CPSC 2735, Assignment Six

Persistent storage refers to data that outlive the program(s) that create and use it. The four basic functions of persistent storage are:

- **C**reation, adding new data to the existing data and storing it
- **R**eading, recovering data from storage, or displaying it to the user
- **U**pdating, modifying existing data and storing the modified data
- **D**eleting, removing existing data when it is no longer needed

These functions are sometimes known by the acronym CRUD.

Partial code is provided for a CRUD application to manage information about Pets treated at a veterinary clinic. The application is a menu-based program. The overall action of the program is:

- Read the pet information from a comma-separated value file into a map keyed to the pet's id
- Offer the user a menu of options for adding new pets, viewing pet information, modifying a pet's information, or deleting a pet from the map.
- When the user chooses 'Quit' from the menu, the pet information is saved to the same .csv file it was read from in the beginning.

Certain functions in the program are incomplete. The tasks to complete are indicated in comments starting with "TODO". These tasks are:

- Complete the `generateUniqueID` function to assign a unique ID to a new Pet object. This must be done by the program without user input
- Complete the `showInfoForOnePet` function that asks the user for an ID and displays the Pet object with that ID. If the ID is not found, display an appropriate message.
- Complete the `modifyOnePetsInfo` function that asks for the ID of a pet to modify, get the updated information from the user, and modify the object in the map. If the ID is not found, display an appropriate message.
- Complete the `deleteOnePet` function so that it asks for the ID of a pet to delete from the map. Show the pet info and get the user's confirmation before removing it from the map. If the ID is not found, display an appropriate message.
- In the `getPetInfoFromUser` function, validate the user's input for kind of pet so that only pets defined in the Pet class can be chosen.