

CS110-04 Final Review:

The final for this class will be comprehensive across the chapters we have studied. You can expect the final to be set up similarly to previous tests. There will be a short answer section, a section where you evaluate the output of Java snippets, and lastly 3 programming questions. The programming questions will be pulled from previous tests (with slight modifications).

Study Resource:

- Study guides from previous tests
- Previous tests
- Homework problems
- Slides from previous classes

Warmup: (Borrowed from <http://codingbat.com/java>)

1. Create a method with two parameters: weekday and vacation. The parameter weekday is true if it is a weekday, and the parameter vacation is true if we are on vacation. We sleep in if it is not a weekday or we're on vacation. Return true if we sleep in.

```
sleepIn(false, false) → true  
sleepIn(true, false) → false  
sleepIn(false, true) → true
```

2. Create a method which, given an int n, returns true if it is within 10 of 100 or 200 of n. Note: Math.abs(num) computes the absolute value of a number.

```
nearHundred(93) → true  
nearHundred(90) → true  
nearHundred(89) → false
```

3. We have a loud talking parrot. Create a method where the "hour" parameter is the current hour time in the range 0..23. We are in trouble if the parrot is talking and the hour is before 7 or after 20. Return true if we are in trouble.

```
parrotTrouble(true, 6) → true  
parrotTrouble(true, 7) → false  
parrotTrouble(false, 6) → false
```

4. Given an array of ints, return true if 6 appears as either the first or last element in the array. The array will be length 1 or more.

```
firstLast6({1, 2, 6}) → true  
firstLast6({6, 1, 2, 3}) → true  
firstLast6({13, 6, 1, 2, 3}) → false
```

5. Given an array of ints length 3, figure out which is larger between the first and last elements in the array, and set all the other elements to be that value. Return the changed array.

`maxEnd3({1, 2, 3})` → {3, 3, 3}

`maxEnd3({11, 5, 9})` → {11, 11, 11}

`maxEnd3({2, 11, 3})` → {3, 3, 3}