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1. This assignment is traditionally done with Pair Programming. Were there times you wish you had a partner to bounce ideas off of? We will ask you to compare your experiences with these first, "single" to assignments to the paired assignments later on in the semester. Please use your answer here for reference later.

Yes, if there is a partner to discuss with will help.

2. Java's built-in classes Comparable and Comparator are both interfaces for doing comparisons among objects. What is the difference in the two interfaces? Give a situation when it is best to use each. Is it possible to change the extra features in LibraryGeneric such that the Comparable interface is used instead of Comparator? Why or why not?

java.lang.Comparable: int compareTo(Object o1) compares this object with o1 object, and returned int values.

The class implements the java.lang.Comparable interface is in order to be able to compare its instances. A comparable object is capable of comparing itself with another object.

java.util.Comparator: int compare(Object o1, Object o2) compares o1 and o2 objects and return int values.

The class implements the java.util.Comparator interface is not comparing its instances, but some other class's instances.

It is not possible to change the Comparator interface to Comparable interface in the assignment, because we are going to compare instances in other class which is in LibraryBook class instead of extra features classes (OrderByAuthor, OrderByIsbn, OrderByDueDate).

3. Comment about the efficiency of your programming time. Did you utilize the time spent on this assignment effectively? How might it be improved?

It was not very efficient because I usually made simple mistakes, which protected me from programming fluently. What's worse, these mistakes are difficult to find out. Some of them are spelling mistakes (misspelling the variables etc.) and some of them are syntax that I ignored. If I can pay attention to the spellings and check the syntax where I usually made mistakes, it will be better.

The instructions for the assignment is also very useful. Following them will make the programming much more efficient.

4. Reiterate why writing Generic code is important for this course. Phrase your answer in terms of Data Structures and Algorithms.

Everything in Java is an Object, just make all data structures hold Objects.

When defining classes, interfaces and methods, generics enable *types* (classes and interfaces) to be parameters. Type parameters provide a way for you to re-use the same code with different inputs, and the inputs to type parameters are types. It enables programmers to implement generic algorithms. By using generics, programmers can implement generic algorithms that work on collections of different types, can be customized, and are type safe and easier to read.

What's more, generics allow for type-checking at compile time instead of run-time, and can detect type mismatch BEFORE your code runs.

5. How many hours did you spend on this assignment?

25