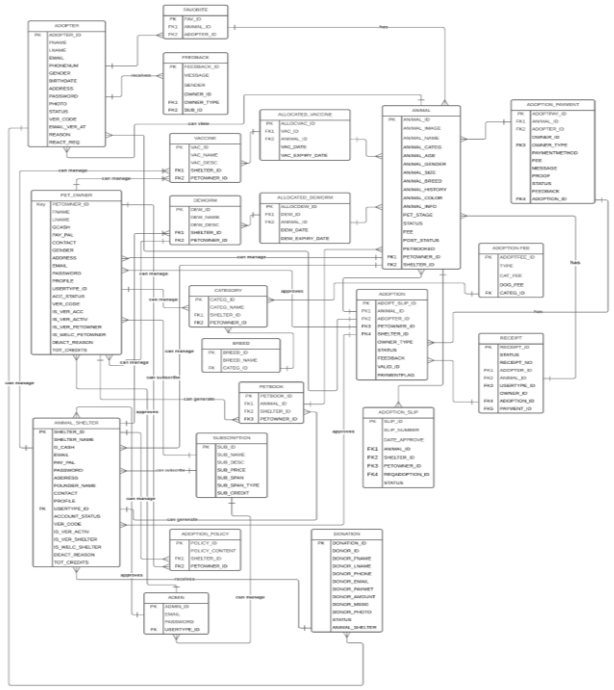

Figure 9. Entity-Relationship Diagram

Network Model. The developed system uses a Client-Server Architecture. A client-server network allows clients to access resources and services from a central computer via an area network or a wide-area network, such as the Internet. Figure 9 shows how clients' wireless devices are connected through a wireless LAN and will send HTTP requests, which will then pass through the wireless router to the router and finally be received and accepted by the Web or Database server. As soon as the server accepts the HTTP request, the server will perform the requested task and reply to the client.

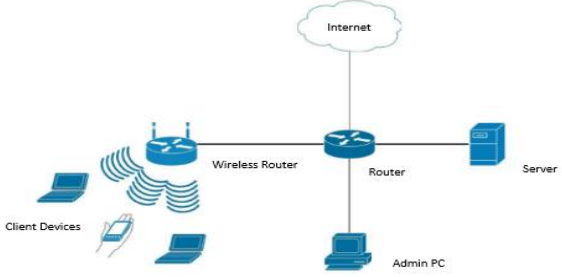

Figure 10. Network Model

Graphical User Interface (GUI) Design. This allows the users to directly interact with their devices, which are characterized by icons, windows, menus, and other objects on the screen. Figures 11 to 18 show the sample screenshots of the web application for pet adoption. Also, Figures 19 to 26 display the sample screenshots of the mobile application.

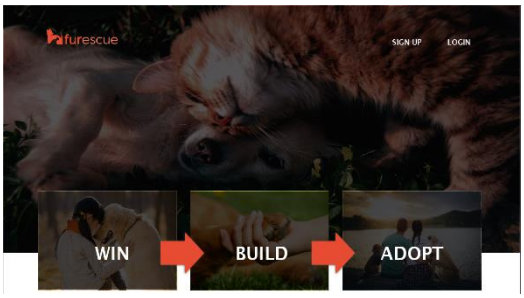

Figure 11. Front Page Interface

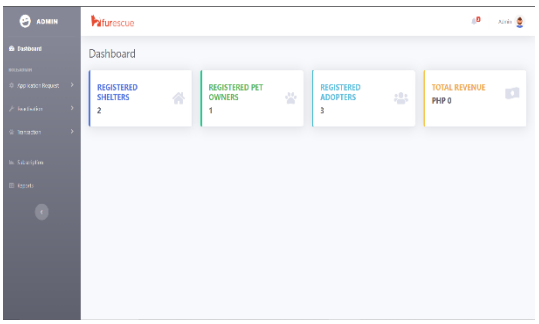

Figure 12. Admin Dashboard Page Interface

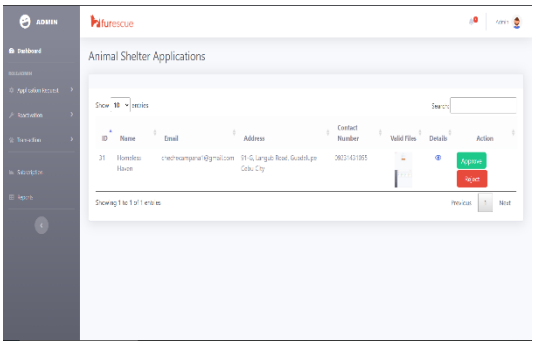

Figure 13. Admin View Shelter Application

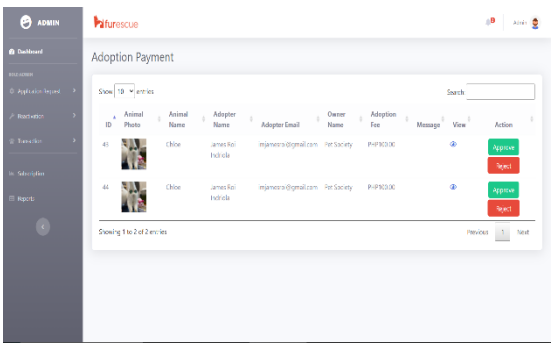

Figure 14. Admin Adoption Payment

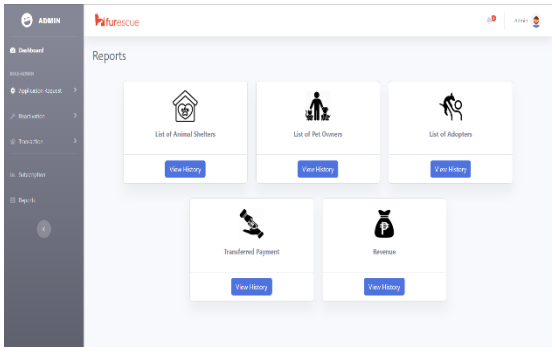

Figure 15. Admin Report Interface

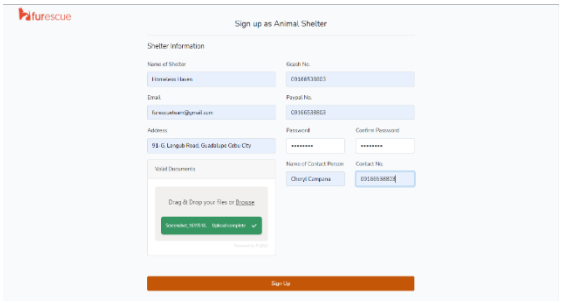

Figure 16. Animal Shelter Registration

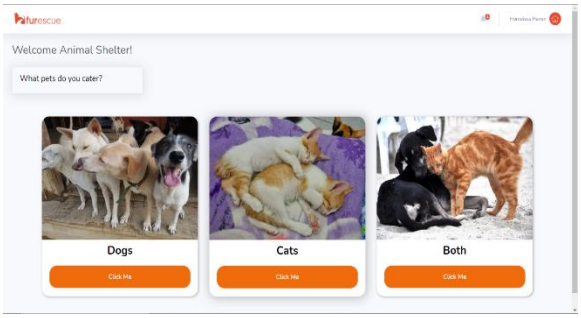

Figure 17. Animal Shelter Select Pet

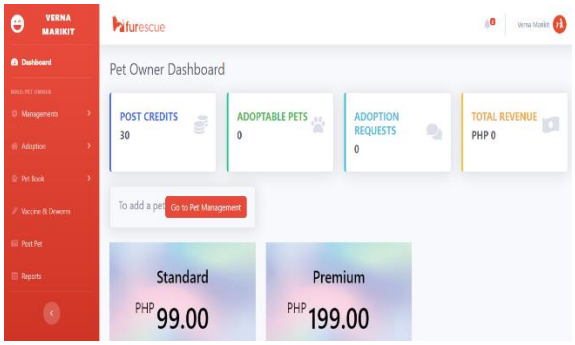

Figure 18. Pet Owner Dashboard

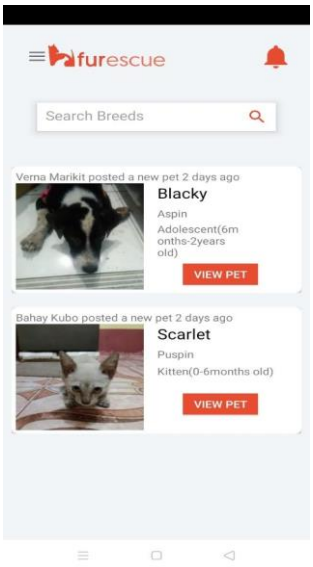

Figure 19. User Dashboard

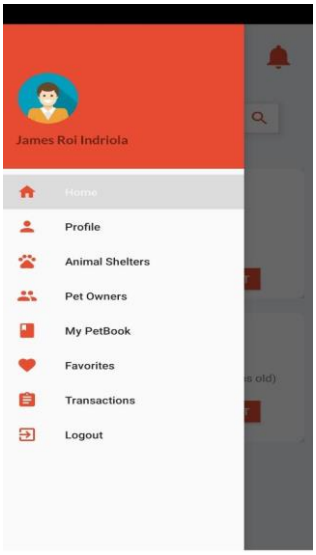

Figure 20. User Sidebar

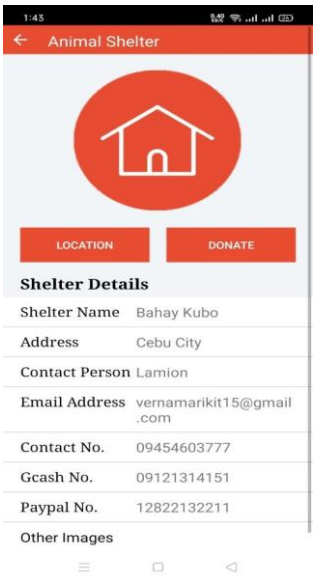

Figure 21. Animal Shelter

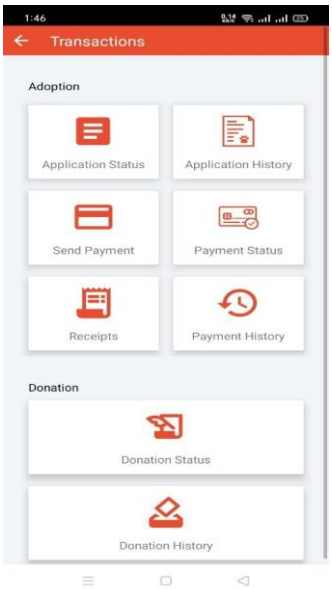

Figure 23. User Transactions

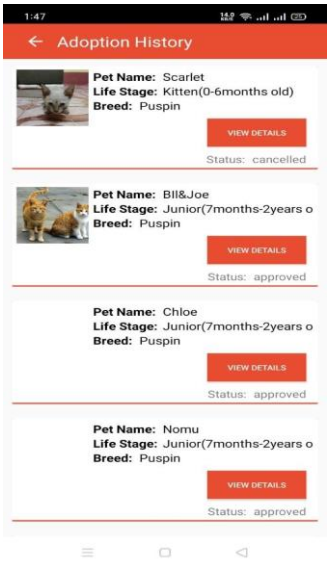

Figure 24. User Adoption History Details

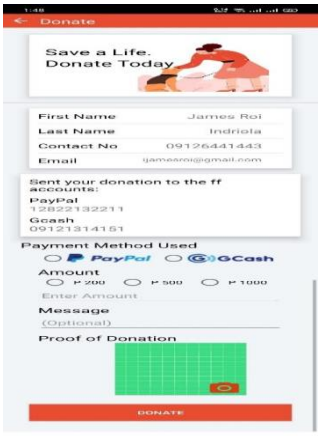

Figure 25. User Donate Interface

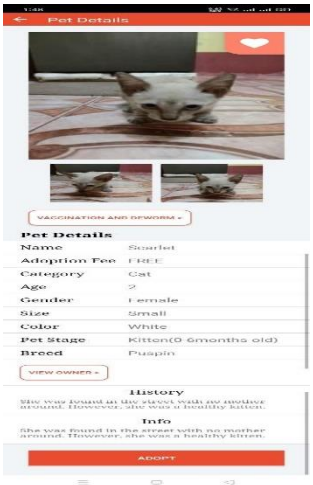

Figure 26. Pet Details Interface

Table 2. Stakeholders' Responses on System Capabilities of the Application

	Indicators	Animal Shelters [n = 3]		Pet Owners [n = 35]		Adopters [n = 40]		Consolidated [N = 78]	
		Mean	Inter	Mean	Inter	Mean	Inter	Mean	Inter
1.	Speed	3.43	VC	3.55	VC	3.65	VC	3.54	VC
2.	Reliability	3.76	VC	3.47	VC	3.89	VC	3.71	VC
3.	Functionalities	3.37	VC	3.06	MC	3.55	VC	3.33	VC
4.	Corrective	3.22	MC	3.19	MC	3.09	MC	3.17	MC
5.	Design	3.84	VC	3.74	VC	3.43	VC	3.67	VC
	Aggregate Mean	**3.52**	**VC**	**3.40**	**VC**	**3.52**	**VC**	**3.48**	**VC**

Range:

1.00-1.74 Not Capable [NC]; 1.75-2.49 Less Capable [LC];
2.50-3.24 Moderately Capable [MC]; 3.25-4.00 Very Capable [VC]

Stakeholders Assessment on the Application

Table 1 presents the results of the stakeholders' responses on their satisfaction with the use of the application.

When data are combined, the study shows that the application's Features got the highest mean of 3.61 [Very Satisfied]. At the same time, the Overall product got the lowest mean of 3.49 [Very Satisfied].

The data imply that the system users were delighted

Table 1. Stakeholders' Responses on Satisfaction of the Application

	Indicators	Animal Shelters [n = 3]		Pet Owners [n = 35]		Adopters [n = 40]		Consolidated [N = 78]	
		Mean	Inter	Mean	Inter	Mean	Inter	Mean	Inter
1.	Quality of the application	3.70	VS	3.27	VS	3.61	VS	3.53	VS
2.	Responsiveness	3.33	VS	3.35	VS	3.99	VS	3.56	VS
3.	Features of the application	3.87	VS	3.41	VS	3.56	VS	3.61	VS
4.	User-friendliness	3.48	VS	3.09	MS	3.95	VS	3.51	VS
5.	Overall product	3.57	VS	3.44	VS	3.47	VS	3.49	VS
	Aggregate Mean	**3.59**	**VS**	**3.31**	**VS**	**3.72**	**VS**	**3.54**	**VS**

Range:

1.00-1.74 Not Satisfied [NS]; 1.75-2.49 Less Satisfied [LS];
2.50-3.24 Moderately Satisfied [MS]; 3.25-4.00 Very Satisfied [VS]

The table shows that most respondents from animal shelters were very satisfied with the application's features [Mean = 3.87]. While the indicator, Responsiveness, got the lowest mean of 3.33 [Very Satisfied].

Also, the table reveals that most pet owners were very satisfied with the overall product [Mean = 3.44]. While the indicator, User-friendliness, got the lowest mean of 3.09 [Moderately Satisfied.]

Moreover, Table 1 shows that most adopters were very satisfied with the application's responsiveness [Mean = 3.99]. While the indicator, Overall product, got the lowest mean of 3.47 [Moderately Satisfied].

with the Web and mobile-based applications for adopting pets because adopting them from shelters saves more than just one life. The pet adopters help free up spaces inside the shelter, giving the shelter more space for rescued animals.

Housing design affects staff, pets, and adopters. Regarding cages, double-compartment housing is perhaps the most significant factor affecting staff safety and efficiency. The most significant risk to staff in daily care comes with moving and crating pets to clean and service the enclosure [24].

The study of [25] concluded that those who adopted the pets lived in different parts of town than those who

adopted from a shelter. Although the pets have a more extended stay from intake to adoption, they spend less time in the shelter and free up more kennel space for other pets in the shelter.

Table 2 presents the results of the stakeholders' responses to the system capabilities of the application. The table shows that most respondents from animal shelters agreed that the application design is very capable of adopting pets, with a mean of 3.84. While the indicator, Corrective, got the lowest mean of 3.22 [Moderately Capable].

Also, the table reveals that most pet owners agreed that the application design could capture data on pet adoption [Mean = 3.74]. While the indicator, Functionalities, got the lowest mean of 3.06 [Moderately Capable].

Further, the table shows that most adopters agreed that the reliability of the application was very capable [Mean = 3.89]. While the indicator, Corrective, got the lowest mean of 3.09 [Moderately Capable].

When data are combined, the study shows that the application's Reliability got the highest mean of 3.71 [Very Capable]. While the indicator Corrective got the lowest mean of 3.17 [Moderately Capable].

The data imply that the system is capable of adopting pets utilizing the Web or by a mobile device. The users acknowledge the speed, reliability, functionalities, and design of the system for adopting pets.

An increasing number of information technology systems and services are being created to influence users' attitudes, behavior, or both. The study by [26] discusses designing and evaluating persuasive systems and the types of content and software functionality that may be found in the final product. The following seven underlying postulates, methods for analyzing the user and the user context, and persuasive design strategies and guidelines are highlighted.

[27] Investigates the use of UX and UI design theory to improve the pet adoption process and determines whether a more efficient user experience would result in a higher adoption rate and increased awareness. Users are likely to continue using and sharing an app that is simple, efficient, and usable. Users will not analyze every detail but will intuitively recognize features and indirect meanings, so nothing on their screen should be redundant.

Table 3 presents the results of the stakeholders' responses on the usefulness of the application.

The table shows that most respondents from animal shelters agreed that the application helps them be more productive, with a mean of 3.91.

While the indicator, Helps to more effective, got the lowest mean of 3.22 [Moderately Useful].

Further, the table reveals that most pet owners agreed that the application helps them be more productive and got the highest mean of 3.76 [Very Useful], while the indicator, Helps meet my needs, got the lowest mean of 3.18 [Moderately Useful].

Moreover, the table shows that most adopters agreed that the application helps them be more productive and got the highest mean of 3.95 [Very Useful]. Also, it reveals that the application helps pet owners helps find shelter for pets got the lowest mean of 3.13 [Moderately Useful].

Table 3. Stakeholders' Responses on Usefulness of the Application

	Indicators	Animal Shelters [n = 3]		Pet Owners [n = 35]		Adopters [n = 40]		Consolidated [N = 78]	
		Mean	Inter	Mean	Inter	Mean	Inter	Mean	Inter
1.	Helps to be more effective	3.22	MU	3.48	VU	3.95	VU	3.55	VU
2.	Helps to be productive	3.91	VU	3.76	VU	3.15	MU	3.61	VU
3.	Helps to save time and effort	3.81	VU	3.56	VU	3.53	VU	3.63	VU
4.	Helps meet my needs	3.63	VU	3.18	MU	3.91	VU	3.57	VU
5.	Helps them to find their shelter for pets	3.55	VU	3.65	VU	3.13	MU	3.44	VU
	Aggregate Mean	**3.62**	**VU**	**3.53**	**VU**	**3.53**	**VU**	**3.56**	**VU**

Range:

1.00-1.74 Not Useful [NU]; 1.75-2.49 Less Useful [LU];

2.50-3.24 Moderately Useful [MU]; 3.25-4.00 Very Useful [VU]

When data are combined, it reveals that the users agreed that the application helps them save time and effort [Mean = 3.63, Very Useful]. While the indicator, Helps them to find shelter for pets got the lowest of 3.44 [Very Useful].

The data imply that the Web and mobile applications for pet adoption benefit users of the system. Animal shelters have vital roles in the community to reunite pet owners and adopters to lessen the number of pets in the shelter.

The study of [28] aimed to reduce the number of stray animals by introducing an app that is convenient for the public. The mobile applications provide a function and information about pets only. These apps do not give the necessary information to users in handling stray animals. Even though the evaluation results were satisfactory, the app still lacked some features.

Many web and mobile application platforms use a decentralized control strategy, relying on explicit user consent to grant the apps' requested permissions. Users must rely on community ratings as the primary signal for identifying potentially harmful and inappropriate apps, even though community ratings typically reflect opinions about perceived functionality or performance rather than risks. [29] attempt to deceive or entice users into granting permissions by requesting more permissions than is typical; 'look-alike' applications with names similar to popular applications also request more permissions than is typical.

7. Conclusions

Domestic pets are seen every day on the streets with nothing but themselves. Those strays may look untamed and aggressive, but they are much more than that. Those pets, with proper training, are harmless and only looking for the love and care they need. Pets offer unmatched loyalty, and with animal adoption, people cannot only lessen the number of strays but also stop the abuse that most animals are getting from people who do not deserve to have pets. To adopt a pet is undeniably a big responsibility. However, people have to start adopting rather than buying. Thousands of animals are being euthanized each day, and with adoption, people can put an end to it. Decisions to adopt give them a second chance in life and helps reduce overcrowding in animal shelters. Animal adoption must be normalized and introduced to other people to help those animals that are struggling because those animals deserve to live a happy life just like humans, and with the world's current situation, humans are the most capable of helping those animals**.**

8. Recommendations

The researchers recommend conducting another study to support the preliminary findings.

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