Method with input parameter

- Write an instance method
  ```java
  boolean isIn(Interval i) {
      return ( getBase() >= i.getBase() &&
              getEnd() <= i.getEnd() );
  }
  ```
  that returns the boolean value true if the instance is in Interval i. Return false otherwise.

- Parameter of non-primitive type: pass by reference
  I.e., Reference is copied; object itself is not copied

Another method with parameter

- Write a method
  ```java
  Interval overlap(Interval b) {
      return null;
  }
  ```
  that returns a new Interval if this Interval and b overlap. Return null otherwise.

- What is the method header?
/** = the overlapped Interval between 
* this Interval and Interval b */

```java
public class ClientInterval {
    public static void main(String[] args) {
        Interval i1 = new Interval(0.2, 0.5);
        Interval i2 = new Interval(Math.random(), 0.2);
        Interval o = i1.overlap(i2);
        System.out.println(o);
    }
}
```
Static Variables & Methods

- Shared by all instances of a class
- Only one copy no matter how many objects have been instantiated
- Keyword: static
- Examples:
  - A variable to keep track of how many Intervals have been created
  - A constant used by the whole class
  - A method that doesn't need to reference fields

Method overlap: the static version

- Write a static method
  
  ```java
  overlap(...)  
  ```

  that returns a new Interval if two Intervals overlap. Return null otherwise.

- What is the method header? What should be the parameters, if any?

- Are the static and instance versions very different?