



## give me inheritance 3 simple java progrms

Here are 3 very simple Java programs that show inheritance.

### 1) Single inheritance (basic)

```
class Animal {
    void eat() {
        System.out.println("Animal is eating");
    }
}

class Dog extends Animal {    // Dog inherits from Animal
    void bark() {
        System.out.println("Dog is barking");
    }
}

public class Test1 {
    public static void main(String[] args) {
        Dog d = new Dog();
        d.eat();    // inherited method
        d.bark();   // own method
    }
}
```

### 2) Multilevel inheritance

```
class Animal {
    void eat() {
        System.out.println("Animal is eating");
    }
}

class Dog extends Animal {    // Dog inherits Animal
    void bark() {
        System.out.println("Dog is barking");
    }
}

class BabyDog extends Dog {   // BabyDog inherits Dog
    void weep() {
        System.out.println("BabyDog is weeping");
    }
}
```

```

public class Test2 {
    public static void main(String[] args) {
        BabyDog bd = new BabyDog();
        bd.eat();    // from Animal
        bd.bark();   // from Dog
        bd.weep();   // from BabyDog
    }
}

```

### 3) Method overriding with inheritance

```

class Animal {
    void sound() {
        System.out.println("Some generic animal sound");
    }
}

class Cat extends Animal {    // Cat inherits Animal
    @Override
    void sound() {            // overriding method
        System.out.println("Cat meows");
    }
}

public class Test3 {
    public static void main(String[] args) {
        Animal a1 = new Animal();
        Animal a2 = new Cat();    // upcasting

        a1.sound();    // calls Animal's sound
        a2.sound();    // calls Cat's sound (overridden)
    }
}

```

If you say which level you are (school/college), example outputs or variations (like hierarchical inheritance) can be added.

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1. <https://www.programiz.com/java-programming/inheritance>
2. [https://www.w3schools.com/java/java\\_inheritance.asp](https://www.w3schools.com/java/java_inheritance.asp)
3. <https://www.youtube.com/watch?v=N93eP-zXWAU>
4. <https://www.geekster.in/articles/java-inheritance/>
5. <https://dspmuranchi.ac.in/pdf/Blog/Inheritance and its Types.pdf>
6. <https://beginnersbook.com/2013/03/inheritance-in-java/>
7. <https://www.codingshuttle.com/java-programming-handbook/what-is-inheritance-in-java>
8. <https://www.w3resource.com/java-exercises/index-inheritance.php>
9. <https://www.digitalocean.com/community/tutorials/inheritance-java-example>

10. <https://www.geeksforgeeks.org/java/inheritance-in-java/>