

## Week 5 Worksheet - if statements

1. Fill in appropriate methods names and Javadoc comments for the following three methods:

```
/**
 *
 *
 *
 */
public static int _____(int a, int b, int c){
    return ((a < b && a < c) ? a :
            ((b < c && b < a) ? b : c));
}
```

```
/**
 *
 *
 *
 */
public static int _____(int a, int b, int c){
    if (b < c){
        if (a < b){
            return b;
        } else if (a > c){
            return c;
        } else
            return a;
    } else {
        if (c > a){
            return c;
        } else {
            if (a > b)
                return b;
            else
                return a;
        }
    }
}
```

```
/**
 *
 *
 *
 */
public static int _____(int a, int b, int c){
    if (a > b && a > c) return 1;
    if (a < c && c > b) return 3;
    return 2;
}
```

2. Using the three now labeled methods from question 1 complete the following method:

```
/**
 * Displays the three input parameters on a single line
 * in increasing order separated by single spaces.
 * @param - first int
 * @param - second int
 * @param - third int
 */
public static void printSorted(int a, int b, int c) {

}
}
```

3. Consider the following definition of *leap year*:

*The Gregorian calendar, the current standard calendar in most of the world, adds a 29th day to February in all years evenly divisible by 4, except for century years (those ending in -00), which receive the extra day only if they are evenly divisible by 400. Thus 1996 was a leap year whereas 1999 was not, and 1600, 2000 and 2400 are leap years but 1700, 1800, 1900 and 2100 are not.<sup>1</sup>*

Write a static predicate method that takes a year as an integer and returns true if and only if that year is a leap year:

4. Write an application class called `LeapYearApp` that has the following behavior:

- a. Prompts the user to enter a year between 0 and 10000 inclusive:  
Please enter a year (0 - 10000):
- b. If the input is in the appropriate range and
  - i. If the year is a leap year, output `LEAP YEAR` and exit.
  - ii. If the year is not a leap year, output `NOT LEAP YEAR` and exit
- c. If the input is not in the appropriate range output `INVALID INPUT` and exit.

You do not need to handle cases where the user does not input an integer.

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<sup>1</sup><http://www.wikipedia.com>