

Java & OOP

# 9. Inheritance

Part 2. Using Inheritance

# What is the use?

- Code Reuse?
- Use the base class code in derived class?
- Who is used and who is using?

# Example

- Kid has grown to a Person
- Code in main method or somewhere else in some other class

```
Person p = new Person("David", 27);  
System.out.println(p);
```

- This must print

My name is David and I am 27 years old.

- Let us code...

# Object is a class

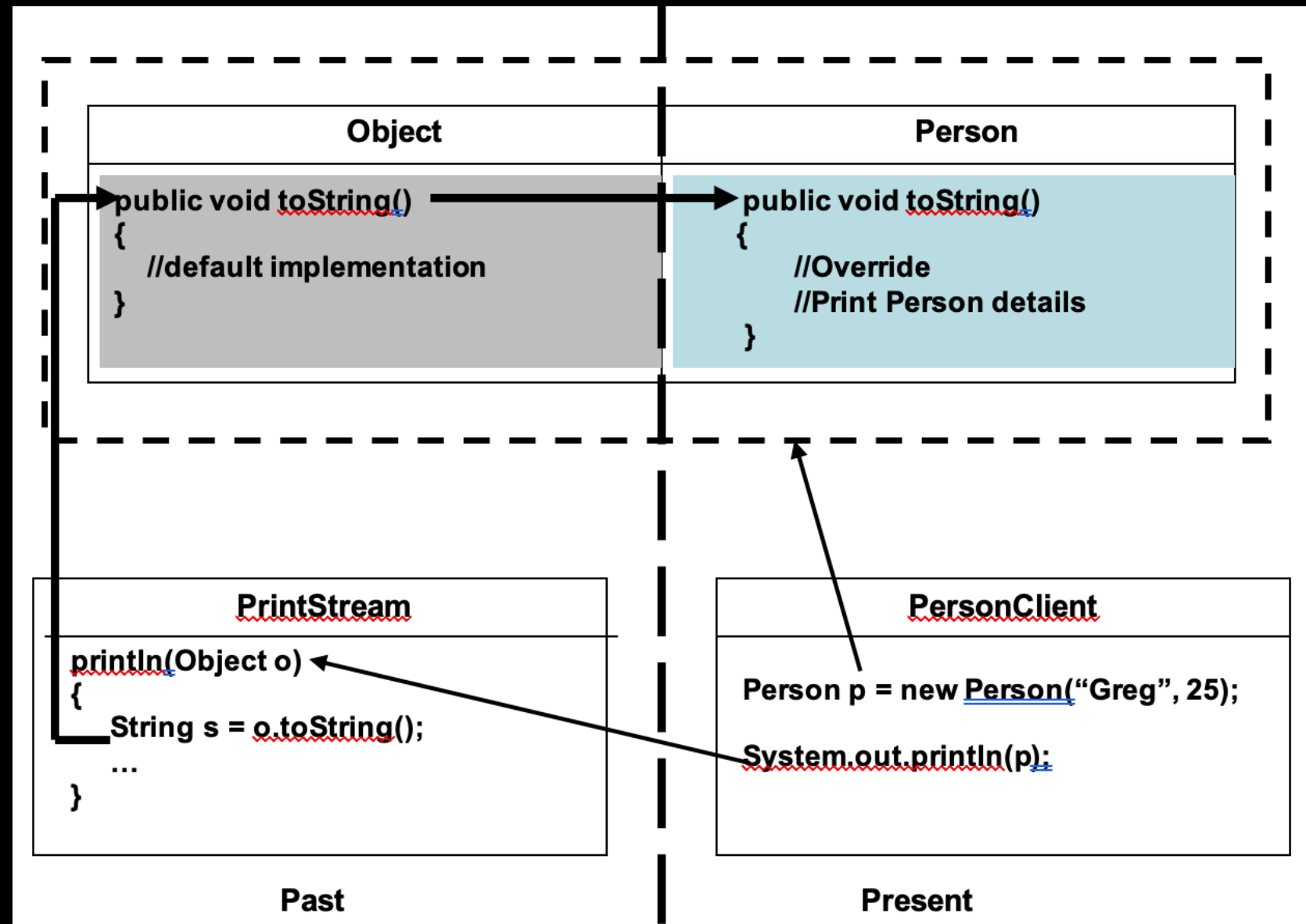
- In JDK there are classes by name `Object` and `Class`
- What is in `Object` class?
  - `toString()`
  - `equals()`
  - `hashCode()`
- These are overridden for many things to work

# Who is using who?

- Object class in JDK is using our Person class
- All classes are implicitly inherited from Object

*You write a base class and make people extend it. So you can use them in the places where you have used your base class*

# How does it work?



# equals() method

- ArrayList methods
  - contains() and indexOf()
- Lets see how it works
- IntelliJ gives us an implementation

# hashCode() method

- Used with `HashTable`, `HashMap` and other hashed collection classes
- used to find the hashbucket when this object is used as key
- Need to return a integer distributed well
- Need `equals()` also to identify the value from the hashbucket
- Let us see IntelliJ's implementation



# Commons

- Apache's commons.lang library can also be used for implementing the methods discussed

Next

# Inheritance Project