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CSCI 350

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Reflection Assignment - Complete with Tutorial Assignment 2

1. What is string interpolation, and why is it better than the way you concatenated strings and variables in Java?

**String interpolation allows imbedding code while formatting a string.**

**The advantage this has over Java is that you can use variables directly in the formatting.**

1. In the HelloWorld tutorial, what was the purpose of the hard brackets ([ and ]) in the following code? trimmedGreeting = greeting.Trim();

Console.WriteLine($"[{trimmedGreeting}]");

**The brackets are used to illustrate how the Trim method works by placing a bracket at the start and end of the string.**

1. What is the range (min and max possible values) of the following types in C#? int

double

decimal

**The range of doubles is -1.79769313486232E+308 to 1.79769313486232E+308.**

**The range of decimals is -79228162514264337593543950335 to 79228162514264337593543950335.**

1. Do you notice any differences between C# and Java with if statements, while loops, or for loops? If so, describe.

**There seem to be no obvious differences between loops in C# and Java.**

1. What does the T mean in List<T>?

**The “T” stands for the type of elements that the list contains.**

1. What type of sorting algorithm does the List<T>.sort method use? You’ll need to dig for this one but start with the links from the tutorial.

**The List<T>.sort method uses the Array.Sort method which uses a combination of three different sorting algorithms: insertion sort if the partition has less than 16 elements, Heapsort if the number of partitions is bigger than 2logn and Quicksort for every other situation.**

1. Continuing the research from the previous question, what is the difference between a stable and unstable sort?

**An unstable sort does not guarantee that the order of equal elements will be preserved, whereas a stable sort does.**

1. How is namespace used? What is it similar to in Java?

**A namespace is used to organize code by associating “names”, such as classes, with a namespace. This also helps to control the scope of methods and classes, keeping them locked inside of the namespace.**

**Namespaces are similar to Java’s packages.**

1. In C#, can you define more than one class in a file?

**It is possible to define multiple classes in a file, but it is generally advised not to.**

1. After completing the Intro to classes section, describe some similarities and differences that you notice between this tutorial and the way you would have done it in Java.