

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.