

Exercise 4 Answers

References in more detail

- 1.
2. Add the following lines to the main method:

```
Flea p = new Flea("Pop");
Flea s = new Flea("Squeak");
Flea z = new Flea("Zip");
```

3. Add the following lines to the end of main method:

```
Dog r = new Dog("Rex", 3,p);
Dog j = new Dog("Jimbo",4,s);
Dog f = new Dog("Fido", 5,z);
```

4. Define the method something like this:

```
public String toString() {
    return "I am a dog called " + name +
           " and my age is " + age +
           " and I have a flea called " + dogsFlea.name;
}
```

Then add the following lines to the end of the main method:

```
System.out.println(r.toString());
System.out.println(j.toString());
System.out.println(f.toString());
```

Alternatively, the following code is shorter and has the same effect:

```
System.out.println(r);
System.out.println(j);
System.out.println(f);
```

I will not use this shorter way of printing an object in the answers to the rest of the exercises because an understanding of why it works requires an understanding of the advanced concepts of inheritance and polymorphism.

5. Define the class something like this:

```

class DogOwner {

    // Properties of the class...
    private String name;
    private int    salary;
    private Dog    ownersDog;

    // Constructor of the class...
    public DogOwner(String aName, int aSalary, Dog aDog) {
        name    = aName;
        salary  = aSalary;
        dog     = aDog;
    }

}

```

6. Add the following lines to the end of main method:

```

DogOwner a = new DogOwner("Angus", 10000,r);
DogOwner b = new DogOwner("Brian", 20000,j);
DogOwner c = new DogOwner("Charles",30000,f);

```

7. Define the method something like this:

```

public String toString() {
    return "I am a dog owner called " + name +
        " and my salary is " + salary +
        " and my dog is " + ownersDog.name;
}

```

Add the following lines to the end of main method:

```

System.out.println(a.toString());
System.out.println(b.toString());
System.out.println(c.toString());

```

8. The following is output:

```

I am a flea called Pop

```