CSCI 35500 Assignment1

Insertion Sort in Java and C++

COMPARE/CONTRAST

1. Readability.

Both Java and C++ have a similar coding format, in terms of the syntax of the language that is straightforward and concise. This leads to a simpler scheme to read the language with, though C++ is simpler to understand due to the direct nature, which does not require classes for functionality. Both Java and C++ have clear rules, but these rules cause the code to be more readable.

2. Writability.

Both programs have an easy to pick-up syntax that is friendly to work with, though personally I had spent far more time with Java. This is because Java requires all elements to be contained within a class, which hinders less interactive programs, such as a simple Insertion Sort. Because of this, I would say that C++ is more readily available for complex data manipulation, but Java would work better for a user-interface program.

3. Reliability

With Insertion Sort, This program could potentially increase in performance rapidly if more elements were added to the array. With C++, this would not be as much of an issue for the user's perspective.

Due to java being interpreted (as well as compiled), the program would not perform at the same speed as a compiled c++ executable. A compiled program would take less time (and have improved performance), as the code would have to be interpreted during run-time with Java.

4. Cost

The cost of these two programs are both very inconsequential- the financial cost is virtually non-existent, while the time cost would be more for the java implimentation- though with only ten elements in an array, the difference in cost of performance is virtually undetectable. The primary cost for these two programs is creation time. As mentioned earlier, the cost for creating the java program was greater than the c++ program, due to a lack of experience with java.