Lab 22

Instructions: Complete the steps below. Be sure to show your code to one of the lab TAs before you leave, so that you can receive credit for this lab. You must also upload a copy of all your source code (.java) files to the link on Blackboard by **11:59 PM on Wednesday November 18, 2020 for L01, L02, L03, L05 and by 11:59 PM on Tuesday November 17, 2020 for L06, L07, L08 and L09**.

1. Write a method to sort a two-dimensional array using the following header:

```
public static void sort(int[][] m)
```

The method performs a primary sort on rows, and a secondary sort on columns.
For example, the following array

```
{{4, 2}, {1, 7}, {4, 5}, {1, 2}, {1, 1}, {4, 1}}
```

Will be sorted to:

```
{{1, 1}, {1, 2}, {1, 7}, {4, 1}, {4, 2}, {4, 5}}.
```

2. Design a class named `MyInteger`. The class contains :
   - An int data field named value that stores the int value represented by this object.
   - A constructor that creates a `MyInteger` object for the specified int value.
   - A getter method that returns the int value.
   - The methods `isEven()`, `isOdd()`, and `isPrime()` that return true if the value in this object is even, odd, or prime, respectively.
   - The static methods `isEven(MyInteger)`, `isOdd(MyInteger)`, and `isPrime(MyInteger)` that return true if the specified value is even, odd, or prime, respectively.
   - The methods `equals(int)` and `equals(MyInteger)` that returns true if the value in this object is equal to the specified value.

   Write a client program that tests all the methods in the class.

Grading Guidelines: This lab is graded on a scale of 0-6 points, assigned as follows:

- **0 points:** Student is absent or does not appear to have completed any work for the lab
- **2 point (2*1):** Student has written the program, but it has errors.
- **4 points (2*2):** Student has written the program it compiles without error, but it does not produce the correct output.
- **6 points (2*3):** Student has written the program and it compiles and runs correctly, without any errors.