PET ADOPTION APPLICATION: USING FLUTTER

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Abstract - *Through the development of a user-friendly app, this research seeks to decrease the number of strays in India. Applications for pet adoption are common in other countries but not in India. The current crop of mobile applications simply offers a "Adopt" option and pet-related information. These kinds of programs don't provide users with the knowledge they need to handle stray animals. As a result, the writers made the decision to create a prototype of an app to help stray animals in India. Feedback on the planned prototype was also obtained in addition to that. The app's prototype was created and tested with users. The software lacks a few features even though the evaluation results were excellent.. Therefore, the authors have suggested those adjustments for potential future improvement.*

1. INTRODUCTION -

In recent years, as more and more people and families look to expand their homes with new furry members, pet adoption has grown in popularity. To guarantee that the animal is placed in a loving and safe environment, the adoption procedure for pets can be difficult and frequently entails a thorough application and screening process. This research paper's objective is to evaluate the efficiency of pet adoption application procedures and how they affect the adoption of successful pets.

Adopting a pet is a big commitment, so prospective pet owners need to be ready to give their new pet the proper attention, care, and resources to maintain their health and wellness. As a result, adoption agencies and shelters frequently demand that potential adopters fill out a thorough application form that includes inquiries about

their current living circumstances, history with owning pets, and other pertinent information. These application forms are used to determine whether a potential adopter is a good match for the animal in issue and possesses the skills and resources required to give the animal a loving and caring home.

It's not always apparent, though, how well these application procedures actually work to ensure successful pet adoptions. Although the procedure might keep unfit applications away and save animals from going to dangerous or unsuitable homes, it might also deter some prospective adopters from going through with it, leading to fewer successful adoptions. The screening procedure might not always be perfect, and some animals might be placed in homes that are not the ideal fit for their requirements, leading to unfavourable results including returns to the shelter or even abandonment.

2. AIM AND OBJECTIVE –

The purpose of this research is to develop a comprehensive application that can assist animals in a variety of ways. The program need to be able to significantly lower the number of stray animals while assisting their individual owners in locating their ideal companions. The technology, for instance, enables users to adopt pets and locate abandoned pets. By enabling users to sign up for volunteer work to support the animals featured in the system, the system acts as a platform. As communication is established, it will be much simpler to find lost pets with the platform offered. The following are the key goals of pet adoption application:-

1. To help stray animals find their rightful owners through the platform developed in the application where users may post stray animal images and locations, thereby reducing the number of stray animals.

2. To aid pet owners in locating their lost animals by enabling owners to post photos of their missing dogs online.

3. Motivating volunteers to take part in charitable initiatives to assist stray animals.

To achieve these goals flutter has been used.
Flutter is a mobile app development framework that allows developers to create native apps for both iOS and Android platforms using a single codebase. Flutter has become increasingly popular for mobile app development due to its ability to create beautiful and high-performance apps with a fast development cycle.

3. LITERATURE REVIEW-

Summarized research on stray animals that is connected. In order to support the concept and application of the proposed application, facts and findings are identified. The suggested application is evaluated and contrasted with current systems. Animals on the streets lead impoverished and wretched lives because they stray pitifully and aimlessly in areas where they have no business being. As a result of the constantly changing weather, they experience heat and cold. Even more frequently, they are pursued by aggressive and violent individuals. As a result, the Stray Animal Association stressed that adoption is a good practice and an opportunity to engage the public in adoption-related activities.

The primary goal of this activity is to increase public awareness of the issues stray animals confront. When the public showed interest in adoption events, the stray animal shelter would allow stray animals to meet their new owners and find a permanent home. This allows the animal shelter to save additional animals. Once an animal enters the shelter, a better environment and necessities including food, drink, shelter, and medical attention are supplied as needed . Additionally, the shelter must decide which animals can be adopted out and which animals cannot depending on the welfare of the general public .

These connected publications offer a variety of methods for creating pet adoption applications, including mobile apps, web platforms, machine learning algorithms, and social networking tools. Examining these works will help you understand the

benefits and drawbacks of various strategies and suggest areas for further investigation.

Table 1: Comparing the weakness and strengths of the existing application.

Name of application : Dogly	
Strengths	Weakness
1.An appealing UI

2. The capacity to share, discover, and exchange "likes" with other users.

3. The option to select the Daily Dogly Give each month to the shelter's most charitable cause. | 1. Inadequate sharing capabilities on social networking.

2. A few of the features, such as user accounts, are unstable.

3.Too many categories, like profound pups and cheerful tails, are likely to confuse users. Photos can also be uploaded to those categories. |

For your research study, you might want to take a look at some of the following relevant papers on pet adoption applications:

Table 2: Literature review of several papers

Author and Year	Title	Reflections	Pros	Cons	Outcome
Manan Shah , Arsh Shaikh , Zeib Shaikh , Abhay Shittal	Pet Adoption App	To create a people friendly online platform where people come to know about various pet that require help so they can adopt using the app.	Great UI	Lot of old listing as they are not updated.	People will come to know about stray animals that need their help, people will able to share their stories of how they rescued pets and motivate other to do so.
Raenu Kolandaisamy , Indraah Kolandaisamy , Kasthuri Subaramani (December 2016)	Stray Animal Mobile App	Make a program with integrated features that can help animals in a variety of ways.	1. Stylish interface 2. The ability to share, explore, and receive "likes" from other users to choose as the Daily Dogly. 3. Make a monthly donation to the shelter with the highest overall needs.	1. Poor functionality that prevents social media sharing. 2. A few of the features, such as user accounts, are unstable. 3. Too many categories, such "profound pups," "happy tails," and others, might be confusing to users.	To help stray animals locate their rightful owners using the platform application, which allows users to post the images and location of an animal in need of adoption. This will help to minimize the number of stray animals on the streets.
Sener R, Traik Turk Phd (September 2019)	Creating a mobile application for Android to support temporary animal shelter operations	The On the Android operating system, the "ShelterInfo" mobile app was developed for temporary animal shelter operations.In addition to local governments and volunteers for neighborhood animal protection, this app has been made for community members who want details on temporary animal shelters, who want to visit the nearest animal shelter, and who want to adopt animals from animal shelters.	Using information from the website, the mobile application has been updated. Through the platform, each animal shelter can construct their own databases.	The website crashes a lot.	People who wish to own an animal or learn more about them always want to be able to simply discover the answers online. It benefits animal lovers that they can view the adopt billboard without visiting an animal shelter. One of their first options is to access the internet via smartphones. Users' daily lives are made simpler by the ability to view the animal shelter, find routes, and identify the closest animal shelter when they need assistance.
Haoran Liu ,Xiue Meng (2019)	JSP-based Pet Adoption System	The main modules include member management, pet information management, pet adoption management, and pet statistics module..	1. Automatic login and remember password 2. Code analysis.	1. The pace is sluggish. 2. Very difficult to update the data on a regular basis because it requires a lot of coding. 3. Users occasionally experience bugs or glitches.	The pet adoption system's function has been implemented using JSP technology, creating a strong platform for further study in related areas.
Pradheep Kumar, Madhu, C. Sathish, Jaya Kumar	Health Experts For Pets Using Mobile Apps	With the help of this app, we may call the vet at any time and save pets lives.The animals can receive emergency care. Finding nearby hospitals that provide medical care is helpful.	Online Appointment, Communication and Hospitals, Emergencies	It depends on your internet's ping; if your internet's ping is low, it won't function properly.	Advices on pet care medications using this app. Therefore, scheduling an appointment online is made simpler by saving our time. It benefits society, animals, and people's health.
Yeshwin, Anil Archana Sahoo, Powel Shoby (2020)	Pet-Friendly Application using Flutterand Firebase	This program makes it easier for people to determine whether a specific location is pet friendly, such as cafés, stores, and parks where they are permitted to bring their pets.	1.Community: The Firebase community is supportive. 2. Ease of Integration 3. Free for Novices.	1.Data Storage is Inconvenient. 2. Limited Data Migration	Using a single code base, creating a pet Friendly Places application that is independent of the platform and functions flawlessly on both iOS and Android.

Santy, Ryan Karuna, Alvin Budiman (2018)	E-dopt: A application for pet adoption	It provides convenience for those who want to adopt pets or give out pets.	Data is updated.	Design of the application is poor as well as glitches are present.	All the information about the pet is given in the application.
John smith	Pawsite adoptions	Pawsite adoptions is a potential method for overcoming obstacles to pet adoption and enhancing the quality of life for companion animals.	The application has the ability to enhance the adoption process for both pet seekers and shelters by making available pets more visible and accessible.	Time consuming.	Using an iterative design process, the app was created, taking into account input from both pet-seekers and shelter employees. The design and functioning of the program were assessed through a usability research, and participants reported a high degree of satisfaction and usefulness.
Sarah Johnson	PAWS: A user-centered pet adoption app for improved animal welfare	PAWS is a potentially useful technique for enhancing animal welfare and raising the number of successful pet adoptions. The software has the potential to significantly improve the lives of companion animals by prioritizing the needs of both pets and pet seekers.	Innovative features of the program include a matching algorithm that recommends pets based on user tastes and lifestyle, as well as an adoption tracker that lets users follow the status of their adoption application. Additionally, because the app links with social media sites, users may share pet profiles and advertise adoption to a larger audience.	To maintain the data current, a sizable crew is needed, and the size of the app must be increased, for instance, from 50mb to 1.05gb.	The app provides a user-friendly interface for pet seekers to search and browse available pets, view pet profiles, and connect with pet shelters and rescue organizations. The app also offers features for pet shelters and rescue organizations to manage pet listings, communicate with potential adopters, and track adoption applications.

4. PROBLEM STATEMENT –

The procedures used today to adopt or find pets are inefficient and non-systematic. People distributed flyers to the general public and alerted neighbors about the missing animal. If there is a reward, the owner is also at risk since thieves can try to take the prize. Additionally, printing numerous copies of flyers with no intended use for reproduction is a waste of resources. In addition, there are stray animals that have been neglected or even abandoned by their owners. The continuous practice of humans leaving animals behind has gradually increased the number of stray animals. So, in order to address this issue, families that can accommodate animals should do so.

However, a platform is required to allow these individuals to adopt stray animals, allowing them to do so as opposed to purchasing them from pet stores. Although many compassionate people who care for animals and want to help exist, most people lack the necessary knowledge to preserve animals.

Without the right direction, volunteers frequently struggle to assist the animals, and they frequently struggle to find friends or other volunteers to help them. There are always more animals in need than there are volunteers willing to help. There won't be enough people accessible to assist in an emergency as a result. A platform that enables groups to schedule events and ask volunteers to take part will therefore be useful.

Animals do not like to be limited by nature. Additionally, they value freedom the same way that humans do. Animals frequently venture outside the confines of the home to explore, but occasionally they stray too far and become lost. Owners may have a very difficult time locating their dogs since they are unable to determine where they have gone or in which direction they have turned. Even if they come across lost animals, humans won't know what to do. A platform where pet owners can report their missing animals and those who have seen them can respond and even provide contact information will be useful. With the advent of the internet over the past ten years, individuals have begun using websites and portals to assist animals in many ways. However, the effectiveness of using the internet to further the goal of aiding animals is ineffective. This demonstrates that websites take longer than mobile applications to reply to any situation since a mobile application can be accessed whenever a mobile phone has connectivity. Consequently, a system that will promptly remedy the issue is required.

5. METHOD –

A structured process that includes defining the application requirements, designing the user interface, creating the backend system, implementing the application logic, testing the application, and publishing it to the app stores is needed to create a pet adoption app using Flutter. These procedures can be used by developers to produce a user-friendly pet adoption application that is high-quality and effective. It is a comprehensive plan that describes how to develop, maintain, and upgrade certain software.
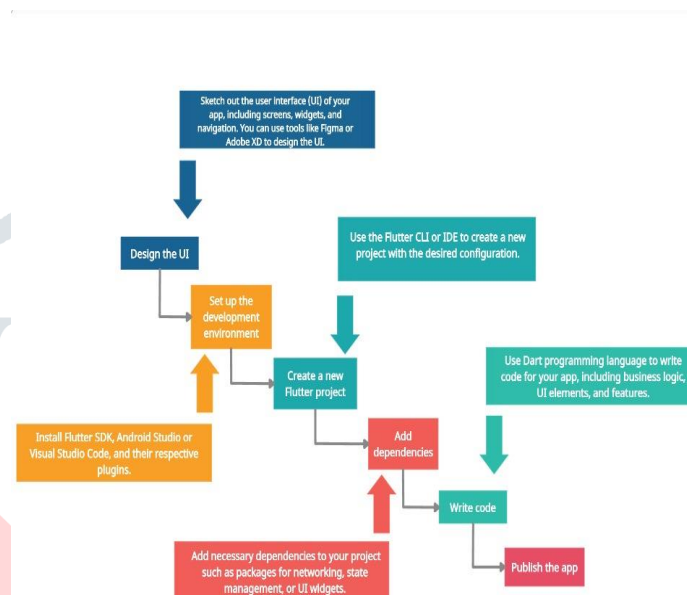

Fig.1

6. EVALUATION-

A complete evaluation, including unit testing, integration testing, and system testing, has been performed on the prototype pet adoption application system. Additionally, evaluation checks that the researcher has accomplished the project's objectives to avoid situations in which the researcher disregards the project's guidelines or scope.
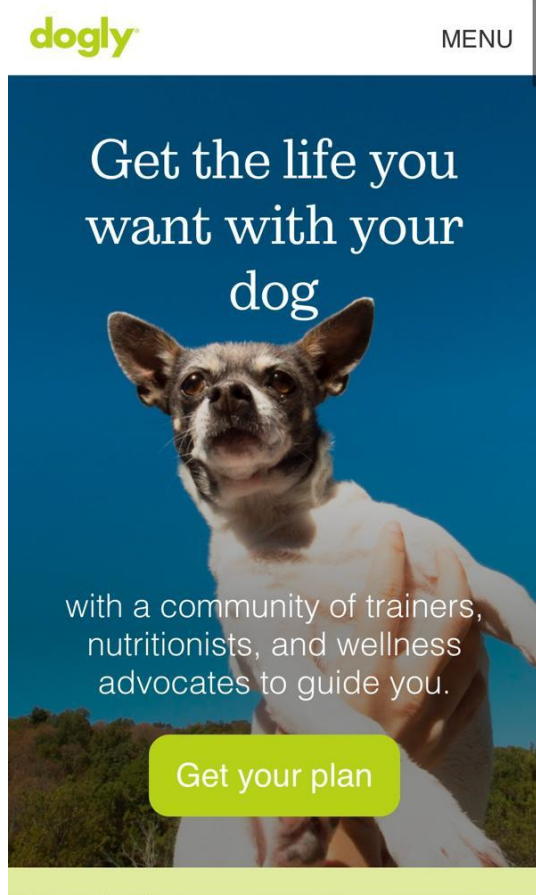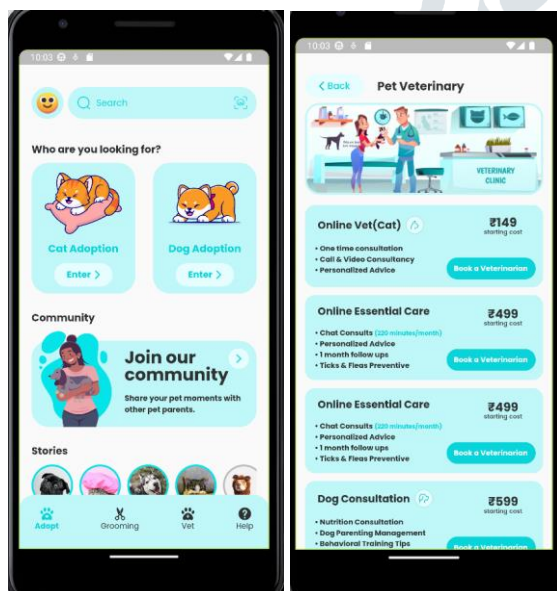
Fig.2
EXISTING APPLICATION: DOGLY [8]

Fig.3
PET ADOPTION APPLICATION USING FLUTTER

7. CONCLUSION-

The Pet Adoption Application prototype was successfully developed. The functional criteria of the application have been met using flutter, and the following objectives are described:

1. To help stray animals locate their rightful owners using the platform application, which allows users to post the images and location of an animal in need of adoption. This will help to minimize the number of stray animals on the streets.

This prototype system provides a platform for users to adopt stray animals. When users come across an animal that is homeless, they can upload a photo of the animal and share it on this network. The owner's details will also contain their phone number and address.

2. By allowing organizers to plan charitable events, to motivate volunteers to take part in charitable activities like helping animals. For users who are interested in joining as volunteers, the prototype system offers a platform. Users can access the most recent news on the system's home page because upcoming events will be announced there. In essence, the program's platform makes it possible for anybody to adopt, post lost and found items, and sign up as a volunteer. This application would speed up the process of finding a lost pet and improve the likelihood that it will be found and saved. However, during the development of, technical limitations, knowledge limitations, and time

limitations were the limitations that were encountered.

However, the Pet Adoption Application was developed as a prototype to evaluate the answers of the responders before being made available to the wider public. We truly believe that this strategy would aid in reducing the number of homeless animals. A mobile-based pet adoption program offers volunteer, adoption, and lost-and-found platforms so users may customize it to meet their needs.

8. FUTURE WORKS-

There are a number of things that can improve or innovate this application. Due to scheduling restrictions, several features that seemed advantageous to the application were not implemented. Recommendations have been made for academics or developers who are interested in carrying out the research in the future. The following characteristics could contribute to the system's value in the future:

1. The application's administrative panel: An administrator can manage the application using this functionality. It enables the administrator to upload the most recent news and forthcoming events, update the announcement, and keep users informed of their own recent news and events.

2. The location of the pet can be searched for and displayed using the Google search function. This feature will display the pet's current location that users have located. The owners may simply locate their lost pet because it will display the critters' precise locations. Users will now be able to utilize Google Maps to look for stray animals in their

neighbourhood. Users can then rescue or adopt the abandoned animals in accordance with their choice.

3. Users or administrators can communicate with one another using this platform. A question can be posed by a user on the forum. Additionally, the administrator will be able to respond to users by addressing their adoption-related worries or providing advice.

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