

Polymorphism

```
class Animal {  
    String name;  
  
    Animal(String name) {  
        this.name = name;  
    }  
  
    void makeSound() {  
        System.out.println(this.name + " makes a sound.");  
    }  
  
    void eat() {  
        System.out.println(this.name + " eats food.");  
    }  
}  
  
class Dog extends Animal {  
    Dog(String name) {  
        super(name);  
    }  
  
    @Override  
    void makeSound() {  
        System.out.println(this.name + " barks.");  
    }  
}
```

```
@Override  
void eat() {  
    System.out.println(this.name + " eats kibble.");  
}  
}
```

```
class Cat extends Animal {  
    Cat(String name) {  
        super(name);  
    }
```

```
@Override  
void makeSound() {  
    System.out.println(this.name + " meows.");  
}
```

```
@Override  
void eat() {  
    System.out.println(this.name + " eats fish.");  
}  
}
```

```
class Bird extends Animal {  
    Bird(String name) {  
        super(name);  
    }
```

```
@Override
void makeSound() {
    System.out.println(this.name + " sings.");
}

@Override
void eat() {
    System.out.println(this.name + " eats seeds.");
}

class Zoo {
    void feedAnimals(Animal animal) {
        animal.eat();
    }

    void feedAnimals(Animal[] animals) {
        for (Animal animal : animals) {
            animal.eat();
        }
    }
}

public class Main {
    public static void main(String[] args) {
        Animal dog = new Dog("Rover");
        Animal cat = new Cat("Whiskers");
        Animal bird = new Bird("Tweety");
    }
}
```

```
Zoo zoo = new Zoo();  
  
System.out.println("Feeding each animal individually:");  
zoo.feedAnimals(dog); // Feeds one animal - the dog  
zoo.feedAnimals(cat); // Feeds one animal - the cat  
zoo.feedAnimals(bird); // Feeds one animal - the bird  
  
Animal[] animals = {dog, cat, bird};  
System.out.println("\nFeeding all animals together:");  
zoo.feedAnimals(animals); // Feeds all animals using the array version  
}  
}
```

OUTPUT

Feeding each animal individually:

Rover eats kibble.

Whiskers eats fish.

Tweety eats seeds.

Feeding all animals together:

Rover eats kibble.

Whiskers eats fish.

Tweety eats seeds.