Week 5 Worksheet - if statements

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

```java
/**
 *
 */
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:

```java
/**
 * 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.¹

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.

¹http://www.wikipedia.com