About super

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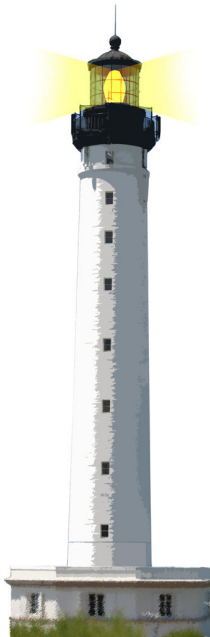

Super well which one...

Java is confusing at wish:

- super in accessing super same named superclass fields (Duh! Ugly)
  - Syntactically: super.x
- super in method to invoke overridden super method (super is the receiver see Lecture)
  - Syntactically: super.method();
- super in constructor
  - Syntactically: super(x)
  - first line represents the superclass and looks for constructor function based on argument
  - in any for the other line, represents the newly created object but changes lookup and in plain method.
- static <T> void copy(List<? super T> dest, List<? extends T> src)
  - to say any super type of T.
  - so readable

Super : accessing super same named superclass fields

```
class Vehicle {
   int maxSpeed = 120;
}

class Car extends Vehicle {
   int maxSpeed = 180;

   void display() {
      System.out.println("Maximum Speed: " + super.maxSpeed);
   }
}
class Test {
   public static void main(String[] args) {
      Car small = new Car();
      small.display();
   }
```

super in constructors

- means look in superclass and invoke the constructor with the same signature as the super call

```
public Meal {
   public Meal(String flavour) {
     this.flavour = flavour;
   }
}
```

```
public Crisps(String flavour, int quantity) {
   super(flavour); // pass flavour to the super class constructor
   this.quantity = quantity;
}
```

super in constructor: II

```
public Meal {
  public void setFlavour(String flavour) {
    this.flavour = flavour;
  }
```

```
public Crisps(String flavour, int quantity) {
   this.quantity = quantity;
   super.setFlavour(flavour);
}
```

Clearly not good style. But super here is not the superclass but the instance.

Subclass may want to access hidden superclass

```
public class Box extends Rectangle {
  ...
  public double getArea() {
    return (super.getArea() + height * length + width * height) * 2;
  }
```

- super.getArea() executes the method rectangle.getArea on the box instance

Conclusion

Be precise :)

A course by

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