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

Answer: Meow.I am a cat. My name isKurre.

Woof.I am a dog. My name isVilma.

Meow.I am a cat. My name isBamse.

• What is meant by polymorphism ?

Answer: Polymorphism means "many forms", and it occurs when we have many classes that are related to each other by inheritance. Polymorphism uses those methods to perform different tasks.

• How does polymorphism work in the above program?

Answer: The polymorphism let the program run the method introduceYourself() in the classes Cat,Dog and Animal to perform in array.

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

Answer: Because the method introduceYourself () was appears in every classes that the array called.

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

Answer: The output will changed to :

Meow.I am a cat. My name isKurre.

Morr.I am an animal.

Meow.I am a cat. My name isBamse.

• 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?)

Answer: The instance of name Cat and Dog was stored in both classes which is calss Cat and class Dog.

• How does the code in the test program work?

Answer: First, the super calss which is the Animal will inherit the method introduceYourself() in all of the classes which is the Cat and Dog. Declare the variable int variable which is i and Animal array. After that initialize the Animal array into a array with the size of 3. Then store all of the animal inside the Animal array which is Cat will be in index 0 and 2, Dog will be in index 1.After that, use while loop to initialize the int variable earlier with 0 let the loop keep reapeating until the counteris less than the length of the array.Call the method introduceYourself() from each object stored inside the array.Then increment the counter by 1.

• How does an array work?

Answer: Arrays work by reserving some sections of consecutive memory based on the type and size of the array. We can store any value inside the array for example like 3. The array length will be always count from 0 till the index number insert for example 0 ,1, 2 3, The array may let the program to run out more than one type of the animal by depends on the array length for example 3 animal.

• 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?

Answer: we can also use for loop to step through the array.

```
 for(i=0; i < allAnimals.length; i++){

allAnimals[i].introduceYourself();

}
```