

CSE 2102: Introduction to Software Engineering

Lab #5: Mar 1, 2022

Classes, Objects & Arrays

Note: Lab assignments are intended for practice. These will not be graded, and need not be submitted.

So far, we have used arrays to store primitive data types such as int, float, and double and also the string data type. However, arrays can also store instances of objects. In this code snippet, we use the Pet class from the last lab to store information about a collection of Pets in a family or on a much broader scale a pet store.

```
import java.util.Scanner;
public class PetArray {
    public static void main (String[] args)
    {

        Pet[ ] petcollection = new Pet[2];
        Pet myPet = new Pet( initialName: "Fido", initialAge: 0 , initialWeight: 150);
        petcollection[0] = myPet;

        Pet yourPet = new Pet( initialName: "Balto", initialAge: 3, initialWeight: 180);
        petcollection[1] = yourPet;
        System.out.printf("We have %d pets in the family\n", petcollection.length);
        System.out.println("They are:\n");
        petcollection[0].writeOutput();
        System.out.println("\n");
        petcollection[1].writeOutput();
        System.out.println("\n");
        if (petcollection[1].getAge() > petcollection[0].getAge())
            System.out.printf("%s is older\n", petcollection[1].getName());
        else
            System.out.printf("%s is older\n", petcollection[0].getName());
    }
}
```

The output produced by the code segment is shown below.

We have 2 pets in the family
They are:

Name: Fido

Age: 0 years

Weight: 150.0 pounds

Age in human years: 0 years

Name: Balto

Age: 3 years

Weight: 180.0 pounds

Age in human years: 27 years

Balto is older