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<p style="text-align:center">Assignment 2 Analysis Document</p>

1. I really enjoyed working on this assignment by myself. I think the reason is that I am so far advanced in computer programming that it is just really easy to work on things alone. Sometimes I do wish that I could bounce my ideas off with someone. However, I think that this assignment was completed at a much faster pace than if I worked with someone. The huge differences in skill would cause me to mentor the partner and therefor slowing me down.

2. Java's Comparable and Comparator interfaces are different, in that comparator has a compare function on any object that implements comparator. The compare function is used to compare two objects of the same type and have the programmer personally designs the compare function. The comparable interface is a natural ordering of the objects and is therefore only used on objects that can be naturally sorted like int or long. On objects that are made by the programmer a comparator would have to be used since it does not have natural ordering. A situation where comparable should be used would be a comparison of isbn of a book. A situation where Comparator is used in could be the shape's area or a length of a string. The reason being a shape's area is the different way a shape's area could be calculated. So for various shape a comparator is needed. It also have to be specifically programmed to figure out all of the various shape's area and compare them. The length of a string is of the same type of problem. This is due to the fact that while the string itself have natural alphabetized order, the length of a string does not. So it is up to the programmer to make the compare function in the comparator interface. It is possible to use the comparable interface for the Inventory Generic function due to the fact that Isbns are a long type and has natural ordering. So it would be o1>o2 return a 1 and o2>o1 return a -1.

3. I spent about 5 hours on the assignment it was pretty easy and straight forward. The main time was used on testing to see if the functions would work correctly and making new tests for the boundary conditions and exceptional cases. I believe I utilized the times correctly by focusing on the main problem and using all of the time on programming, testing the functions and making the generic functions. I could have used my time more correctly by focusing more on the programming part like commenting and organizing my structures to make them more efficient.

4. Generics is the central theme of this assignment. It is important in computer programming because of code reuse. For example, let say you have a class file that you want to sometime puts int in the object and sometime puts String in the object. If there is no generic you would have to go back to the class file and change the parameters, but with generics you can specify the type you want in the diamond brackets. This will save you a lot of times. In terms of data structures and algorithm I would say generics is a way to save time for the programmer. For the various data structures like a queue or linkedlist sometime you want a string in the structure instead of a long. You would have a universal class file for different type of input use instead of one file for one type of parameter you want to puts into the object.

5.   I spent about 5 hours on the assignment.