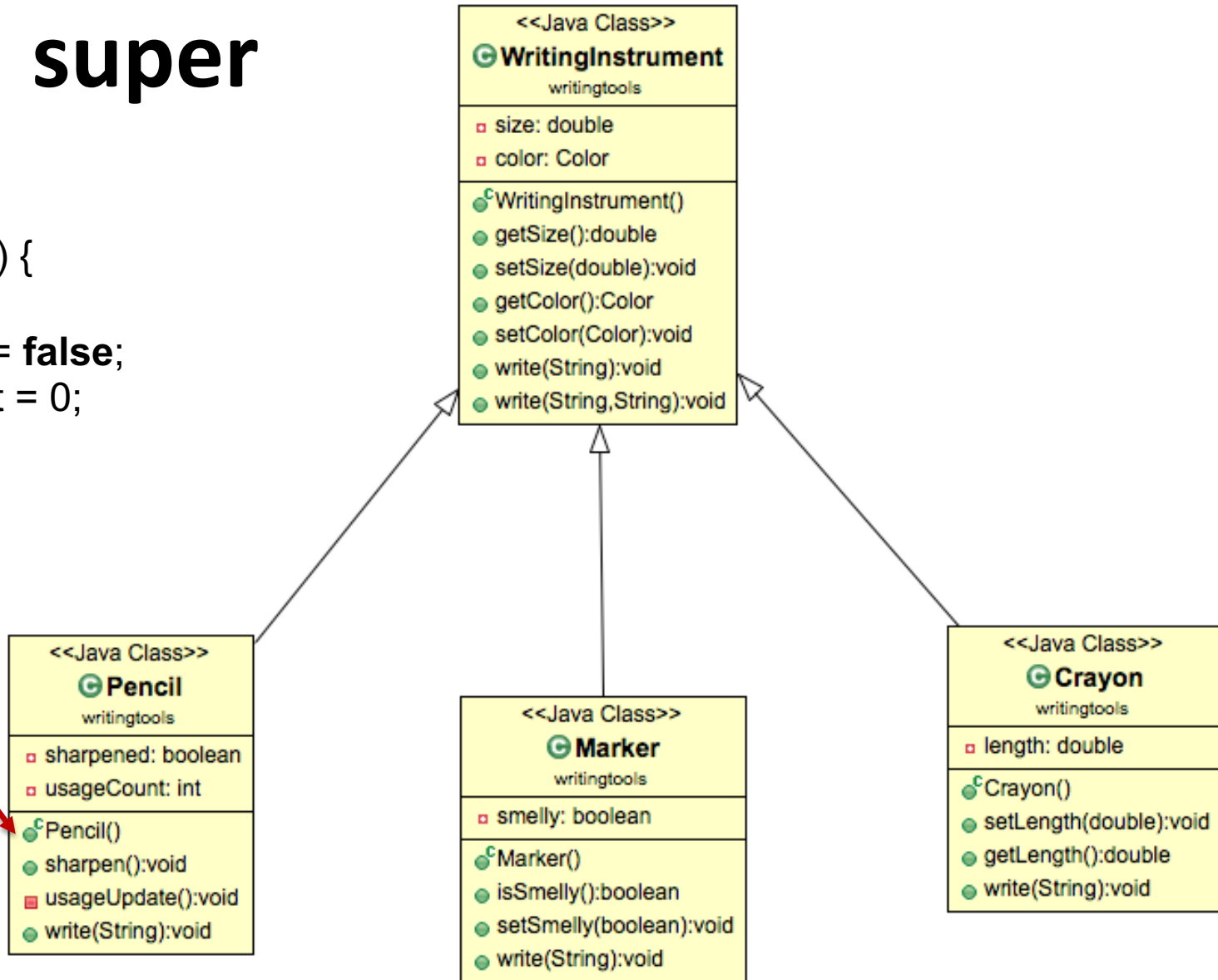


# Inheritance

this and super

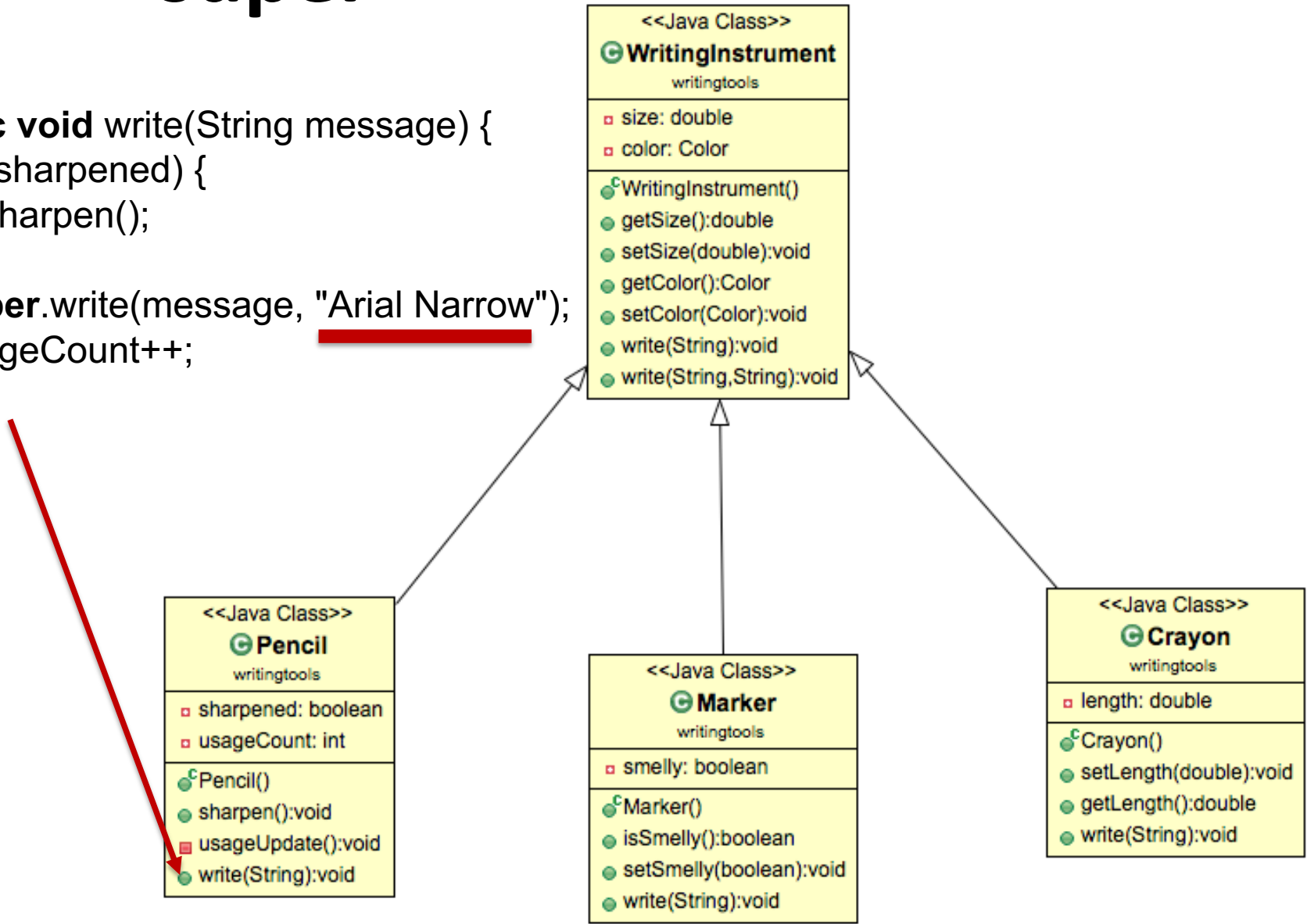
# super

```
public Pencil() {  
    super();  
    sharpened = false;  
    usageCount = 0;  
}
```



# super

```
public void write(String message) {  
    if (!sharpened) {  
        sharpen();  
    }  
    super.write(message, "Arial Narrow");  
    usageCount++;  
}
```



# this (demo in Marker)

```
public void setSmelly(boolean fragrant) {  
    smelly = fragrant;  
}
```

or

```
public void setSmelly(boolean smelly) {  
    this.smelly = smelly;  
}
```

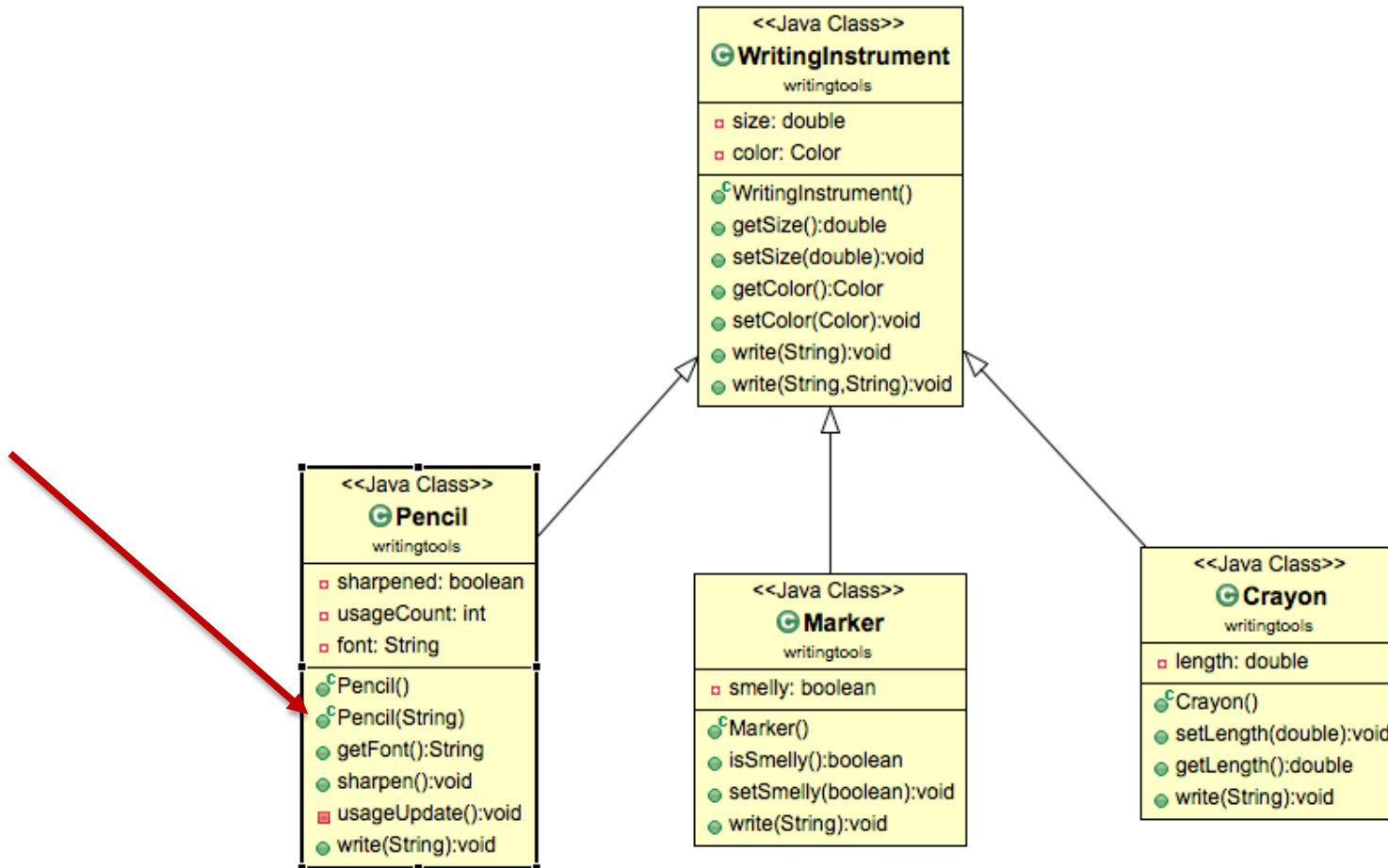
# This(demo in Pencil)

- make the font a field of pencil
  - Add String font as a field
  - Make a constructor that takes a String

```
public Pencil(String font) {  
    this();  
    this.font = font;  
}
```

- Also should then make a getter
- Create a pencil with a different font

# Updated UML



# this() and super()

- this() is a call to the constructor of a current class that has no parameters
- super() is a call to the constructor of the parent class that has no parameters
- Cannot access **private** fields of another class, even a parent class! Instead use getter and setter methods.