Development of an Application for Pets

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Abstract: The grooming, veterinary care, and sale of pets as well as pet supplies all take place through the Android app Pet Buddy. We discovered that most people are members of nuclear families that require their pets to be taught and groomed while they are away. The issue here is that they lack sufficient direction and are unable to get accurate information online regarding businesses or groups that offer similar services to pet owners. We intend to digitalize this procedure through online marketing as part of this initiative. As a result, the individual can also rely on the numerous stores that offer grooming services across the city. Also, depending on their region, people might learn about the various price points for the same service provided by other businesses. As a result, our app offers a platform where users can book grooming and veterinarian services for their pets at their convenience and have the services delivered right to their door. Combs and brushes, baths, shampoos, and conditioners, as well as nail clipping and trimming, are all part of basic pet care. Users of our app can track the medical histories of their pets, buy pet food, and request grooming and boarding services based on the information given. By this, we hope to benefit those who lead hybrid lifestyles and require such services.

We design an Android application so that it prompts every user to log in. The user is taken to the site after logging in, where they may view all the services offered by various suppliers throughout the city. In addition to this, there were alternatives for choosing other services and purchasing pet food.

Index Terms- Grooming, Training, Veterinary, Boarding, Pet

I. INTRODUCTION

One of the world's marketplaces for pet care with the largest increase is India. Rising earnings, nuclear families, and shifting views towards dogs and pet owners are some of the causes driving this development. Throughout the outbreak, some 30,000 people adopted animals. A survey found that companies including grooming and hospitality also saw a rise from 22% to 29%. The Times of India reports that the pet styling market has expanded recently. This company brings in a large quantity of money.

Pet owners are becoming more and more like parents to their animals. They are cared for just like members of their own family, and their owners were willing to spend a lot of money on them to keep them looking and feeling their best. Working more days and longer hours is a significant trend in the workplace. Then there is the mobile professional. Professionals are looking for assistance to provide loving and engaging day-care for their pets. Pets must be looked after for extended periods of time when their owners are gone.

As of 2019, Nagpur is home to 45,000 pets, of whom 15,000 are other animals and 30,000 are dogs. In Nagpur, the only way to access basic services like grooming, veterinarian, sitting, boarding, and others is through phone calls rather than app-based services. Our market analysis will concentrate on dual-income households, mobile

professionals, and households with busy schedules juggling work, personal lives, and pets. Pet owners—not just those with one pet per home—who are willing to use our services for their animals are our target market.
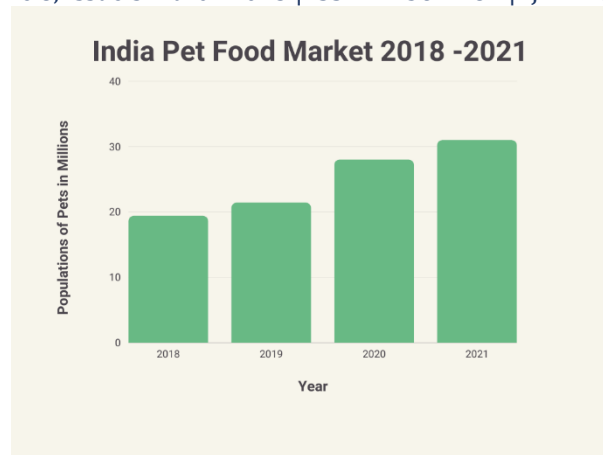
Goals or Objectives:

- To provide pet grooming services.

- To provide veterinary services.

- To provide door to door services.

- To provide hassle free reservation for the pet.

II. LITERATURE SURVEY

The report entitled "India Pet Care Market Outlook, 2021-26" gives a comprehensive analysis of the pet care market of India for the segmentations of Pet Food, Pet Accessories, Pet Grooming & Pet Healthcare, along with in-depth analysis for market share by animal type (Dog, Cat, rabbit, bird, and others), by food type (wet & dry), by accessories (toys; harness, collar, leashes chain & muzzles; Beds, Pet Houses, Crates & Cages; Bowls, Feeders, training tray & pads, Litter box; and others), by grooming product (Shampoo & conditioner, oil, spray; brushes, combs, trimmers; & others) by sales channel (Specialized Stores, Multi Brand Retails & Online Retails), by region (east, west, north, and south), by cities (Bangalore, Mumbai, Hyderabad, Delhi, Chennai, and others) and by major companies.[1]

By the end of the predicted time, it is anticipated that the pet care industry in India will have grown to a value of INR 7500 crores due to the rise in nuclear families, double-income homes, changing lifestyles, urbanization, and rising pet ownership. Delayed parenthood, which is common among urban and newlywed couples, has led to a rise in pet adoption rates nationwide, making them an emotional stimulant.1]

The Indian pet food market is projected to register a CAGR of 4.7% during the forecast period (2022-2027). The COVID-19 pandemic has caused a major impact on the pet food market in India. Due to the rampant spread of misinformation on pets' immunity to infection, some people started abandoning their pets, leading the pet food industry to launch awareness campaigns to dispel such rumors. There were a huge supply and demand gap due to panic buying of pet food among pet parents, which the pet food industry was unable to cater to due to disruptions in the supply chain and poor logistic services.[2]

The concept of owning pets and taking care of them is a very urban phenomenon in India. In 2020, major factors driving the demand for pet food in India included increasing pet ownership, rising per capita disposable income, and increasing nuclear families, particularly in urban areas. The initial impasse of the Indian consumers' overspending on pets is slowly giving way to trends such as pet humanization and sensitization, which are well demonstrated by the rapid rise in adoption rates. In India, pet food predominantly includes packaged, ready-to-eat food products manufactured to provide complete nutrition to pets. Most bird owners rely on fruits, millets, seeds, and other protein-rich diets. They rarely buy food manufactured specifically for birds. However, in urban regions, birds are preferred as pets to dogs and cats as they are smaller, easier to care for, and low maintenance. Food for birds also differs according to species. The diets of aquatic creatures vary not only by species but also by size, with companies, such as Tropical Industry and Pacific Blue Taiwan, specializing in catering to the fish food needs of all varieties. Due to a shift in the culture of enhanced pet humanization and the importance given to the health of pets, the pet food market is projected to grow during the forecast period. [2]
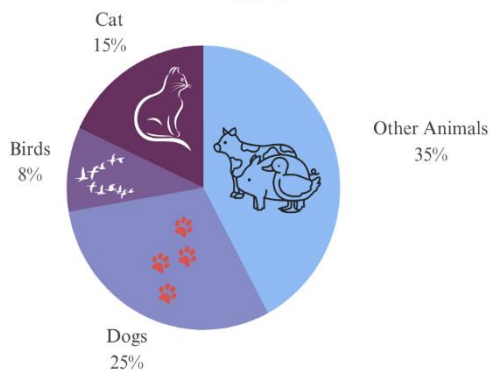
Dog food dominates the animal type segment.

India is the fastest-growing market due to the increased level of adoption of dogs and awareness about pet food products among consumers. Rising income levels and the trend of adoption of dogs in the urban parts of the country are driving the growth of the dog food market. Health concerns for animals and pet humanization have created an opportunity for the pet food market. On the other hand, growing middle-class families in countries like India are more inclined toward adopting pets.[2]

About 85% of the pets in India are dogs, with the northern region accounting for the highest pet population. However, on the contrary, cats and fish are more adopted in South India. A rising trend of natural and grain-free pet foods is being witnessed in the Indian pet food industry. Pet owners are switching to gluten-free and grain-free foods in the country. The dog owners' interest in purchasing healthy and nutritious foods for their pets drives the sales of different types of dog foods, leading to the launch of various dog food products. Thus, due to such factors, the dog segment of the market is expected to grow steadily over the forecast period. [2] The share of dogs is about

25%, share of other animals is 35%, share of cat is 15% and share of birds is about 8%.

Indian Pet Food Market: Market Share%, Animal Type, 2021

Indian Pet Food Market: Market Share%, Animal Type, 2021

Cat 15% — Birds 8% — Other Animals 35% — Dogs 25%
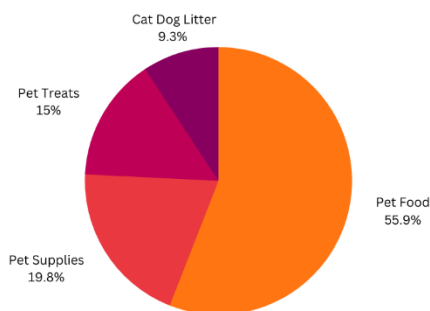
Pet Products & Supplies:

With food and pet care holding the top two spots in terms of industry sales, there are more promising prospects within the pet supply market because it is slower growing and encompasses niche products like clothing, food bowls, collars, and carriers.

A key driver for this industry will be the wide range of availability of fashionable and multifunctional pet accessories.

Pet supplies are a leading industry category in the United States, with sales of approximately 4.54 billion U.S. dollars and positive sales growth of 2.7%.

Its share of revenue also spread due to the "pet parenting" trend, in which pet owners treated their pets as family members and started supplying them with complementary products. This segment accounts for an estimated 40.6% of total industry revenue in 2019.

US Pet Product Categories by Sales

Cat Dog Litter 9.3% — Pet Treats 15% — Pet Supplies 19.8% — Pet Food 55.9%

Of those buying pet products, approximately 17% reported buying pet products online in 2017, up from approximately 13% in the previous year.[4]

Global Pet Care Market:

Petcare products are aimed towards providing better facilities, food and nutrition, care, comfort, and healthcare services for pets or companion animals. The wide range of pet care products includes pet food, cleaning and grooming products, toys, furniture, nutritional supplements, and medical supplements and care products.[5]

The growth of the pet care products market globally is directly influenced by the growing population of pets and other concerned needs in both developed and emerging economies. Further, a number of these factors have bolted the market growth significantly.[5]

The pet care market was valued at USD 2225 million in 2019 and is expected to grow with a CAGR of 6.1% during the forecast period.[5]

Pet Services Market Size, Share & Trends Analysis Report by Pet Type (Dogs, Cats), By Service Type (Pet Boarding, Pet Grooming), By Delivery Channel, By Region, And Segment Forecasts, 2022 – 2030.[6]

The global pet services market size was valued at USD 23.0 billion in 2021 and is expected to expand at a compound annual growth rate (CAGR) of 9.1% from 2022 to 2030. The increasing population of companion animals, pet humanization, strategies implemented by key companies, and increasing expenditure on pets are some of the key drivers of this market. For instance, in February 2022, Petco Health and Wellness Company, Inc. partnered with Rover- an industry online marketplace for pet services, to offer Petco customers access to pet boarding, sitting, and dog walking services. This enabled Rover to reach around 130,000 of Petco's Vital Care subscription pet parents.[6]

The growing trend of responsible pet ownership has made the pet care market scale new heights. The strides have been stridently underpinned by the deluge of pet care products over the past few years. A sizable chunk of demand has come also from the mushrooming pet care centers in some emerging and developed nations. The growing numbers of veterinary hospitals has raised the awareness about the medical science behind proper care for domesticated animals. Dogs and cats are two of the domesticated animals who have attracted considerable interest among industry players and pet care centers. Particularly, pet lovers are increasingly visiting pet care centers to seek professional care. Furthermore, they are showing a deep proclivity toward educating themselves about pet health problems. They are emphasizing on preventive care for companion animals. As a result, the trend of responsible pet ownership has caught on momentum in recent years. This is also a key trend bolstering sales of pet care products, thereby boosting the pet care market.[7].

III. PROPOSED METHODOLOGY AND DISCUSSION

A. *System Architecture:*
   The primary focus of the application is to provide all kinds of services and pet food according to the users need. We achieved this

by creating different modules for the project. The users just have to Login/Signup their accounts to buy food and book services. After buying or booking the user can pay online by card or by cash.
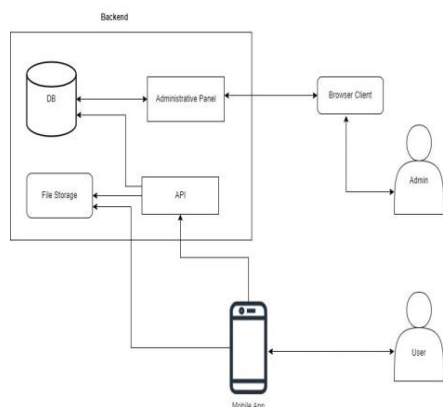
B.

Fig3.1: System Architecture

The above architecture describes the complete view of the app and its usage in the perfect manner. It also shows the working of all the actors.

C. Functional Modules:

Our application that the user should get all types of services for their pets which are provided by the various shops. The user should afford and compare prices of services provided by the shops across the city. The client must get all types of veterinary services used for the treatment of many kinds of diseases of their pets. Our marketplace will be simple where all the service providers will provide all kinds of services provided by them so that the customer can book them accordingly. Services such as grooming, and veterinary will be added by the providers.

Module 1: Admin

Admin panel is a backend area used to make a new entry of products and pets for adoption with some basic details. And can manage and access payment of the user. We used SQLITE as database to store our data.

1.1 **Admin Dashboard**: Admin can see all records of the products, services and orders.

1.2 **Manage Products**: Admin can Add/update and delete products as well as pets and services.

1.3 **Admin Management**: Admin can Login/ Log out.

Module 2: User /Customer

Users are the people who have the access to see the services and products for their pets. The user has the access to buy various kinds of products for their pets as well as they can avail the services for them.

2.1 **Home**: User/Customer can search for various kinds of products for their pets and, they can book appointment for vet as well as for grooming services.

2.2 **Order/Appointment Management**: Users/customers can view and process orders and pay for same also book an appointment for services.

2.3 **Customer Managements**: User/customer can Login/ log out, View/ Update Profile, give reviews about product as well as service.
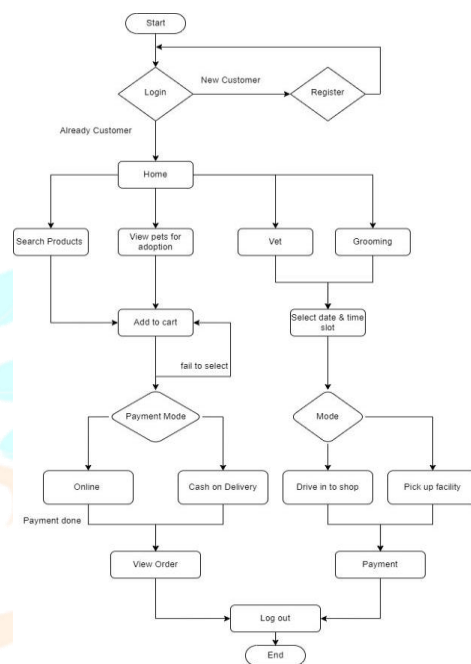
D. Flow of the system:

Fig: 3.2 Flow Chart

Here, we have shown the flow of our project. This contains the Customer's and Admin's Login/Signup information. The customer or admin must give valid credentials because they must verify their account using email or mobile verification. If they already have an account, the customer or administrator can directly login; otherwise, they need to sign up first. After a successful login, the customer can view products and book services. The customer can then buy and add the product to their cart after making their selection. After which he needs to pay online by card or by UPI. After that, he can log out. After successful login, the admin can manage orders by adding, deleting products, and accepting or rejecting bookings. Admins can also check feedback.

Discussion:

Regarding their ability to successfully communicate on these subjects, veterinary health-care providers must consider how pet owners' ideas regarding the right food and health management of companion animals can vary. It happens frequently that a patient needs to have their diet or feeding habits changed. It is important to learn about the pet's present feeding routine and gain an understanding of the reasoning behind it to successfully convince a pet owner to follow those recommendations. Analysis of the results of the study reported here suggests that there is an association between concerns of pet owners and their pet's health.

Also, they had more favourable attitudes towards performing basic pet grooming. Although there were some differences in replies between owners of dogs and cats, owners of various animals were significantly more likely to show blatant discrepancies. These findings suggest that veterinarians should be ready to address any worries pet owners may have and provide the best medical care possible for their patients.
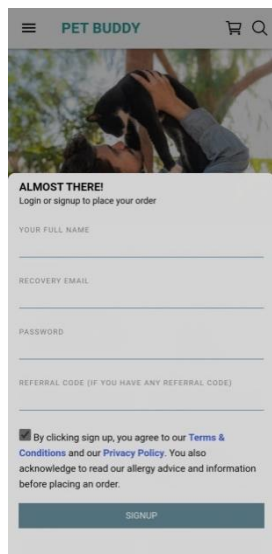
IV. EXPERIMENTAL RESULTS

Fig4.1 Login Page

This is the Login Page of our application. The user needs to verify his phone number then enter his details. After agreeing to the terms and conditions of our application the user can sign up. The user can login by entering his/her phone number and by entering password.
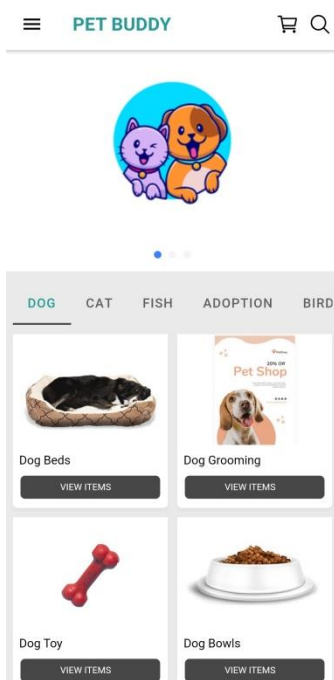

Fig4.2 Home Page

The user can check different categories of pets. The user can check various products. The user can then add the items to cart and order those products.
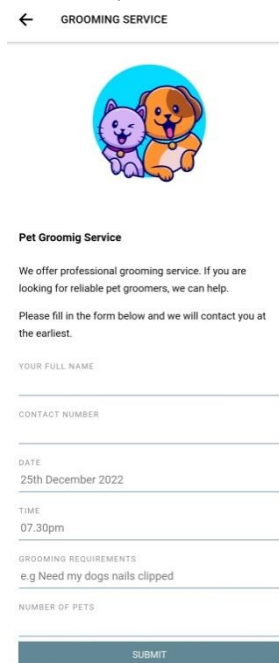

Fig4.3 Grooming Service Page

The user can book appointment for his pet. The user has to enter his/her name, contact number, date of grooming, time, his/her requirements and the number of pets he/she has. The user then can pay for the appointment.
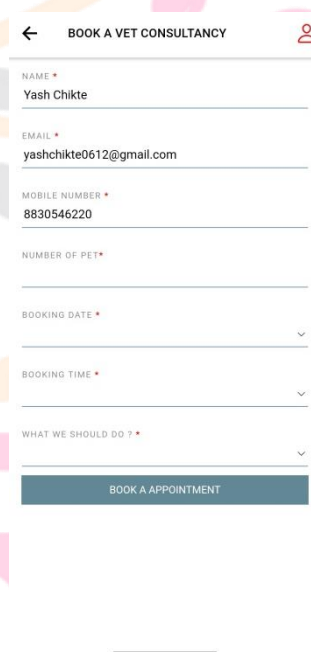

Fig4.4 Vet Consultancy Page

This is the vet consultancy page of our application where the pet owner can book an appointment with vet by filling up the details.

Fig4.5 Order Details Page

The user can check for what he ordered and what services he booked after the payment in the order details page.

V. CONCLUSION

This research paper helped us in the development of an Android application for pet grooming services as well as vet consultation for pets. It has helped us to explore various applications that were previously developed for the grooming of pets. With this paper and study, we developed an application for pet parents who are keen on the health and grooming of their pets. Our application has features like buying pet food, booking grooming services for their pets, and booking veterinary consultations for them. This application will help the users sit at home and take care of their pets while searching for services on our application.

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