

# Java ☐☐ - Type Casting

## Type Casting

Casting ☐ ☐ ☐ ☐

```
class Animal {
    void speak(){
        System.out.println("Default speak");
    }
}
```

```
class Bird extends Animal {
    @Override
    void speak() {
        System.out.println("☐☐ ");
    }
}
```

```
class Dog extends Animal {
    @Override
    void speak() {
        System.out.println("🐶");
    }
}
```

```
public class main {  
    public static void main(String[] args) {  
        Animal animal = new Animal();  
        Bird bird = new Bird();  
        Dog dog = new Dog();  
  
        animal.speak();  
        bird.speak();  
        dog.speak();  
  
        // Upcasting and Downcasting
```

```
Animal animal2;
animal2 = bird; // Upcasting
animal2.speak(); // works normally
```

```
Bird bird2;
// bird2 = animal; // Down casing, compile error
// bird2 = (Bird)animal; // Compile pass
// bird2.speak(); // but throw ClassCastException error
```

```
Dog dog2;
// dog2 = bird; // Obviously not working for compiling
// dog2 = (Dog)bird; // Cannot casting to another child class, compile error.
}
}
```

- Bird casting Animal Upcasting Upcasting
- animal casting Bird Animal Bird
  - Downcasting Compiler
- (Bird)animal Compiler Compiler
  - OK
    - ClassCastException Runtime error
- Animal class
  - Compiler ...

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