



Dog Vaccination and Healthcare

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Declaration

The research work embodied in the written submission titled “Dog Vaccination and Health Care” has been carried out by the undersigned as part of the Post-Graduate program in the Industrial Design Centre, IIT Bombay, India under the supervision of Prof. Mandar Rane.

The undersigned hereby declares that this is his original work and has not been plagiarized in part or full from any source. Furthermore, this work has not been submitted for any degree in this or any other University.

I understand that any violation of the above will be a cause for disciplinary actions by the Institute and can also evoke penal action if need arises.

Anupriya Kashyap
136250010

Approval Sheet

The project entitled “Dog Vaccination and Health Care” by Anupriya Kashyap, 136250010, is approved in partial fulfilment of the requirements for the Master of Design (M. Des) Degree in Visual Communication.

Project Guide:



Chair Person:



Internal Examiner:



External Examiner:



Date: 25.11.14

Place: Mumbai

Acknowledgement

I am sincerely grateful to my guide, Prof. Mandar Rane for his thoughtful guidance, constant support and patience. I would also like to express my gratitude to Prof. Sumant Rao for his valuable feedbacks, ideas and insights during the course of the project.

I am very much thankful to my Friend Jaikishan Patel who also helped me throughout the project through his experience and knowledge in design.

I would also like to thank Doctor Vaibhav Pawar, M. V.sc, who helped me cure my stray puppy Khujju who unfortunately died in a car accident of human negligence and to whom I would like to dedicate this project, may his soul rest in peace. Doctor Pawar who also helped me knowing more about dogs, pet owners and the problems that are faced by them usually.

I would also like to take this opportunity to thank my parents for their love and motivation that kept me going. Last but not the least, I thank all my friends and relatives who helped me during my research.

Abstract

Dog owners always wonder if vaccination is truly necessary. Vaccines protect the pets against contagious potentially fatal diseases. But many cases of over vaccination and vaccination side effects have created a fear among the pet owners and they prefer skipping it or Sometimes the pet owners aren't at all aware of the vaccination schedule and the core and non core vaccines.

The purpose of this project is to provide the dog owners with an android mobile application that will help them plan a proper vaccination schedule for their pet. It will give them information about the various vaccines that can help them judge the crucial vaccines for your dog without putting your dog through any unnecessary discomfort.

The project will also address the basic healthcare issues and will help the user to locate the nearest vet, breeder, NGO around a location.

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Introduction

Studies have found out that human and dog's friendship goes back to 30,000 years back. They have been as our companion, rescuer for a long time. For all the unconditional love, affection and care taking of our home and loved ones what they need in return is a little care, love and understanding of their needs.

My Project "Dog Vaccination and Healthcare" aims at providing a very small but crucial part of the care they require.

Sadly, the majority of puppies fail to live long enough to enjoy their second birthday. The reasons are many, and one of them is healthcare. Majority of puppies die because of not being vaccinated on time. In most cases it is not the negligence but the unawareness.

The Project "Dog Vaccination and Healthcare" aims at providing the same awareness with planning and decision making for a pet's healthy life.



Pet Vaccinations: Understanding Vaccinations for Your Dog

Why do pets need vaccines?

“Vaccines protect against contagious, potentially fatal diseases”, says Margret Casal, DMV, PhD. Casal is associate professor of medical genetics at the School of Veterinary Medicine, University of Pennsylvania. Vaccines trigger immune responses, she says, and prepare pets to fight future infections.

What are the problems?

Vaccinating the pet is one of the most crucial step that comes quite early in it's life. Vaccinations are divided into two types- Core and Non Core.

Core vaccines are the ones which are mandatory by law and also recommended strongly for the good health of your pet. On the other hand Non Core vaccines are the ones which are not mandatory but their importance depends on the locality and a few other factors. Few of the problems found out during the study were:-

1. Unawareness

Pet owners are sometimes unaware of the vaccination schedule that delays the pet's vaccination resulting in fatal deaths in many cases, as young pups are most prone to certain fatal diseases and need to get vaccinated against them at a very young age.

2. Difference in Immunisation and Vaccination

Vaccination is when a vaccine is administered to a pet(usually by injection).

Immunisation is what happens in your body after the vaccination. The vaccine stimulates the immune system so that it can recognise the disease and protect the pet from future infection (i.e. pet become immune to the infection).

The reason that immunisation doesn't happen even after vaccination is when vaccination is not scheduled properly i.e. the time interval between different doses of the same vaccines and also some vaccines should not be given with the other vaccines as it suppresses the effect of one of them and pet's immune system doesn't develop immunity against either of them or both.

3. Carelessness of certain Veterinary Doctors

Often, pets are vaccinated by vets who just want to keep clients coming in. And lack of knowledge leads to poor or no judgement from the pet parent's side which results bad for the pet's health. Like too many vaccines, especially when given in "combo shots," can "assault" immune systems. There are many doubts and questions about vaccination of the pet. So it is advised to see if your vet is trust-able. There is no right or wrong answer. It is only the pet owner that decide what's best for his dog and only he can know that.

4. Side effects and other Health Complications

While any medical procedure, including vaccinations, do carry some degree of risk, the risk is generally much greater if the pet is not vaccinated at all. With a good vet and a little know how about the vaccination procedure, schedule and side effects the risk can be lowered.

5. Frequency of vaccinations

When the dog is a puppy, there is a very standard schedule of vaccinations that needs to be met during his first year of life. After this initial year, the core vaccinations of parvovirus, adenovirus and

distemper should be administered every one to three years, based on your veterinarian's recommendation.

State and city governments will determine how often a rabies vaccination must be given, and the vet will know the guidelines for your area. This time frame could range from once a year to once every three years.

If the dog is kennelled frequently, or is in regular contact with other dogs, you may need to keep up with some of the non-core vaccinations as well. Sometimes these types of vaccines will need to be administered more often, such as in the case of a kennel cough vaccine that is sometimes offered every six months.

6. Titer Test

For some dogs, a test can be done to determine whether a particular vaccination is necessary. These tests are called titer tests, and they measure the amount of antibodies for various diseases that are in your dog's body. If pet owners are concerned about giving their dog a particular vaccine, dog owner can ask a veterinarian about a titer test. But having awareness about this test is the first step for better choice of vaccination.

Diseases and Symptoms

Dogs in their lifetime suffer from many diseases and get ill just like humans.

It's the dog owners job to keep the dog healthy and safe. Knowing the facts about grooming, vaccinations, parasite prevention, and first aid can help the pet owner to choose a healthy lifestyle for their dogs and take the right measures at right time.

Diseases and Conditions in Dogs

Dogs rely heavily on their owners to look after their health issues.

Caring for their dogs is a responsibility all pet owners take on board when they bring a dog into their lives. But dog health care is not necessarily a subject all have expertise in

From most common to highly fatal disease, each one of them harms the health of the pet and should be taken care of at the right time.

Describing the diseases with preventive measures creates a fear out of love in the mind of pet owner and he takes right measures to safeguard it's dog or otherwise to cure it.

Symptoms

The first step in identifying a disease is to look for symptoms by carefully observing and picking up on the early signs/symptoms of illness or injury, accurately diagnosing and treating common health problems when appropriate or quickly recognizing health issues that require Veterinary care.

Giving the user information about symptoms from severe to mild controls the behaviour of the dog owner in such conditions keeping them calm to take a right decision.

Annual Check-up

An annual check-up is the equivalent of a human only heading to the doctor's office every five to seven years. A lot can happen during this time, which is why it is so important for the vet to take a look at a pet regularly. Early detection of problems can mean more effective treatment options and a healthier pet overall.





Breeds: Type and Description

Many varieties of dogs that might be classifiable as separate breeds are not recognized by the various international kennel clubs and breed registration groups. However at least a general count can be given, knowing that it will most certainly be an underestimation.

The World Canine Organization is best known by its French title Fédération Cynologique Internationale which is abbreviated FCI. It is the largest registry of dog breeds that is internationally accepted. Till May, 2013 FCI has recognized 339 breeds of dogs.

A new puppy is a long-term commitment, so a prospective dog owner need to be certain that he is making the right decision. There are many questions that are needed to be asked to make sure this is the right puppy for a person and that he will be able to care for it properly.

For example

- If you have children or other animals in the household
- Where your puppy will be sleeping, and
- How often it will be left on its own.

Prospective Pet Owner should also know what to expect from the breed, such as how suitable it is for families and how much space and exercise is needed. If knowing any of these things makes him uncomfortable then he is advised to consider another breed.



Determining Dog's Age

Getting a dog when it was a puppy has no trouble knowing its age. But many pets, like rescue dogs or strays, have been saved from dog pounds. This makes knowing the true age of the pet a bit more difficult. Getting a rough estimate of your young pup can help in vaccination and other medical procedures and also for knowing when the dog is close to being a dog senior citizen when it requires much more care than it ever did.

There are many methods of knowing the age of the dog. One method is by examining the dog's teeth. While the teeth will only give a very rough estimate of the dog's age, it's a good starting point.

User Study

After talking and interviewing around 21 dog owners of different section of society i.e upper, and middle class and asking them a set of questionnaire some of the common observation was found.
Set of questions were as follows-

Q1. Since when do you have a pet? How did you choose your pet?

Q2. Did you do a background check on your pet before taking?

Q3. What did you look for in the background check?

Q4. Is your pet Vaccinated?

Q5. When did it get Vaccinated? How did you come to know about vaccination?

Q6. If not Vaccinated then why?

Q7. What problems do you face in vaccination?

Q8. If your pet ever got any disease? What did you do then?

Q9. What symptoms do you look for when he gets a disease?

Q10. How did you choose your Vet? How do you find out if he is good for your pet or not?

Q11. Is your pet trained?

Q12. Home training or by Professional?

Q13. How did the training helped your pet?

Q14. If not trained then why did not you go for his training?

Q15. What do you feed your Dog? Homemade or market?

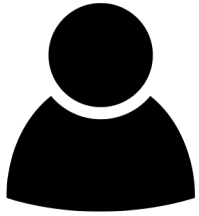
Q16. Why do you think that food is good?

Q17. How do you choose a food brand for the dog?

Q18. Have you ever faced any behavioural problem with your dog?

Q19. How did you tackle?

Q20. What problems do you face most commonly having a pet?



“I got my puppy as a gift from a friend who knew that I love playing with dogs but dont have one. Till then I had no knowledge of vaccination at all I use to just adore them and play with them”



“I bought my puppy myself but because I had no idea about the behavioural problems that puppy face if they are not from a good breeder, I did not do a background check”



“My uncle is a vet and he told us about all the useful information, in-fact he takes care of our dog more than us”



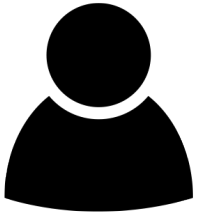
“I decide with the dog food brand by the advertisements that I see in TV, they cant be faking?”



“I have a lot of friends who have dogs, so I consulted them for a good vet, and he gives a lot of time, ask questions and my dog feels comfortable while check up”



“When my pet gets sick or shows symptoms of being sick I first check Internet and try to figure out what is wrong”



“Before consulting the Vet I try check on internet what is wrong with my dog because Vet’s fee is quite high and I don’t want to go for very trivial problems that I can handle myself”



“Internet is not too reliable but still good at times when nothing and no one is available”



“My puppy fell sick and the nearest to my house is a Govt. hospital, it’s cheap but I didn’t know about its credibility plus I had zero knowledge of anything related to health of dogs, I took it in hurry and my puppy lost his life due to the carelessness of first me and then the bad vet who didn’t care about anything. He didn’t tell me anything just said he will be fine in 2 days and then it got too late.”



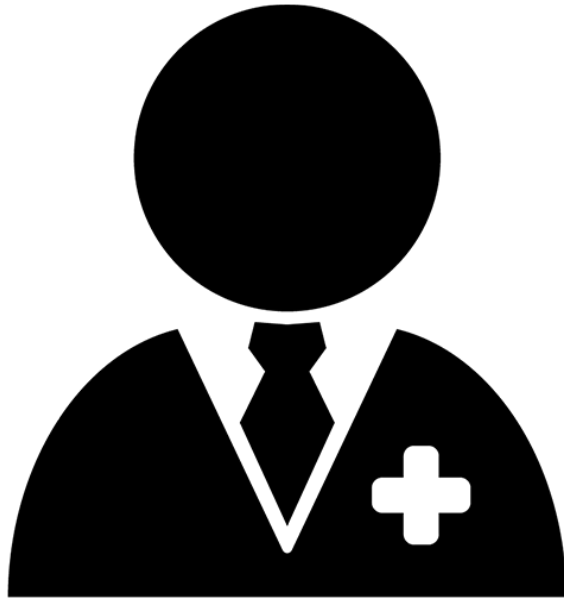
“I feel knowing the symptoms of getting alarm at the right time is very important”



“I feel being a new owner if I can get some touch points of how to up bring puppy, that would be great!”

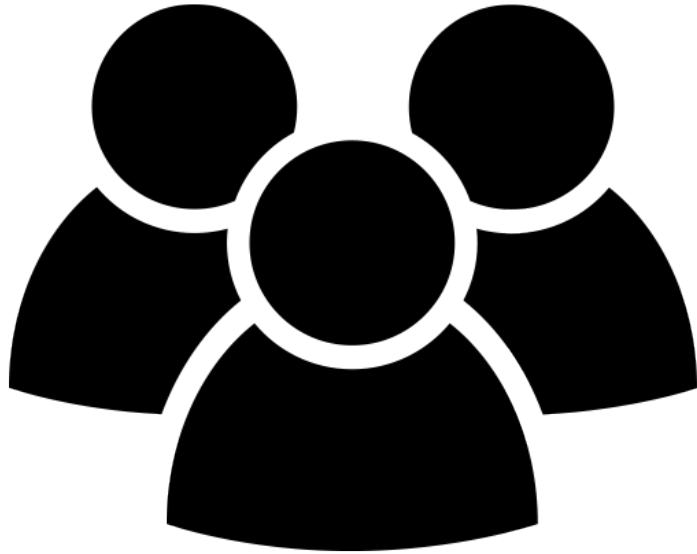


“I vaccinated my dog very late when he was an year old, I didn’t know how fatal these diseases could can get, it was only after a friend asked me to take him and I went to the vet”



“Knowing the right time of your puppy to get vaccinated is important because we get so many cases of puppies getting infected with fatal disease like parvo virus which mostly results in death due to not vaccinating at the correct age”

“Some health problems in dogs like ticks and fleas are very common and can be treated very easily, ignoring such basic things results in a bigger problem so the dog owners should know how to look for the symptoms and take action at the correct time”



Analysis

After analysing the answers of the pet owners, vet and prospective dog owners it was found that-

1. 8 out of 21 people interviewed got their pet from someone else like a friend or as a stray who had little or no knowledge of basic healthcare and vaccinations, or dog breed type.
2. 17 of the dogs were vaccinated from which 9 weren't vaccinated on time as per the schedule.
3. All the dog owners looked on Internet first if he found something wrong with his dog.
4. Only 2 out of the 21 dogs were trained by professionals, rest weren't trained properly because of lack of the knowledge of training from dog owner's part and also they didn't realise the importance of training.
5. Social network plays a very crucial part while choosing a Vet, as 18 people asked their friends, neighbours, relatives for a vet.
6. 19 people out of 21 had no knowledge of breeds their behaviour and needs.

Medium

A decision on the medium as an android mobile application was taken as majority of people look first on Internet for any information they needed on their Dogs.

Almost every dog owner carries a smart phone.

Android has the biggest market share.

Smart phones are easily accessible as everyone has it now.

An App. can work online and offline both.



Content

1. The App. will give the basic Healthcare solution to the dog owners.
2. It will give a description of Dog diseases with Precautions to prevent them and Symptoms to identify them.
3. It will give you a graphical instruction on how to identify the age of your dog if you don't know.
4. It will help you plan your dog's Vaccination, De-worming schedule, give reminders from time to time.
5. It will help you maintain a profile of your dogs with a medical history and all the basic information.
6. It will help you locate the Vets, Breeders, NGOs nearby a particular location.
7. It will give information about all the dog's breeds.

Breeds: type and description



Generic Information



Beagle

Intelligence	I
Ease of Training	IIII
Grooming	IIII
Exercise	IIIIIIII
Life Expectancy	II
Popularity	IIIIIIII
Guard dog	IIIIIIII
Good with kids	II
Shedding	IIII
Size	II
Watchdog	IIIIIIII

(Physical)

Temperament

Height

Description

Weight

Living Conditions

Origin

Group

Health Problems

Dog Breed Selector

<input type="checkbox"/> House Type	<div><div><input checked="" type="checkbox"/> Apartment</div><div><input type="checkbox"/> Farm House</div></div>
<input type="checkbox"/> Highly Athletic	
<input checked="" type="checkbox"/> Good with kids	
<input checked="" type="checkbox"/> Excellent Watchdog	
<input checked="" type="checkbox"/> Life Expectancy	
<input type="checkbox"/> Low Shedding	
<input checked="" type="checkbox"/> Excellent Guard Dog	
<input checked="" type="checkbox"/> Easy to Train	
<input type="checkbox"/> Highly Intelligent	

Ticking to your requirements App. will filter and give you, your suitable breed.


Vaccination Planning and Description



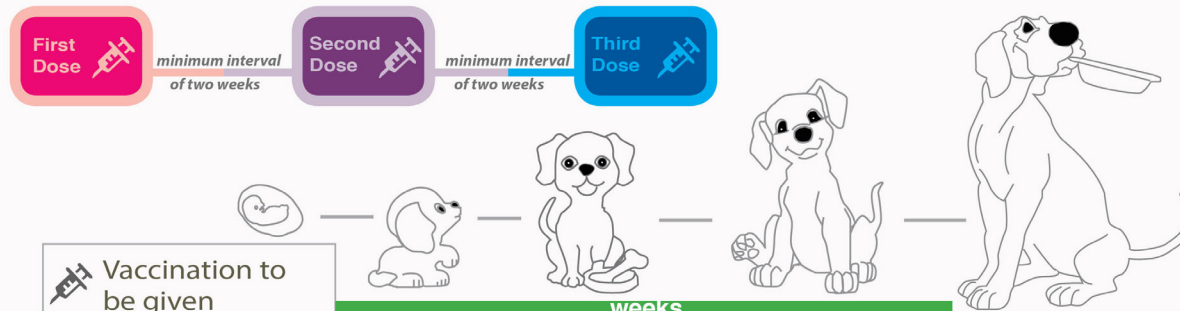
Dog Vaccination Schedule



















Dog's Name	Gender <input type="checkbox"/> M <input type="checkbox"/> F
Dog's Breed	
Owner's Name	
Owner's Address	
Doctor's Name	

Due Dates	
1. dd/mm/yy	6. dd/mm/yy
2. dd/mm/yy	7. dd/mm/yy
3. dd/mm/yy	8. dd/mm/yy
4. dd/mm/yy	9. dd/mm/yy
5. dd/mm/yy	10. dd/mm/yy

 Vaccination	vaccination given (week)	vaccination given (day)	Comments
Core			
Canine Distemper		dd/mm/yy	
Canine Parvovirus		dd/mm/yy	
Canine Adenovirus		dd/mm/yy	
Rabies		dd/mm/yy	
Non Core			
Parainfluenza		dd/mm/yy	
Leptospirosis		dd/mm/yy	
Bordetella		dd/mm/yy	
Coronavirus		dd/mm/yy	

Dog vaccination planner



 Vaccination to be given	Weeks										Revaccination	Description	Symptoms
Core	6 TH	7 TH OR 8 TH	9 TH	10 TH OR 11 TH	12 TH	13 TH	14 TH	15 TH OR 16 TH					
Canine Distemper	←		→	←		→	←		→	12 months	Severe multisystemic diseases.	Fever, loss of appetite, watery discharge from eyes and nose, dry cough, dehydration, diarrhea, vomiting	
Canine Parvovirus	←		→	←		→	←		→	12 months	A deadly viral diseases causing gastrointestinal tract damage and dehydration.	Depression, dehydration, profuse diarrhea that contains mucous and blood, vomiting	
Canine Adenovirus	←		→	←		→	←		→	12 months	Highly contagious virus seen in combination with other agents that cause upper respiratory problems.	Lethargy, bleeding under skin, loss of appetite, vomiting, swelling of head, runny nose	
Rabies					←		→			12 months	A fatal virus that affects the brain and spinal cord.	Fever, chills, fatigue, problems sleeping, loss of appetite, headache, anxiety, irritability, sore throat, vomiting	
Non Core (optional)	6 TH	7 TH OR 8 TH	9 TH	10 TH OR 11 TH	12 TH	13 TH	14 TH	15 TH OR 16 TH					
Parainfluenza	←		→	←		→	←		→	12 months	Viral disease much less severe than distemper. A type of kennel cough.	Chest pain, sore throat, cough, croup, fever, runny nose, shortness of breath, stuffy nose, wheezing	
Leptospirosis							←		→	12 months	Bacterial causing acute infection that can lead to liver and kidney diseases.	Muscle pain, shaking chills, abnormal lung sounds, fever, headache, dry cough, abdominal pain, vomiting diarrhea	
Bordetella										6 months	An infectious disease that which results in persistent dry hacking cough which is sometimes severe.	Dry hacking cough witha honking sound, breathing difficulties, lethargy, fever, watery nasal discharge.	
Coronavirus										12 months	A viral disease of intestines.	Watery diarrhea, nausea, lack of appetite, vomiting	

Scenarios



After fixing the content of the App. I started working on the different scenarios that different users with different priorities will have.

Like there will be Users-

1. Who has a Pet.
2. Who want to have a pet.
3. Who neither have a pet nor want to have but still want to dig in information for a friend or some stray.

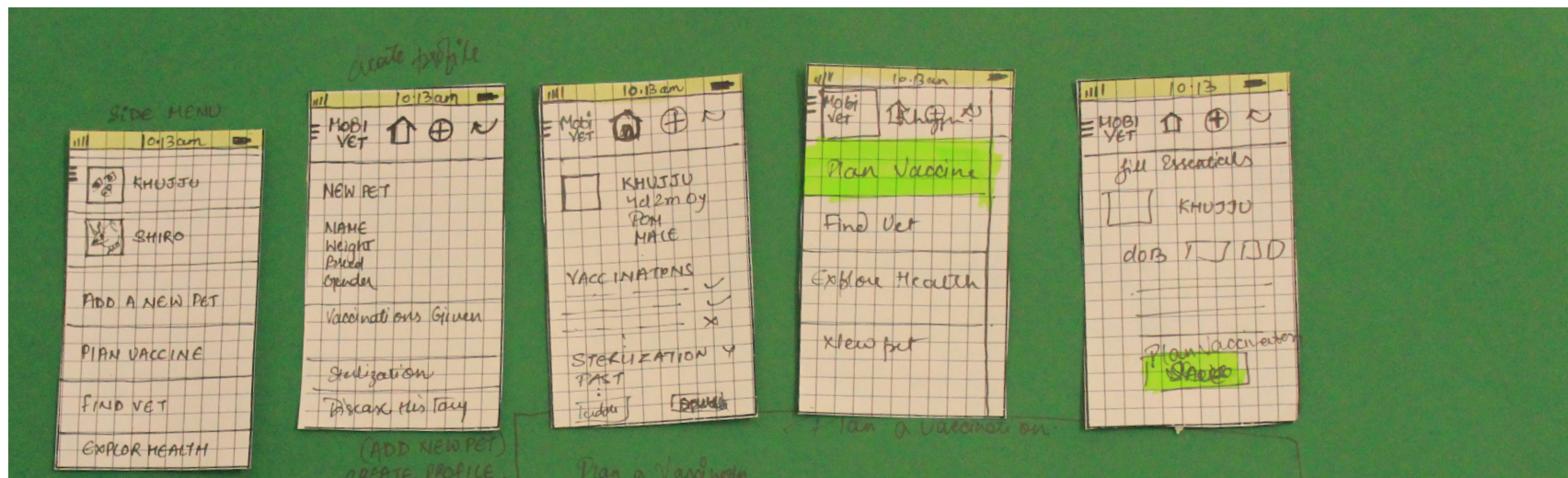
Then there can be scenarios where-

1. A user has all the information ready to be filled for his pet and want to go for planning a vaccination.
2. Then there can be a user who doesn't have all the details to be filled and still want to explore what the App. can offer.
3. Then there can be users whose priority is not vaccination and they don't want to fill the details at all for now.

Considering all these factors I started designing the interface of the App. starting from what can come on the home page.

Rough Sketches of the User Interface

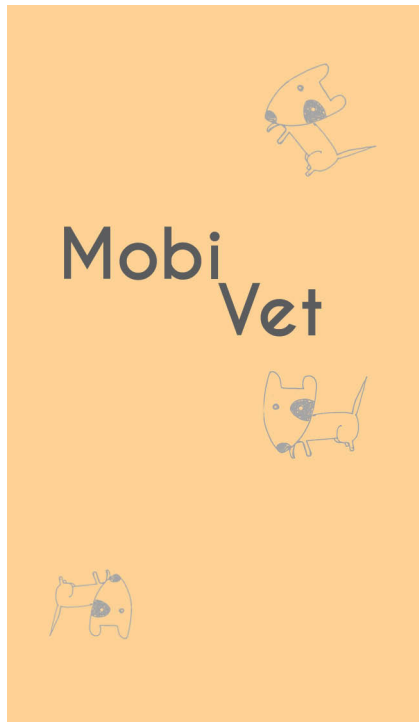




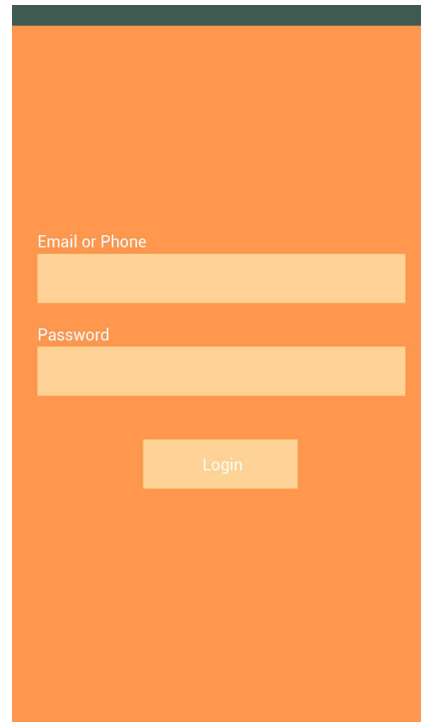
The initial rough sketches helped a lot in coming up with ideas of how the content can be put and what scenarios can occur but it didn't bring clarity of the information structure design and spacing so I started working in digital media to bring more clarity in my thoughts and scenarios.

The First Version

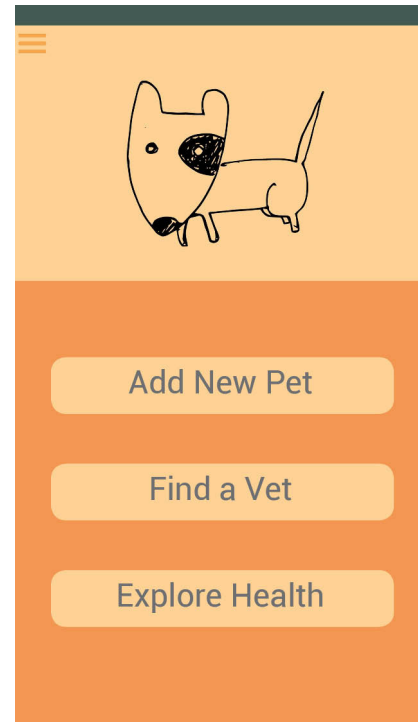




Start Screen, this is the first screen that a user will see after installing the app

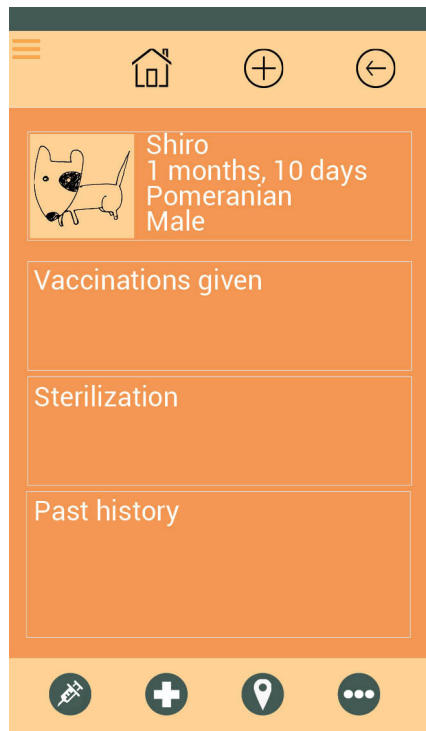


user will login through phone or email id

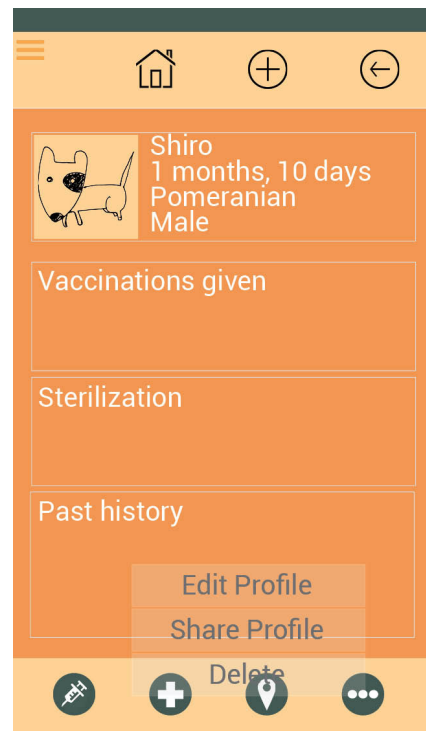


First default home screen will come with three options for now, user clicks on add new pet

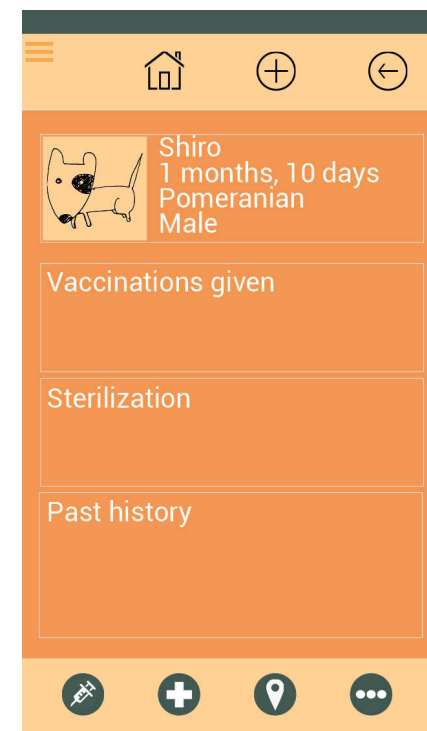
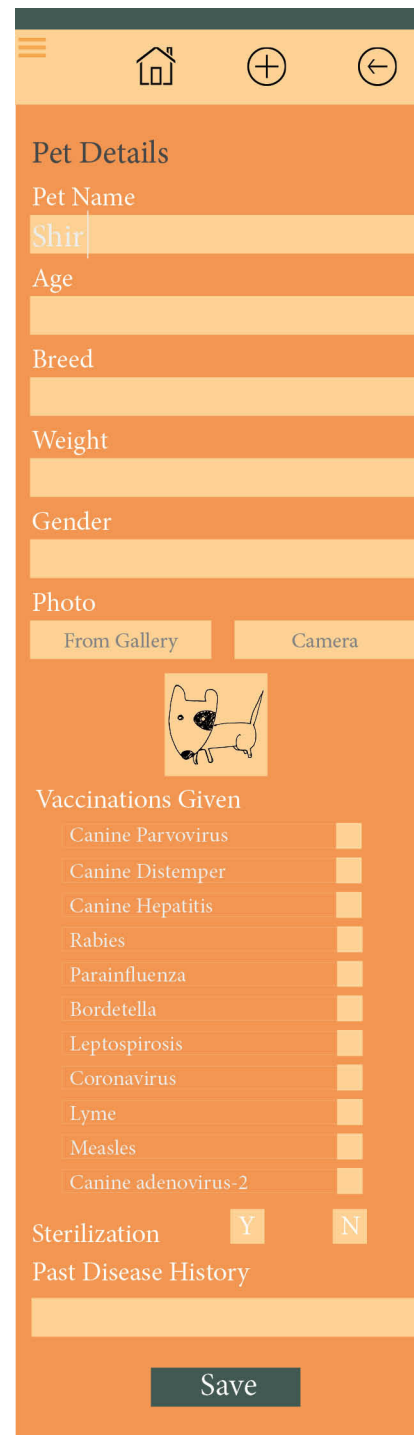
pet details are filled partially or fully and clicks save



pet profile is created with the summary of filled in details

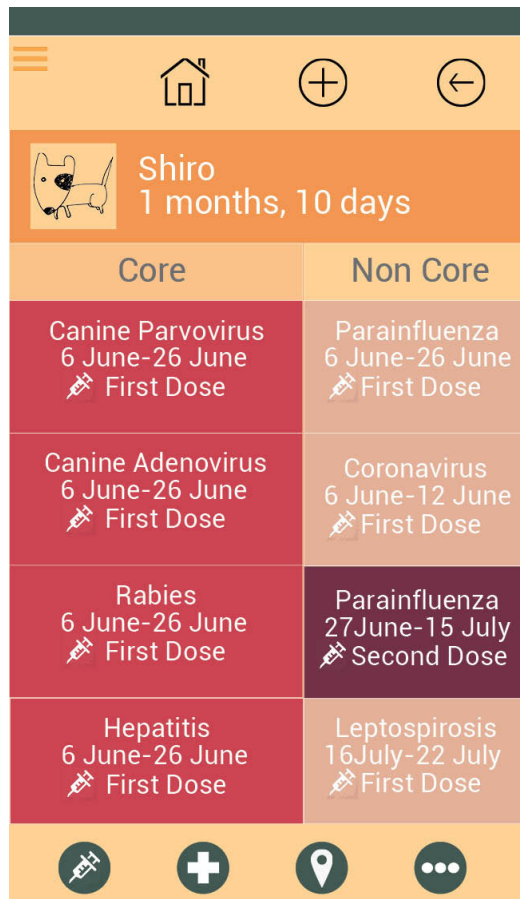


user can share, edit or delete the profile or click on plan vaccination



profile is completed, clicks on vaccination

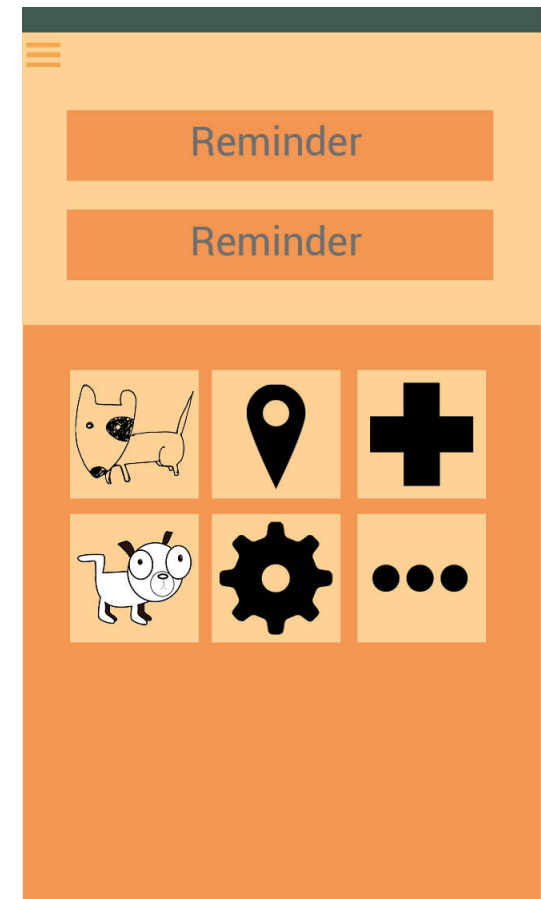
plan vaccination requires some details to be filled in



a time line of all the core and non core vaccination comes, colour depicts first second or third dose of each vaccination, user clicks on canine parvovirus



most optimal days of the vaccination to be given with the not so optimal days comes user select a day on which he has given the vaccine and save it, profile updates



the App. will put the pets of the user on home screen otherwise a user can customise the short cuts he wants to see, upper section is reserved for crucial reminders

The first version was my first attempt to see how one scenario can work, how can I arrange the space and data.

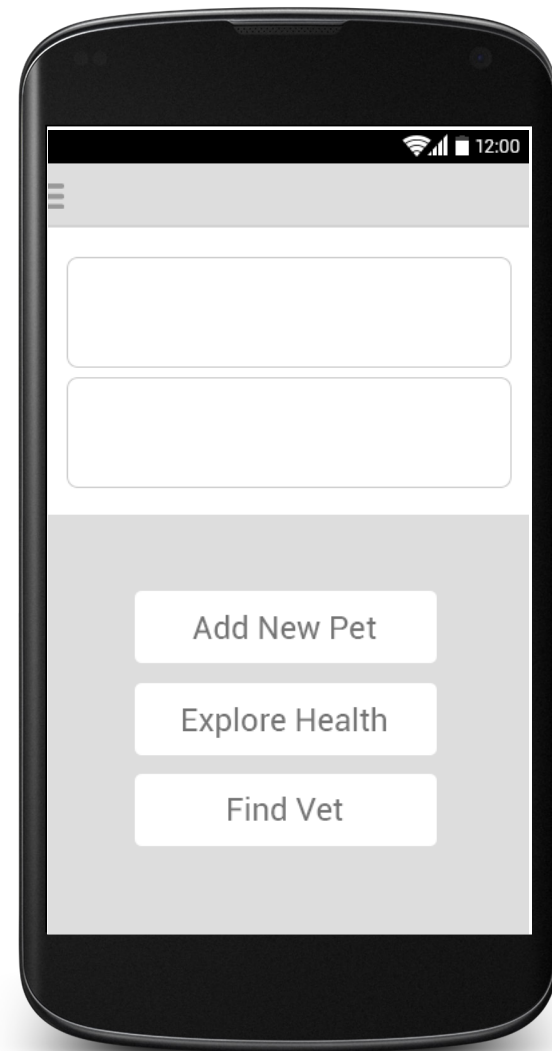
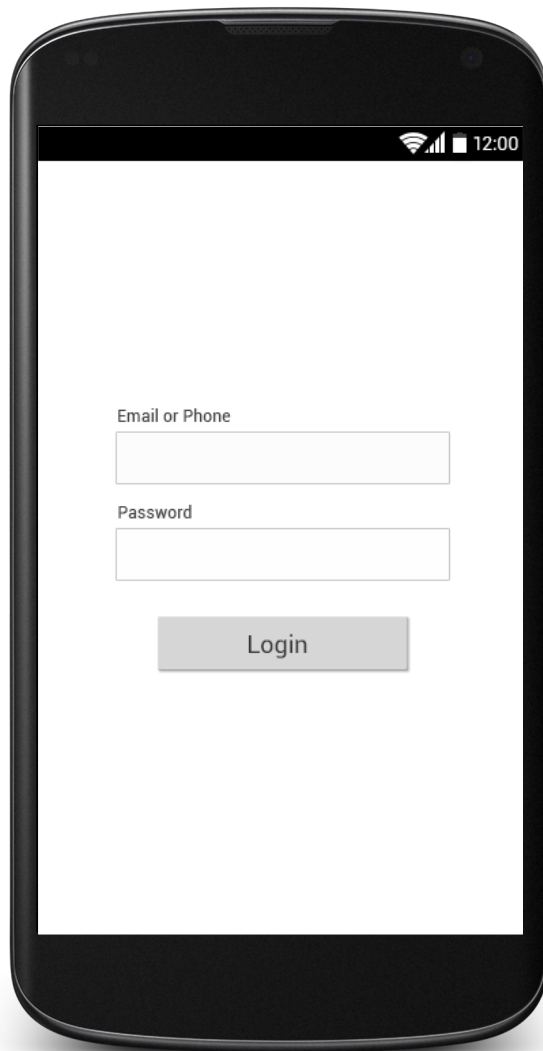
It was a very rough version of the App. with a lot of flaws but a greater level of learning.

After the first version I decided to work on the Visual design, Visual language and information architecture of the App. learning the Android Design Guidelines.

Android application design guidelines were a bit complex to grab at first go but I started learning and applying it in my design slowly.

The Second Version





Smartphone mockup showing the "Fill Pet's Details" form. The form includes fields for Name, Age (dd, mm, yyyy), Weight (pounds), Breed (dropdown), Sex (male/female checkboxes), and an Upload Photo section with Camera and Gallery buttons. A Save button is at the bottom.

Smartphone mockup showing the "Fill Pet's Details" form. The form includes fields for Name, Age (dd, mm, yyyy), Weight (pounds), Breed (dropdown), Sex (male/female checkboxes), and an Upload Photo section with Camera and Gallery buttons. A Save button is at the bottom.

12:00

Home Back

Fill Pet's Details

Name*

Shiro

Age

12 02 2014

Weight

4 pounds

Breed*

Pomeranian

Sex* ☒ male ☐ female

Upload Photo


Camera Gallery

Save

12:00

Home Back

Fill Pet's Details



Shiro
6 weeks, 2 days
Pomeranian
4 Pounds

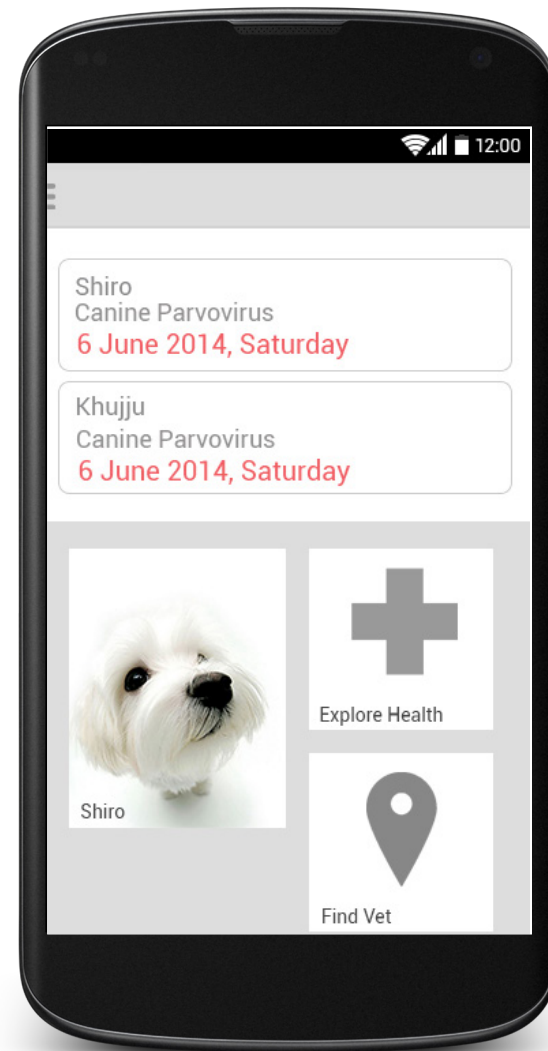
Vaccinations Given

<input checked="" type="checkbox"/> Canine Parvovirus	CORE
<input type="checkbox"/> Canine Distemper	
<input type="checkbox"/> Canine Hepatitis	
<input type="checkbox"/> Rabies	
<input checked="" type="checkbox"/> Parainfluenza	NON CORE
<input type="checkbox"/> Bordetella	
<input type="checkbox"/> Canine Adenovirus	
<input type="checkbox"/> Coronavirus	
<input checked="" type="checkbox"/> Lyme	
<input type="checkbox"/> Leptospirosis	

Sterilization ☐ yes ☒ no

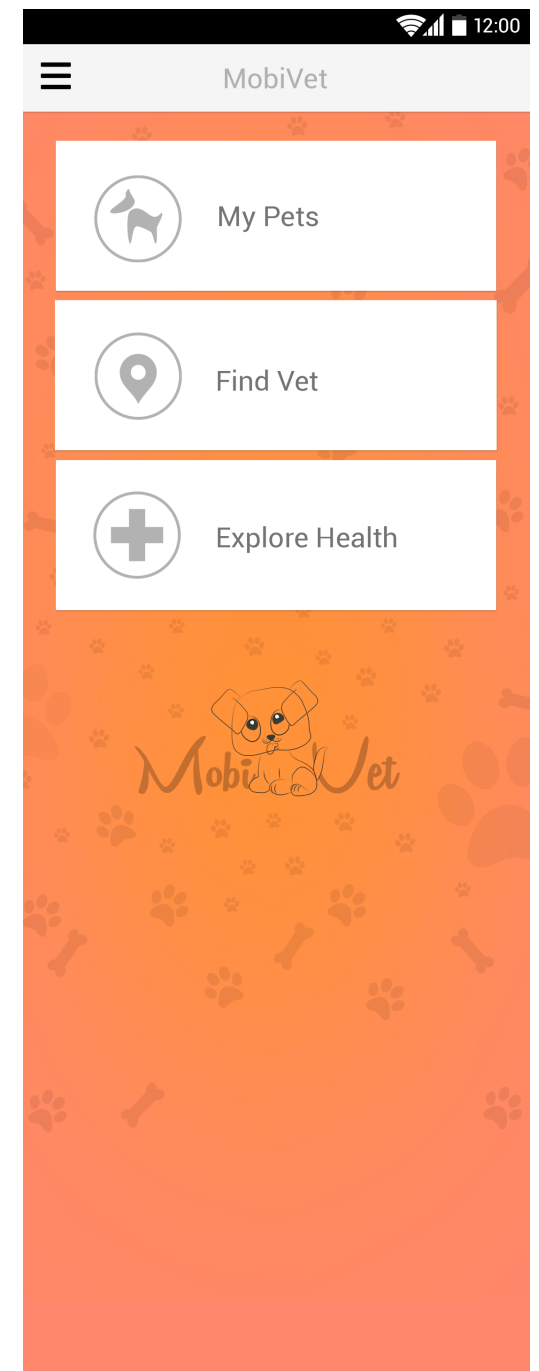
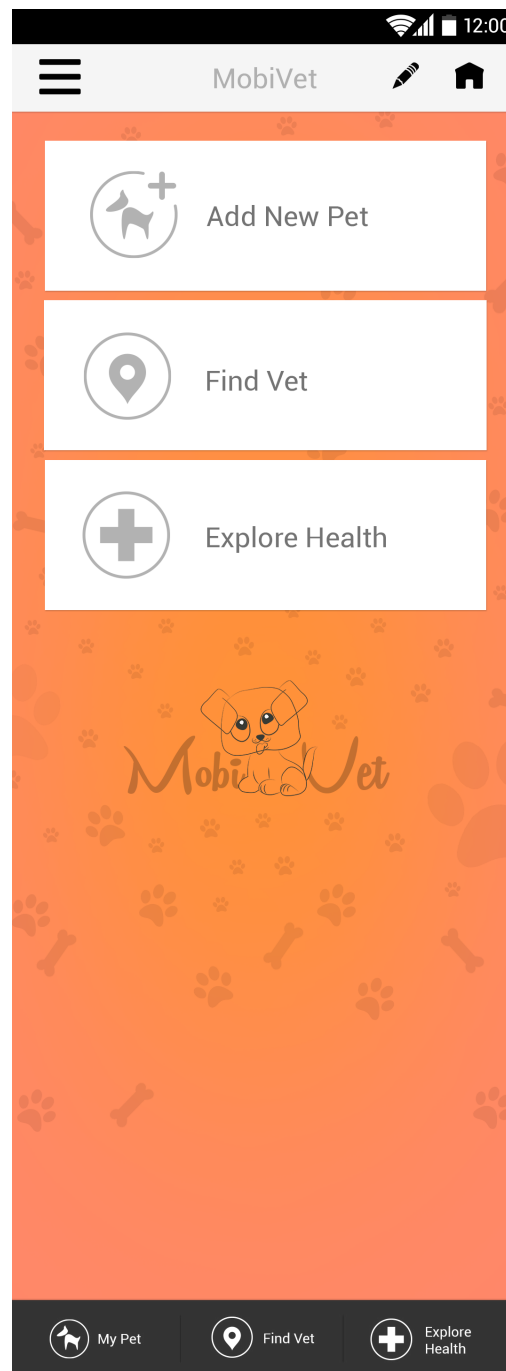
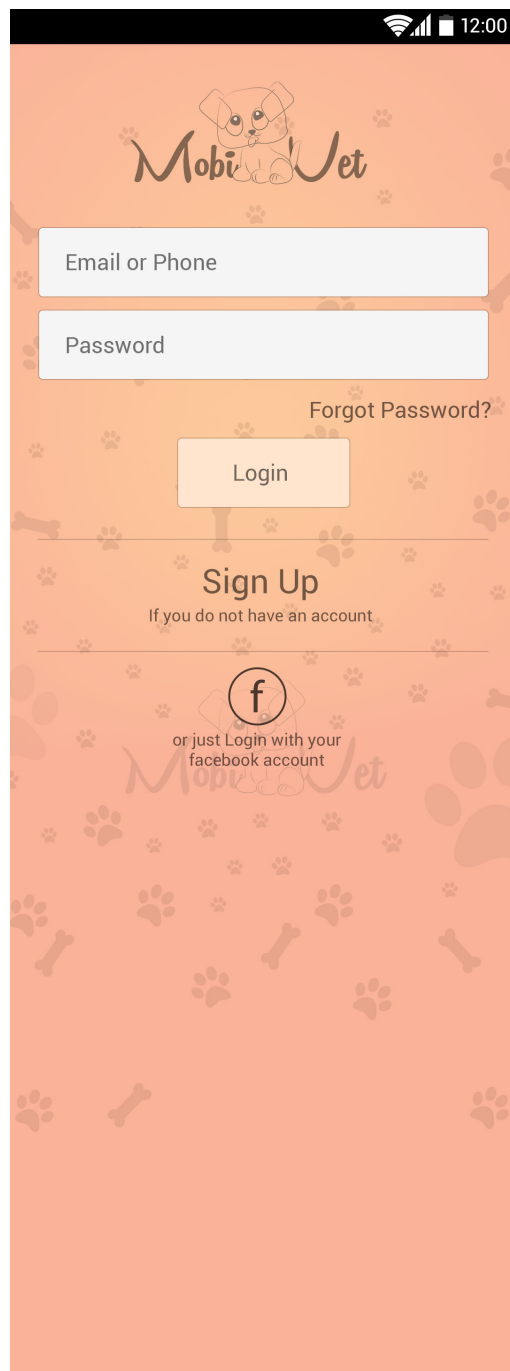
Past History

Save



The Third Version





CREATE PROFILE

PET'S BASIC INFORMATION

Pet's Name

Choose Breed

Date of Birth

DD MM YYYY

Weight

Pounds

Height

Inches

Sex ☐ Male ☐ Female

Pet's Color

Upload Photo Camera Gallery

Save

My Pet Find Vet Explore Health

MY PETS

Shiro Pomeranian 1 Month 10 Pounds 12 Inches

Jennifer German Shephard 1 Year 4 Pounds 8 Inches

Khujju Chihuahua 2 Months 4 Pounds 5 Inches

Oscar Labradore 3 Months 6 Pounds 14 Inches

Tuk Tuk Pug 1 Month 10 Pounds 9 Inches

Mobile Vet

My Pet Find Vet Explore Health

In the third version that I am currently working on, I am thinking in more details about the different scenarios like what different home screens can come, how the profile of a single puppy and more than one puppy should be seen. Working on the visual design and visual hierarchy of the App. is a big challenge and need to be worked upon.

Profile View

Shiro

Pomeranian

6 Weeks, 2 Days

4 Pounds

8 Inches

Color White

Vaccination Status

Core Vaccines

Canine Distemper

Dose	VaccinationDate	Status
1st	12 June 2014	Given
2nd	19 June 2014	Given
3rd	26 June 2014	Due

Canine Parvovirus

Dose	VaccinationDate	Status
1st	12 June 2014	Skipped
2nd	19 June 2014	Given
3rd	26 June 2014	Due

Rabies

Dose	VaccinationDate	Status
1st	12 June 2014	Given
Yrly	12 June 2014	Due

Canine Adenovirus

Dose	VaccinationDate	Status
1st	12 June 2014	Skipped
2nd	19 June 2014	Given
3rd	26 June 2014	Due

My Pet

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Explore Health

Profile View

Shiro

Pomeranian

6 Weeks, 2 Days

4 Pounds

8 Inches

Color White

Vaccination Status

Non Core Vaccines

Dose	Vaccination Date	Status
Leptospirosis		
1st	12 June 2014	Given
2nd	19 June 2014	Given
3rd	26 June 2014	Due
Parainfluenza		
1st	12 June 2014	Skipped
2nd	19 June 2014	Given
3rd	26 June 2014	Due
Lyme		
1st	12 June 2014	Given
Yrly	12 June 2015	Due
2nd	12 June 2014	Given
Bordetella		
1st	12 June 2014	Skipped
6 M	19 June 2014	Given
Coronavirus		
1st	12 June 2014	Skipped
Yrly	19 June 2014	Given

My Pet

Find Vet

Explore Health

Future Work

I aim at completing all the scenarios of the App. with strong visual design and visual language that will help the pet owners for a better healthcare of their dogs.

I will also aim at working on the other features that I have thought like social networking among the dog lovers and carers.

References

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