

CMSC 256 –Sorting and Searching Lab

In this lab, you will perform searching and sorting operations on a set of data of the names of registered dogs from Anchorage Animal Care and Control as of 7/13/2017 in the Municipality of Anchorage, Alaska. This data can be found in the file, **Dog_Names.csv** (source: [https://data.muni.org/resource/r849-w2cw.json?\\$limit=8000](https://data.muni.org/resource/r849-w2cw.json?$limit=8000)). You may hard-code the file name for this lab.

Your program should be called **DogNamesLab.java**.

You will use command line arguments to direct how the program will function. The argument is a single number that corresponds to the part of the lab described below. For example, if the program is run with an argument of 1, Part 1 is executed. These steps apply to all three parts:

1. Implement a **Dog** class that has the fields, **dogName** and **count**.
2. Read names from data file, create **Dog** objects, and add them to an array or ArrayList.
3. Prompt the user and respond.

PART 1

This part of the program prompts the user to enter a dog name and responds with the number of dogs registered with the same name.

Here's a sample run of the program:

Enter a dog's name?

User types: Zoey

Zoey is registered 23 times.

PART 2

If the command line argument is 2, the program displays a list of all the dog names in alphabetical order.

PART 3

If the command line argument is 3, the program presents two dog names from the data set and asks the player to guess which dog name is more popular. The program responds to the guess with either "Yes, that's right." or No and the correct answer.

Then, the player is asked if they'd like to continue. If they respond "Y", two new dog names are presented to them. When they decide to stop playing, a report of the number of correct guesses is given. Here's a sample run of the program:

Which name is more popular for Anchorage dogs? (Type 1 or 2)

1. Bingley 2. Zoey

User types: 1.

Nope, the more popular dog name is Zoey.

Do you want to play again? (Y/N)

N

You guessed correctly 0 out of 1 times.