

## Scalable Data Infrastructures

### Classes and Objects – An Animal Shelter

Create a class to track dogs in an animal shelter. It should contain at least the following:

#### Member variables

- Highest number of dogs the shelter can have. You cannot have more dogs in the shelter than this number
- Low number of dogs. You cannot have less than 0 dogs.
- Current number of dogs. This will be the current number of dogs in the shelter

#### Methods

- At least one method that allows changes the number of dogs in the shelter. This could be a single method to increase or decrease the number of dogs or it could be two methods, one to increase it and one to decrease it. But, the method(s) should make sure that the new number of dogs is not greater than the highest number the shelter holds and not lower than 0.

#### Instantiation

- When instantiated, the new object should accept values for at least the high number of dogs as well as current number of dogs in the shelter. In other words, the new object will be created with the highest number of dogs and the current number of dogs. But, it must also include 0 as the lowest number of dogs.

The main method should instantiate the new object first with hard-coded values. You should then have a loop that runs at least five times. Each time the loop runs, it asks the user if dogs have been added to or removed from the shelter. Then it should ask the user by what amount the number of dogs should change. Thus, you need to figure out how the object's current number would be increased or decreased while remaining within the high and low numbers of dogs. But, it should not exceed the number of dogs allowed in the shelter or be less than 0.