

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.

There were no times where I wish I had a partner to bounce ideas off of. The only thing a partner would've helped with is having another person to drive crazy with the lookup by ISBN method due to the case where the library contains the book, but it isn't checked out. In that case lookup (ISBN) would return null as the holder is null by default, but lookup (ISBN) also returns null when the book doesn't exist. Thus a situation is created where lookup (ISBN) can only tell you the book isn't checked out.

Also, since the method only returns the holder or null it is useless as a search function to reuse in the check-in and check-out methods as you need a reference to the book object. Combined with the lack of information potentially provided, lookup (ISBN) has very limited use for an end-user either. When the library was limited to Strings, a simple answer would be to make "-1" the default holder. However, once the switch is made to generics, I have no solution to the problem besides change the return type of lookup. In short, what I really want to know is; what is the intended purpose of the lookup (ISBN) method?

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?

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Comparable compares this object to another object, it is usually used within a class (i.e. our Book class) to establish a natural ordering. Comparator takes in two, possibly different, objects and compares them, comparator is more useful when you don't have control over one of the objects you want to compare or they lack a natural ordering.

We could have established a natural ordering for the books by ISBN with Comparable, however the other sorting types would've still required the use of Comparator.

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

Other than wasting about thirty minutes on lookup (ISBN) and uncertainty about what to test, the assignment went smoothly.

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

Generics allow us to create a single data structure that can be used for several different data types. Generics also provide stronger type-casting with type flexibility for data structures and algorithms utilizing them.

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

I spent roughly five hours on this assignment.