Don Bosco Institute of Technology
PET WORLD

A Group Project Report submitted to Don Bosco Institute of Technology in partial fulfilment of the requirement for the award of

Bachelor of Engineering
In
Computer Engineering

Submitted by

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15th OCTOBER 2017

Don Bosco Institute Of Technology

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CERTIFICATE

The group project titled ___Pet World___, was carried out by the following students:

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       Roll No:

    Exam Seat No:

Date of Exam:

_____   _____   _____

Project Guide   **External Examiner**   **Principal**

ACKNOWLEDGMENTS

Most importantly, we sincerely thank Almighty God for giving me strength throughout the preparation of this project proposal. We also wish to extend my sincere and heart-felt gratitude to our parents for the financial, moral and emotional support, our classmates and friends who helped in various ways for the successful completion of this project proposal. Finally, it is a great pleasure for me to also acknowledge the assistance and support of all the people who helped me start and finish this project proposal successfully especially Ms. Jeffi Ann Thomas who has been a great supervisor during this period. I would like to give my special thanks to DBIT for giving me enough knowledge and skills that made me to innovatively and successfully research and compile this project proposal.

Thank you everyone!

ABSTRACT

The objective of the project is to design a device that would help pet owner's to know what care must be taken for pets to live long and healthy. Pets aren't finding themselves at the veterinarian's office as much these days. There's been a drop in vet visits over the past few years, and a lack of knowledge around when to bring pets in for a checkup.

This is a problem, experts say, because preventative healthcare measures are just as important for pets as they are for humans. Keeping pet health problems such as obesity and diabetes at bay is possible, but pet owners need to be armed with the right tools to help their pets live longer, healthier lives.

Unlike human health care app, pet care app require more autonomous mechanisms to perceive and respond to the changes of environmental conditions as pets areunable to alert their caretakers if an anomalous condition arises. As pets have their specific living conditions to thrive, a pet care system for one species may not suitable for another. Therefore, component reuse software architecture is beneficial for the design of a pet care app. The caring app for a pet cat is different from the one for a pet dog or a pet fish. To validate the proposed app is appropriate for various pets, we used the dog care cat care,fish care and bird care as four illustrative examples to demonstrate the feasibility of the proposed framework for the application of a pet world.

The proposed application provides all the information regarding what the pet owner must do for their pets at a right time and what care must be taken for their healthy life.

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CHAPTER 1
INTRODUCTION

This chapter gives a brief introduction of the project. We have discussed the current scenario of the field in which in the project is going to be implemented and the shortcomings in the current system that led to the creation of this project. The objective of the project has also been discussed to give a clear idea about why we have decided to do this project and what significant impact that it would have on the concept of pet ownership and pet care taking as a whole.

The pet population in India has grown from 7 million in 2006 to 10 million in 2011. On an average 600,000 pets are adopted every year. This number in itself is enough to pass the message that the number of people who take charge over the responsibility of an animal is exponentially increasing. The problem in this spectrum is the fact that these pet owners are up to a point isolated from a complete all-round knowledge which is related to the information needed by the pet owner.

One needs to realize the fact and have this quality embedded within them that taking up the responsibility of owning a pet could at one point be compared to the role of a parent where one has a living creature that depends on its owner for survival. Thus as this role cannot be taken lightly there needs to be a platform that focusses on teaching the owners the protocols it needs to follow as it would then avoid any sort of mistakes and could guarantee the safe life of the pet.

As a result, the product here consists of the information content that would be ranging from the basic details about the pet, this proves to be beneficial when an user wishes to narrow down this choice of pet which he/she wishes to buy. Beyond which the information would also be consisting all sorts of data related to the type of food the pet would be eating also providing solutions in case the pet falls sick, as in the steps needed to be taken, substances it is allergic to and finally precautions it should take in order to avoid all types of diseases.

With this being the foundation and the ground work of the application our target audience out here is the daily increasing numbers of pet holders who needs all these information to carry out their role and to be aware of the tasks and methodology they need to follow for the safety and the precaution of the pet. Another set of target users being the spectrum of people who are yet to buy and own a pet. The information provided in this application focusses on the

description of the pet, which could prove to be a valuable source of knowledge that could assist the user in deciding the which kind of pet to purchase, its specifications and ultimately deciding features related to its purchase.

MOTIVATION

Here addressing the factors that stand as the reasons that at the end of the day motivates the user to use the application. There exists three major foundations on which the entire frame work of the motivation spectrum is understood.

To start off, on research and analysis it is understood that the platforms that helps an user to decide which pet he/she needs or rather the pet he/she wishes to buy, such kind of a platform is seen missing from the open market which would define us our first major constructive; platform for pet selection. Here we are addressing to that sector of the crowd who are confused about the selection of pet that they need to select. So the need of providing the platform appears to be as a huge reason of utilization due to its unavailability in the market.

Secondly, in the open marketing we find the apt resource missing within which we are informed and are aware of the complete information related to the types of food required by the pet. As information beyond the normal approach is existing in the platform which consists of specific data related to each type of pet ranging from any of the mentions animal-type. This overall structure of data helps in focusing and getting the best information required with regard to all the specifics of the pet. As this isn't an easy procedure to figure out or else if not of this option, it now brings us to the scenario where we have this module as a primary motivation for the user to utilize and the application.

Finally, once we have a pet if the pet is facing any sort of medical issues, we are usually left with some straightforward approach of steps to follow. One being to take the pet to a pet specialized where the doctor could take charge over the health of the pet and accordingly measures could be taken. Another way of approach is to carry out precautions and remedies as a home scale level. This is to avoid the burden of actually going to a specialist. Thus, on facing and introspecting on these two scenarios we do understand the fact that both these steps are steps of extreme measures. Because of which we could possibly be having a middle ground where the efforts involved are less and at the same time the quality along with it is assured as well.

The solution out here is to present the user with particular guidelines it needs to follow in case of an emergency faced by the pet. This could lead us to the outcome of having a solution found while you are seated at home and also at the same time having the steps taken and considered which are professionally correct and are very much advisable to be carried out.

The work schedule of the project is as follows:
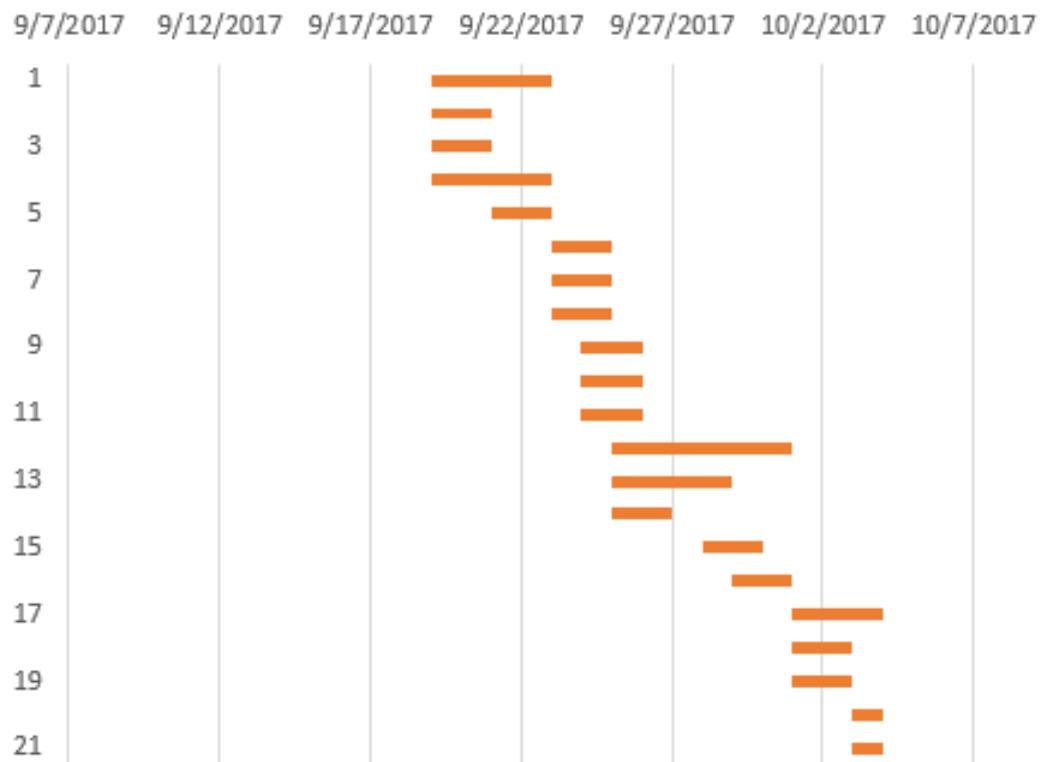
ORGANIZATION OF REPORT

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Work Done

Chapter 4: Conclusion / Result Analysis

Chapter 5: Future Scope

CHAPTER 2
INTRODUCTION

This chapter gives a brief idea related of the project. We have discussed the current scenario of the field in which in the project is going to be implemented and the shortcomings in the current system that led to the creation of this project. Beyond which we have also discussed the working timeline of the product as well. The objective of the project has also been discussed to give a clear idea about why we have decided to do this project and what significant impact that it would have on the concept of pet ownership and pet care taking.

LITERATURE REVIEW

There are certain rules and protocols that need to be followed in order to ensure that an individual can be a pet owner. Also there are certain set of rights that are associated with it that would be mentioned in the application.

Despite other tenants being in consensus about not allowing pets in the apartment, a ban on owning pets is illegal and can't be enforced on tenants.

2. They can't pass any such notice regarding the size or breed of dogs which will be accepted in the apartment, while others are rejected.

3. The barking of pet dogs won't be considered as a valid reason to ban dogs from the apartment. However, pet owners are advised to try their best in keeping their dogs quiet, especially at night.

4. Apartment associations can't pass any laws against pets using the elevators or lifts or impose a fine on tenants whose pets use said elevators or lifts. However, if an alternative lift already exists in the apartment, pet owners are advised to use it for convenience.

5. Pets can't be outright banned from gardens, parks and other public spaces. However, provisions can be made to adjust timings such that they don't disturb or scare other tenants or kids, or create any inconvenience.

6. The owners must follow strict regimes to keep their pets healthy and hygienic. All vaccinations should be administered regularly and adequately. Sterilisation of pets is advised, to keep their population in check.

7. Pet owners are advised to participate in the effective cleaning of faeces from their pets while on public premises, methods of which might be suggested by apartment associations.

With regards to the rules that would be present within the application, we have a certain set of rules that are needed to be followed and are pre-determined.

Those who feed or offer shelter to stray animals in their locality are also advised to participate in these animals' sterilisation, vaccination and health care. However, after sterilisation and vaccination, those animals must be returned to the same locality, under ABC Rules 2001.

Any cruelty towards strays is also a punishable offence under section 11 of the Prevention of Cruelty to Animals Act and sections 428 and 429 of the Indian Penal Code.

Bears, Monkeys and other animals can't be kept and trained for entertainment purposes, under Section 22 (ii), PCA Act 1960.

Another important point to remember is the list of animals which are allowed to be kept as pets. In addition to dogs, cat and cattle, most animals which are domestically found can be kept as pets. This includes horses, ponies, pigs, red-eared sliders, fish reared in aquariums, rabbits, etc.

Budgerigars, pigeons, finches, poultry and some other variety of love-birds are allowed to be kept as pets as well, while other birds like parakeets are strictly forbidden. Most varieties of rodents and turtles are also banned from being kept as pets.

CHAPTER 3
Knowledge Review

A major catalyst of choosing this project was the fact that there were limited pet care apps although pets are an integral aspect in houses all over the world. Most pet owners are oblivious as to the care required to nurture their new pet in order to keep it fit and healthy and also for timely treatment of diseases.

Pets aren't finding themselves at the veterinarian's office as much these days. There's been a drop in vet visits over the past few years, and a lack of knowledge around when to bring pets in for a checkup.

This is a problem, experts say, because preventative healthcare measures are just as important for pets as they are for humans. Keeping pet health problems such as obesity and diabetes at bay is possible, but pet owners need to be armed with the right tools to help their pets live longer, healthier lives.

Now, a new app called Pets world could provide those tools and make it easier for pet owners to stay on top of their pet's health care needs.

The Google Play Store is an excellent and accessible platform to publish an app to be used by pet owners all around the world. Also, Android Studio was an excellent platform for its easiness and simplicity to create a functional application.

CHAPTER 4
Work Done

Before deciding this topic as a project, we weighed down all our options and discussed which topic to choose. Creating a pet care app seemed to be the most optimal selection out of all mainly because there were very few functional pet care apps on the Google Play Store. Our first survey was google form based, and it received many responses. The next thing was statistics found from various references. The third activity was an interview of a fourth year student from Bombay Veterinary College, Parel. The interview provided us with insightful data which helped us in making our app. Additionally, our scope and targets broadened as we got to understand additional features that we can implement in the application.

Methodology

1. **Experiments done:**

   Various analysis has been carried out in the project in each of the modules. Also references were studied to understand the required and necessary terms for the implementation of the system.

   Research suggested that there is no such system that helps the people to take good care of their pets

2. **Questionnaires in the society:**

   1. Do u have any pet?

   Ans: yes

   2. what kind of a pet?

   Ans: we have a dog

   3. How is his condition?

   Ans: well, it's not fine this days.

   4. Why so??

   Ans: He falls sick regularly.

   5. What do you feed him?

   Ans: commercial pet foods.

   6. Do you take your pet for checkup regularly?

   Ans: not really but once in a year we do his checkup.

   7. Do you take house training of your pet? Like do you take him out for a walk?

   Ans: yes once every 6 hrs.

   8. Do you train your pet?

   Ans: yes

3. Description of setup:

A demo or a beta version of the application named as "Pet World" was created using a software called Android Studio and the images in the application were designed and enhanced using a software called Photoshop
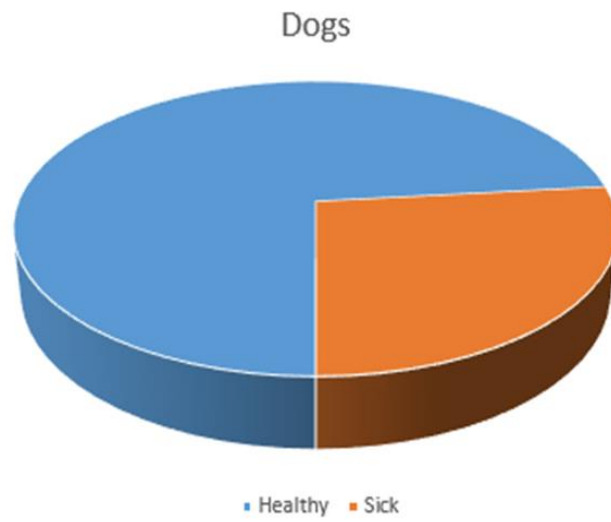
4. How data has been collected
- Google form based Questionnaire
- Authentic online content and surveys
- Market Research
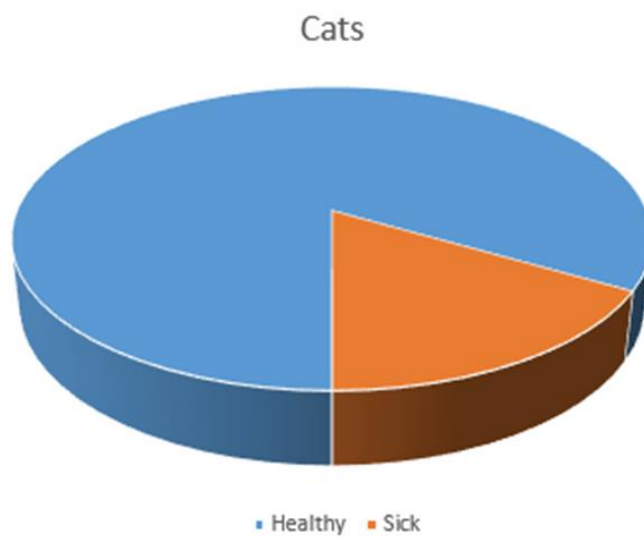- Interview with a Veterinarian Studies student (Fourth Year)
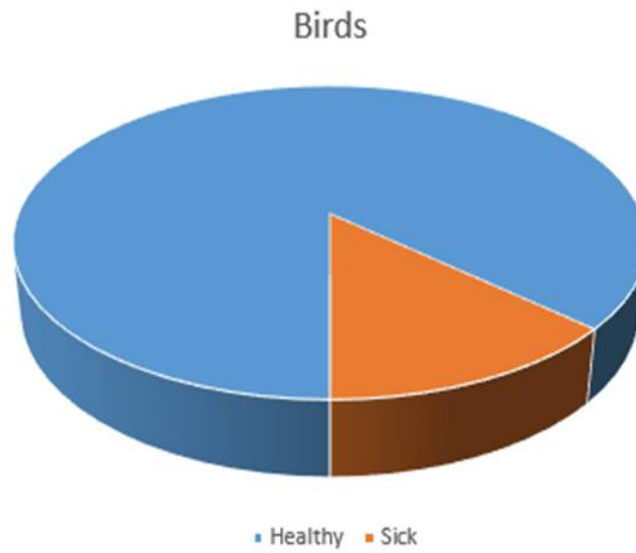
5. Observations Made:

Dog Cat Bird Fish Chicken Turtle Rabbit
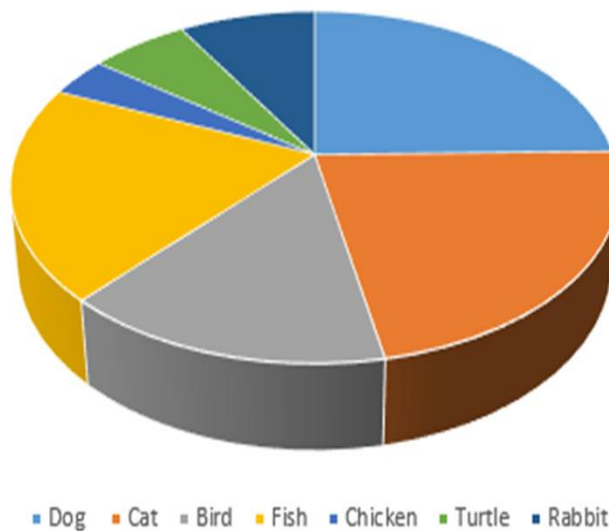
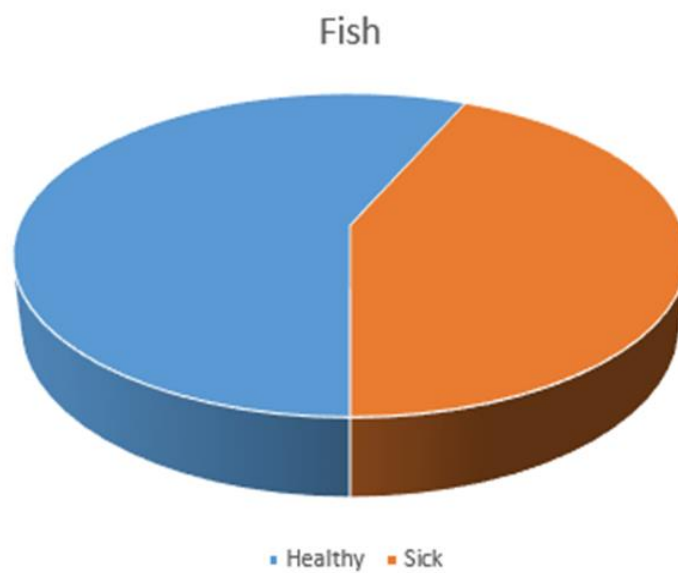*4.1 Pie Chart based on pet selection in the US, 2013*

4.2.1 Healthy vs Sick for Dogs

4.2.2 Healthy vs Sick for cats

4.2.3 Healthy vs Sick for Birds

4.2.4 Healthy vs Sick for Fish

Market survey analysis

Sixty-eight percent of U.S. households, or about 85 million families, own a pet, according to the 2017-2018 National Pet Owners Survey conducted by the American Pet Products Association (APPA). This is up from 56 percent of U.S. households in 1988.

Global Pet Care Market: Comprehensive Overview
The global pet care market is substantiating a sturdy growth with next generation pet tracking and monitoring breakthroughs, such as Whistle 3 for more reliable, faster, and smarter pet care. The wireless and GPS enabled device works remarkably for locating a lost pet and taking charge of the pet's daily activities and exercise. With phenomenal features such as companion mobile app, accurate location tracking, and waterproof on-collar device of all shapes and sizes, Whistle 3 is currently making the cut in the industry. The advanced pet tracking gadget is a fine illustration of the market's quantum leap in technology.
The global pet care market report brings to light some of the salient factors and progressions of the industry while presenting two pivotal segmentations. The analysts have segmented the market taking into consideration the major geographical regions. With reference to the different pet types, the market is split into five segments and an exclusive segment which incorporates the not-so-common types of pets.
In respect of the several microeconomic and macroeconomic aspects making a difference in the international pet care market, the report foresees the growth factors and their impact for the forecast period 2016–2024. Interested parties also have access to the present and future market scenario as the study spotlights the prevailing trends and market size until the end of the forecast period. Overall, the report offers an across-the-board analysis of the market to help make knowledgeable business decisions and have a preliminary visibility of the future market.
Global Pet Care Market: Trends and Prospects
The pet care market is mainly comprised of pet health care and pet food on a worldwide platform. Pet owners are taking to premium food products and creative grooming commodities to care for their domestic pets. This has considerably raised the spending limit of pet owners in the industry, thereby adding to the growth of the global market. As pet owners are accepting their pets as family members due to altering cultural and socioeconomic factors, the market is expected to witness a valuable growth. In addition to the aforementioned drivers, the escalating disposable income of pet owners belonging to the middle income group and rising trend of nuclear family are anticipated to lay a robust foundation for the advancement of the market.
The global pet care market could find some hurdles in its growth path due to strict cultural and government regulations, rising incidence of allergies from pets, and swelling prices of pet care products. Howbeit, the elevating concerns towards pets and surging number of pet owners are envisioned to repair the shortcomings of the market.
Global Pet Care Market: Geographical Evaluation

With the lowest birth rate in the world, China is foretold to boost the global pet care market as the average income population chooses to spend more on their pets rather than having children. However, India tops the Asia Pacific market in terms of healthy growth. Comparative prospects are also expected to be witnessed by North America in the international market.

Global Pet Care Market: Competitive Landscape Analysis

The competitive landscape of the global pet care market is envisaged to be driven by extended trends and innovations apart from the usual pet care products. Services such as pet day care and pet training are prophesied to influence the market. The report elaborates more on the competitive scenario of the market, taking into account other decisive factors.

Market segmentation based on type:

- Dog Care
- Cat Care
- Fish Care
- Bird Care
- Others

Market segmentation based on geography:

- North America
- Asia Pacific
- Europe
- Rest of the World

4.5.1 NUMBER OF U.S. HOUSEHOLDS THAT OWN A PET, BY TYPE OF ANIMAL

Pet	Number
Dog	60.2
Cat	47.1
Freshwater fish	12.5
Bird	7.9
Small animal	6.7
Reptile	4.7
Horse	2.6
Saltwater fish	2.5

4.5.2 TOTAL NUMBER OF PETS OWNED IN THE UNITED STATES, BY TYPE OF ANIMAL

Pet	Number
Freshwater fish	139.3
Cat	94.2
Dog	89.7
Bird	20.3
Saltwater fish	18.8

Small animal	14.0
Reptile	9.4
Horse	7.6

4.5.3 TOTAL U.S. PET INDUSTRY EXPENDITURES, 2007-2017

Year	Expenditure
2007	$41.2
2008	43.2
2009	45.5
2010	48.4
2011	51.0
2012	53.3
2013	55.7
2014	58.0
2015	60.3
2016	66.8

2017	69.4 (2)

4.5.4 BASIC ANNUAL EXPENSES FOR DOGS AND CATS

Expense	Dog	Cat
Surgical vet	$474	$245
Routine vet	257	182
Food	235	235
Food treats	72	56
Kennel boarding	322	164
Vitamins	58	46
Groomer/grooming aids	84	30
Toys	47	30

Interview (Questions asked):

1) What pets do people generally come to the veterinary clinic with?
2) What are the general problems that pet owners come across with regard to their pets?
3) How often do you encounter fish owners coming with problems related to their pets?
4) Elaborate on fish care.
5) What are the problems that stray dogs generally face?
6) Elaborate on dental care for pets.
7) What are the general dietary requirements for pets?
8) What are the general vaccinations that dogs have to take?
9) How often do pet owners give their pets annual booster injections (vaccinations)?
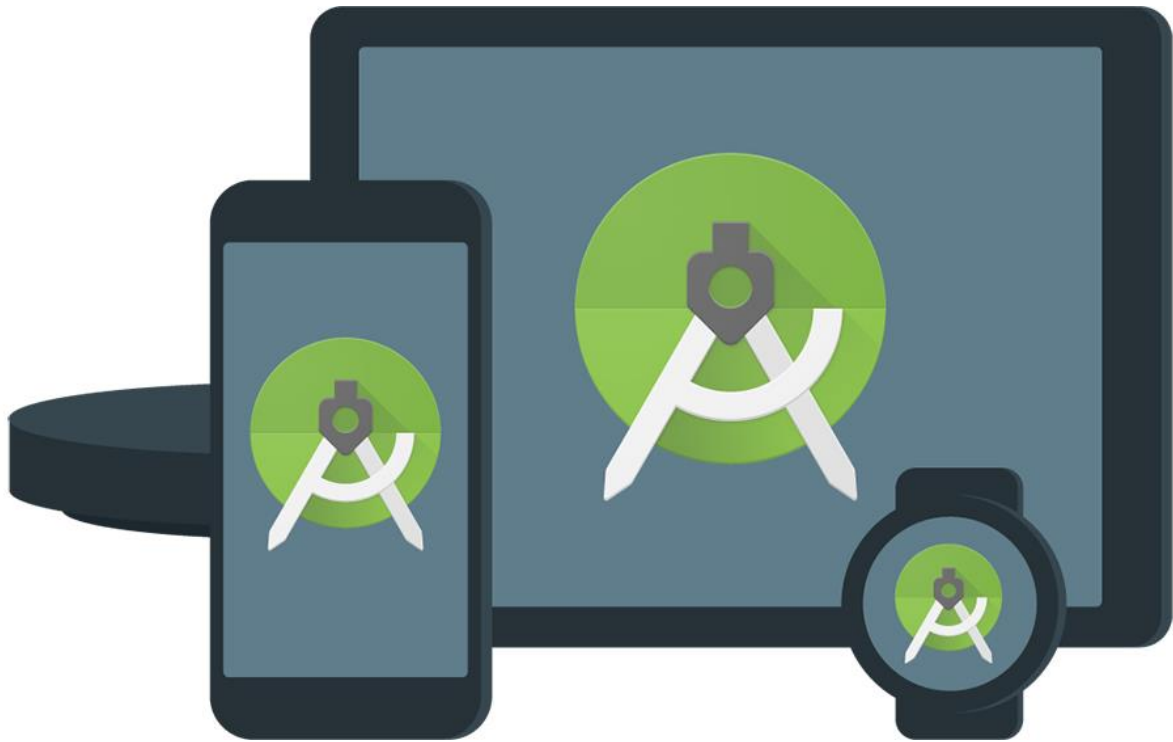
Photograph of visit

4.3 .1 During the interview

4.3.2 Post interview

Tools used

ANDROID STUDIO

4.4.1 Android Studio

Android Studio is Android's official IDE. It is purpose built for Android to accelerate your development and help you build the highest-quality apps for every Android device.

It offer tools custom-tailored for Android developers, including rich code editing, debugging, testing, and profiling tools.

Photoshop

4.4.2 Photoshop

Adobe Photoshop is a raster graphics editor developed and published by Adobe systems for mac OS and Windows.

Photoshop has vast support for graphic file formats but also uses its own `PSD` and `PSB` file formats which support all the aforementioned features. In addition to raster graphics, it has limited abilities to edit or render text, vector graphics (especially through clipping path), 3D graphics and video. Photoshop's feature set can be expanded by Photoshop plug-ins, programs developed and distributed independently of Photoshop that can run inside it and offer new or enhanced features.

CHAPTER 5

CONCLUSION / RESULT ANALYSIS

Introduction

In this chapter, we shall try to give a summary of the study that we conducted. Explaining what we observed and understood from our research. We also analyse the result obtained to try and explain it with more depth. In addition to this we explain the solutions proposed by us after careful thought and consideration. Lastly, we end with the conclusion explaining what this study has accomplished and what impact it can have towards the issue.

The methodology applied in gathering data for research and study as well as providing an effective solution was carried out by firstly conducting a general survey to get a better grasp on the issue and to further understand the views of the general population living in Mumbai who have pets in their homes.
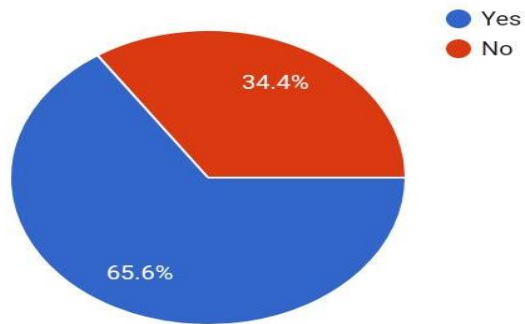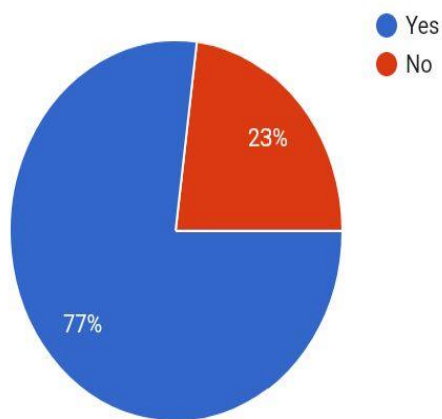
Do you have a pet?
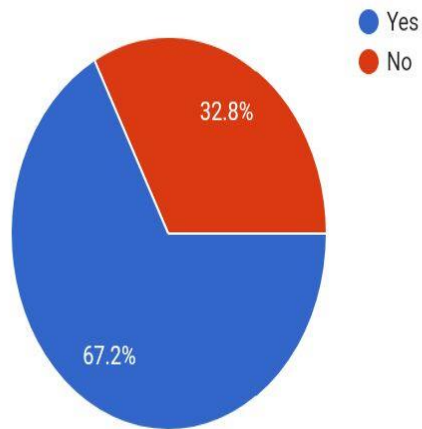
61 responses
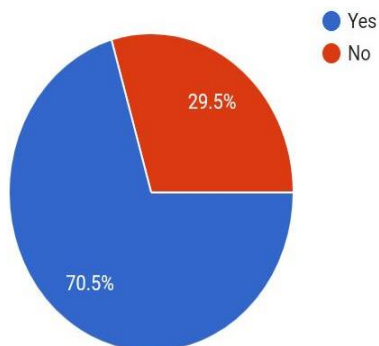
Did you have any pet earlier?

61 responses

- Yes
- No

34.4%

65.6%

Do you wish to have a pet?

61 responses
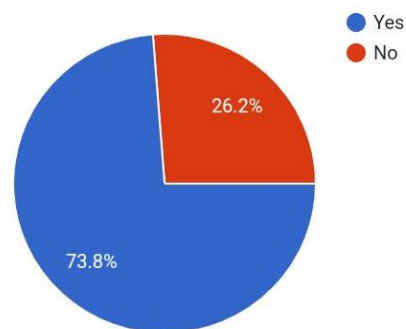

- Yes
- No

23%

77%

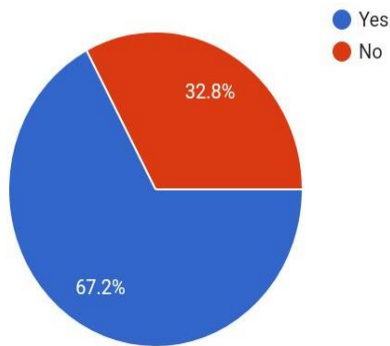# Did your pet fell sick?

61 responses

Would you like an app that will tell you everything about your pet?

61 responses

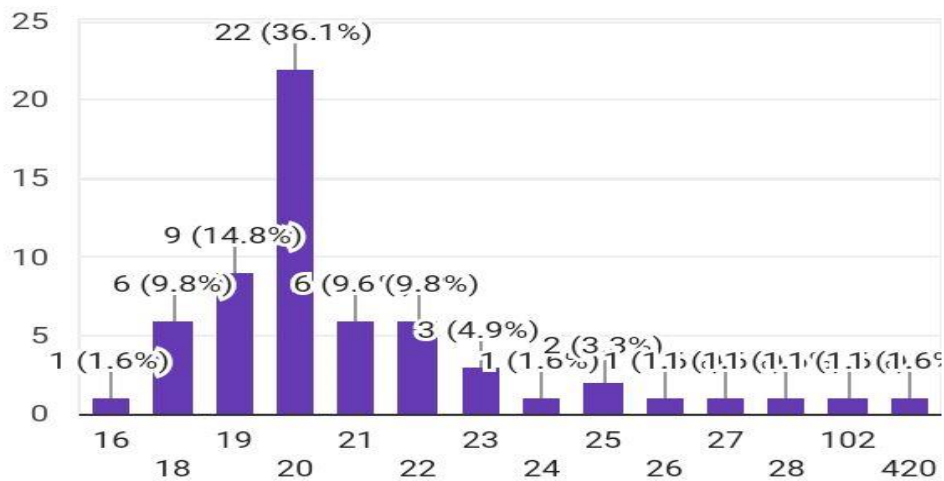## Do you wish for an alarm system that will remind you to feed your pet?

61 responses

- Yes
- No

67.2%
32.8%

How old are you?

61 responses

Conclusion:

　　Based on the analysis we have done here we can assure and be confident from the results of our survey that there is a need for or application "Pet World" and it will surely help those facing trouble with their pets and also help the newbies in their pet selection.

CHAPTER 6

Future Scope Of Work/ Experience Sharing/Conclusion And Recommendations

Introduction:

　In this chapter we shall discuss the limitations of the study and explore more about them in detail as to why we are bound by them.We shall also cover the future scope of the study and in which direction it is heading and what more can be implemented regarding it

Limitations:
- The programmer should have a good knowledge on pet keeping.
- Lots of data collection required
- Huge Database

- Lots of image findings

Future Scope:

We can easily include an alarm feature in the application in the near future. This feature suggestion received a great response in the Google Form based survey. The basic idea is that pet owners tend to forget to feed their pets, or maybe take their pets for vaccinations and check-ups. The alarm can notify the pet owner based on the type of pet and its nutritional requirements.

We can also add a forum for pet owners to interact with vets. Questions may be asked and answered in this forum in a concept known as a thread. This will ensure maximum interaction with pet owners and vets directly benefitting pet owners as they can understand common problems faced by other pet owners by browsing through other threads.

We can also include an interface where **certified** registered users can get accounts and, hence, access to an interface where they can make changes to incorrect details and add many more missing pets and breeds. This will ensure that the app holds a rich database of pets and pet related requirements and health related problems.

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Fish

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Dogs

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http://www.vetstreet.com/dogs/

http://www.petmd.com/dog/breeds

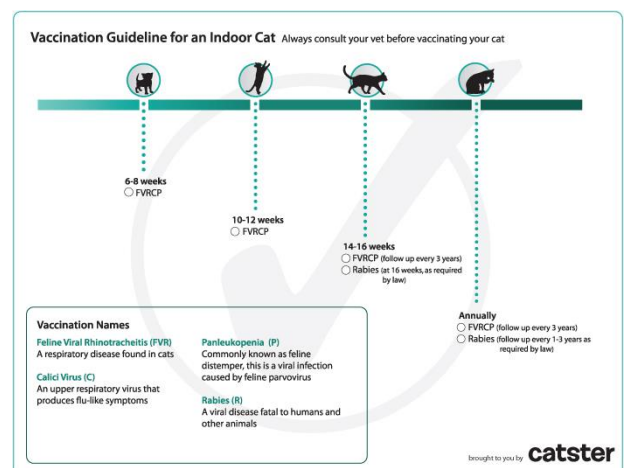# ANNEXURES

Dog Vaccines

Cat Vaccines

Pet Wiki

Pet Care

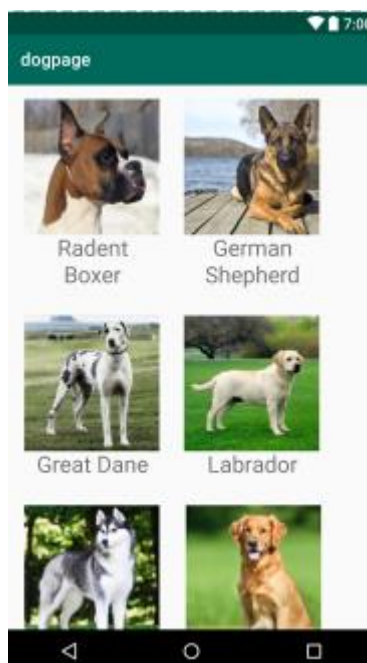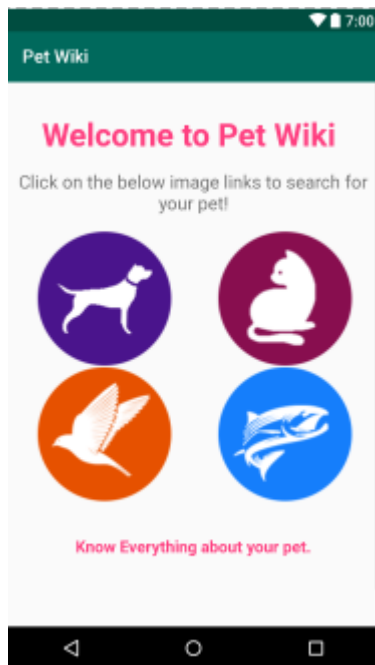|		
	alarmlogo.png	
	bird_home.png	
	birdfood.png	
	boxer_wild.png	
	cat_home.png	
	catfood.png	▼ 📁 layout
ⓒ 🔒 About	clock.png	🔷 activity_about.xml
ⓒ 🔒 Birdpage	clockline.png	🔷 activity_birdpage.xml
ⓒ 🔒 Boxer	dane.png	🔷 activity_boxer.xml
ⓒ 🔒 Catpage	dog_home.png	🔷 activity_catpage.xml
ⓒ 🔒 Dogpage	dogfood.png	🔷 activity_dogpage.xml
ⓒ 🔒 Fishpage	fish_home.png	🔷 activity_fishpage.xml
ⓒ 🔒 Germanshepard	fishfood.png	🔷 activity_germanshepard.xml
ⓒ 🔒 Goldenretriver	food.png	🔷 activity_goldenretriver.xml
ⓒ 🔒 Greatdane	german.png	🔷 activity_greatdane.xml
ⓒ 🔒 Labrador	gold.png	🔷 activity_labrador.xml
ⓒ 🔒 MainActivity	husky.png	🔷 activity_main.xml
ⓒ 🔒 MainActivity2	lab.png	🔷 activity_main2.xml
ⓒ 🔒 MainActivity3	minimalisticsbird.png	🔷 activity_main3.xml
ⓒ 🔒 MainPage	minimalisticscat.png	🔷 activity_main_page.xml
ⓒ 🔒 petfood	minimalisticsdog.png	🔷 activity_pet_play.xml
ⓒ 🔒 petplay	minimalisticsfish.png	🔷 activity_petfood.xml
ⓒ 🔒 pettoys	namepet.png	🔷 activity_pettoys.xml
ⓒ 🔒 petvaccine	patcare.png	🔷 activity_petvaccine.xml
ⓒ 🔒 SplashScreen	petwiki.png	🔷 activity_splash_screen.xml
ⓒ 🔒 Syberianhusky	petworld_logo.png	🔷 activity_syberianhusky.xml

Files of our android applications

Our App Display