Fur-ever Happy Homes-Increase adoption and reduce surrender of pets

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Florida Virtual School (FLVS)

Procedural Programming Project

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1 Introduction

This project is part of FLVS (Florida Virtual School) Procedural Programming course. There was a requirement to complete a capstone project at the end of the course. I chose the project, "Fur-ever Happy Homes'. The objective of the project was to increase adoption of animals and reduce surrenders.

I chose this project because I have been volunteering at my local animal shelter and I love pets. I love it when they find permanent homes. People giving up their pets back to shelters is sadly very common, and I would love to design a program that would help tackle this problem and reduce surrender.

2. Research:

The following research questions were picked up for the project.

Research Question	What did you learn?	Source(s) Used
What do people consider when adopting pets (dogs)?	I learned that people take into consideration the pet's size, age, and prefer purebred pets over cross breeds. Additionally, people preferred friendlier and calmer pets that were friendly to other people/animals.	https://www.companionanimalpsychology.com/2014/05/what-do-people-look-for-when-adopting.html
Why do people surrender their pets to adoption centres?	I learned that people surrender their pets to adoption centres for various	https://www.petfinder.com/pet-adoption/dog-adoption/pets-

	different reasons. These included: ● The owners moving ● The owners having too many animals at home ● The cost of pet maintenance ● Their landlord not allowing pets	relinquished-shelters/
What animals are least likely to get adopted?	Least likely: ★ Black dogs and cats (due to superstitions) ★ Older dogs and cats ★ Certain breeds like pit bulls that have been given a bad reputation by the media ★ Pets with special needs ★ Mutts	https://www.thesprucepets.com/animals-adopted-last-4769768

3. Pseudocode

START

Greet the user and explain the purpose of the program

Ask the user to select an animal (dog, cat etc) of their interest

Take a small survey to get info about the user

Match the information input by the user with the animal database

Shortlist 3 suitable pets for them

Display the average age of the animals

Thank the user

END

4. Program in Python Language

```
# Naomi Vaid

# Date: 23rd August 2020

# Purpose: Create a program to help an animal shelter increase adoptions and decrease surrenders


def main():


    # Greet the user and explain the purpose

    greet = input("Hello and welcome to Fur-Ever homes! We are an adoption centre, and we will help make your adoption process easier and shortlist the top 3 animals for you to pick. Press/type OK to continue.")
```

```
    type = input("We currently have dogs, cats and rabbits. What animal are you interested in?")



    # Find out information about the user to help them find a more suitable pet

    survey = input("We will take a short survey and give you the most suitable "+type+" from our shelter. Press/type OK to continue.")

    energy = input("Are you looking for a low or high energy pet? (Type low or high.)")

    size = input("Are you looking for a large or small sized pet? (Type large or small.)")

    print("Here are your results:")


    if (type == "dogs") and (energy == "high") and (size == "large"):

        print("The 3 perfect matches for you to pick from are: Moe, Toulouse, and Max.")


    if type == "dogs" and energy == "low" and size == "small":

        print("The 3 perfect matches for you to pick from are: Coco, Bailey, and Oscar.")


    if type == "dogs" and energy == "high" and size == "small":

        print("The 3 perfect matches for you to pick from are: Ruffus, Sheppard, and Percy.")


    if type == "dogs" and energy == "low" and size == "large" :

        print("The 3 perfect matches for you to pick from are: Daniel, Harry, and Lily.")


    if type == "cats" and energy == "high" and size == "large":

        print("The 3 perfect matches for you to pick from are: Misty, Tigger, and Smokey.")


    if type == "cats" and energy == "low" and size == "small":

        print("The 3 perfect matches for you to pick from are: Sesame, Whiskers, and Buttercup.")
```

```
if type == "cats" and energy == "high" and size == "small" :
    print("The 3 perfect matches for you to pick from are: Crookshanks, Simba, Elio.")

if type == "cats" and energy == "low" and size == "large":
    print("The 3 perfect matches for you are to pick from are: Leo, Lucy, Charlie.")

if type == "rabbits" and energy == "high" and size == "large":
    print("The 3 perfect matches for you to pick from are: Theo, Kiwi, and Buddy.")

if type == "rabbits" and energy == "low" and size == "small":
    print("The 3 perfect matches for you to pick from are: Duke, Will, and Carrot.")

if type == "rabbits" and energy == "high" and size == "small":
    print("The 3 perfect matches for you to pick from are: Bugs Bunny, Roger, Pepper.")

if type == "rabbits" and energy == "low" and size == "large":
    print("The 3 perfect matches for you to pick from are: Pinky, Caramel, Lola.")



# Give a funfact about the average age of the animals

dogAge = [3, 4, 2, 3, 2, 1, 1, 9]
catAge = [4, 10, 2, 1, 3, 1, 3, 3]
rabbitAge = [2, 4, 1, 1, 5, 2, 1]

dogSum = sum(dogAge)
dogLength = len(dogAge)
dogAverage = dogSum / dogLength
```

```
    catSum = sum(catAge)
    catLength = len(catAge)
    catAverage = catSum / catLength

    rabbitSum = sum(rabbitAge)
    rabbitLength = len(rabbitAge)
    rabbitAverage = rabbitSum / rabbitLength

    print("FUN FACT:")

    if type == "dogs":
        print("The average age for dogs in our shelter is " ,int(dogAverage)," years.")

    if type == "cats":
        print("The average age for cats in our shelter is " ,int(catAverage)," years.")

    if type == "rabbits":
        print("The average age for rabbits in our shelter is " ,int(rabbitAverage)," years.")

    # Thank the user
    print("Fill out our form on our website to schedule a visit to meet your top 3 pet selections and make a decision on which pet to choose.")
    print("Thank you so much for choosing us and for helping an animal in need. Have a good day and we hope to see you soon!")

main()
```

5 Testing

Testing		Results
Acceptance Testing	Spell Check	Performed a spell check test. This was extremely vital as it helped prevent errors, especially for my 'if' statements which were the most vital part of my code.
	Capitalization Check	This was also very helpful for my 'if' statements. The items in my list were not in upper case, so I had to ensure they weren't capitalized in my if statements either.
	Punctuation Check (parentheses, quotes, etc.)	This was extremely helpful and vital for my print statements and inputs. There were a couple of places where I forgot to put parentheses and quotes, so doing this test allowed me to run my program successfully.
	Spacing and Indentation Check	This was important for my 'if' statements and inputs. If I didn't do this test, there would be a lot of errors in my program and it wouldn't run successfully.
Usability Testing	User Input Check (i.e. running your program using a variety of user input responses)	I ran my program, with various different combinations of responses each time. Doing this allowed me to refine my code and make it more user friendly and easy to understand. (For the user)

	Peer Review (i.e. receiving feedback from another person)	I showed this code to my friend via zoom and also asked them to run the code on their IDLE. Doing so showed me and made me understand my program from a different perspective and allowed me to make minor improvements for my program.

6. Program Output

```
Hello and welcome to Fur-Ever homes! We are an adoption center, and we will help make your adoption proccess easier and shortlist the top 3 animals for you t
o pick. Press/type OK to continue.ok
We currently have dogs, cats and rabbits. What animal are you interested in?dogs
We will take a short survey and give you the most suitable dogs from our shelter. Press/type OK to continue.ok
Are you looking for a low or high energy pet? (Type low or high.)high
Are you looking for a large or small sized pet? (Type large or small.)large
Here are your results:
The 3 perfect matches for you to pick from are: Moe, Toulouse, and Max.
FUN FACT:
The average age for dogs in our shelter is  3  years.
Fill out our form on our website to schedule a visit to meet your top 3 pet selections and make a decision on which pet to choose.
Thank you so much for choosing us and for helping an animal in need. Have a good day and we hope to see you soon!
```

7. Post Mortem Review

Post Mortem Review Question	Response
What was the purpose of your program?	To create a program to help an animal shelter increase adoptions and decrease surrenders
How could your program be useful in the real world?	It could be useful for real life animal shelters, for websites that help customers make decisions.
What is a problem you ran into, and how did you fix it?	I ran into a problem with my if statements, and found putting multiple options for one if statement (such as the type of animal, size, energy level) slightly confusing, so I referred to my notes and made the appropriate changes.

Describe one thing you would do differently the next time you write a program.	The next time I write my program I will remember all the if statement rules and I will also stick to my pseudocode, as I tried to make some unnecessary modifications in the middle which only made my program trickier to code.
How could your program be generalized and useful in other areas?	My program could be generalized and useful for apps and websites that study their customer's behaviour (mine included me researching what people consider before adopting an animal, etc) and to predict trends based on this research. This could also allow websites/companies to understand and cater to their customers better, and to produce the most suitable options for them.

8. Security Measure

Security Measure	**Relevance**
Authentication	This could be used to verify a customer's identity while logging onto the website. This is helpful and important as it prevents hackers from accessing the customer's information, and it would keep the customer's information safe and secure as only the customer would be able to access it.
Digital Signature	These are extremely vital as they accurately identify the signer and to prove the integrity of a signature and a document. This should be used for my program as they will ensure none of the information in the program has been tampered with.

Encryption	This should be used for my program and is crucial to keep data safe. This works my scrambling data to make it unreadable. It would ensure that only people authorized to access the data can view it, and would protect sensitive and personal information.

9. Additional Information

The above material is a collection of various submissions done during the course. It has been collated into one document for the ease of reading.