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CS162
Program 3 Algorithm

This program will allow a user to maintain a list of animals that can
perform service activities It will keep track of an animal's breed, species, service, special
information and cuteness rating. The program will provide a menu interface that allows a user to
add animals, display everything, save and load files, and search for a specific breed and
species to display.

Function 1: Welcome function
This function will serve the purpose of welcoming the user to the application by displaying a
message: "Welcome to Service Animal Select!"

Function 2: Menu function
This function will display the menu with all of the options that the user can select and prompt
them to enter a corresponding character to choose one. The menu will list each option on a new
line and append a sequence of alphabetic characters starting at "a" to the front of the listed
option. For example, "a) Add a New Animal". In prompting the user it will ask: "Please enter the
character of the option you would like to select: ". The function will return the user's response so
that the following function can decipher what they want.

Function 3: Translate function
This function will take the input from the menu response and translate it into the correct function
call by checking if the character matches. If the user selects the quit option then the function will
return a signifier of that, otherwise it will return a signifier that the user would like to continue.

Function 4: Add new animal function
This function will allow the user to enter in a new animal if there are less than 10 animals
already stored. If not it will display a message to let the user know that there are already 10
animals. The function will prompt the user to enter the animal's breed, species, service, special
information, and cuteness rating. For example, "Please enter the breed: ". Once the user is
done entering each section, they will return to the menu.

Function 5: Display everything
This function will display every animal that has been entered so far. Below each animal, their
breed, species, service, special information, and cuteness rating will be displayed. Once
displayed, the user will be returned to the menu.

Function 6: Save function
Using this function the user will be able to save their currently stored animal list. It will first
prompt the user for the name of the file they wish to save to. "Please enter the name of the file
you want to save to: ". Then the function will look through the list of animals and write each one

into the specified file. The "|" character will separate each animal's information and each animal will be separated by a new line. Once written the user will return to the menu.

Function 7: Load function
The load function will prompt the user for the name of a file: "Please enter the file you wish to load: ". Once entered, the function will go through each line of the file adding the animal and the animal's information. Because we have written the save files with "|" to separate information and new lines to separate animals, the function will use these as indicators through the process. Once the animals have been loaded the user will be returned to the menu.

Function 8: Display animals of a specific breed and species
This function will prompt the user to enter a breed and species. Then the function will store these inputs and search through the existing animals for a matching breed and species. If the animal is there, it will be displayed. If the animal is not there then a message informing the user that there is no matching entry will be displayed. The user will then be returned to the menu.

Function 9: Thank you function
The last function call of the program that will display when the user decides to quit. The function will display a thank you message to the user: "Thank you for using this application!".