• What will be the output when running the above code?

Meow. I am a cat. My name is Kurre.

Woof. I am a dog. My name is Vilma.

Meow. I am a cat. My name is Bamse.

• What is meant by polymorphism ?

Polymorphism means "many forms", and it occurs when we have many classes that are related to each other by inheritance.

• How does polymorphism work in the above program?

We stored the Cat class and Dog class instances in an array of Animal class, which is their parent class.

• The method introduceYourself of Animal appears to be never called? Why not?

The method introduceYourself of Animal appears to be never called because its child class which is Cat class and Dog class. The Cat class and dog class have override the method with their own implement of same method.

• Comment out the method introduceYourself in Dog. What happens now when you run the program?

Meow. I am a cat. My name is Kurre.

Morr. I am an animal.

Meow. I am a cat. My name is Bamse.

The Animal class’s introduceYourself method will be called.

• Where is the name stored for the instances of Cat and Dog? (In what / which classes did you put the instance variable that refers to the name of the animal? Both Cat and Dog, or just in Animal?)

In the Animal class.

• How does the code in the test program work?

First, declare an Animal array and an integer variable.

Then initialize the array into an Animal array with the size of 3.

Then initialize Cat and Dog objects and store them inside the Animal array.

Initialize the int variable earlier with 0 and start a while loop, which keeps repeating until the counter is largest than the length of the array.

Call the introduceYourself() from each object.

Then increment the counter by 1.

• How does an array work?

Arrays work by reserving some sections of consecutive memory based on the type and size of the array.

• In the above programs we have used a while loop to step through the array and to get information about the animals. But there is a more appropriate loop statement here. What is it?

By using a for loop, we can reduce the length of the code.