

## Essay 1

For this assignment, you will write a 1-2 page paper on one of the following topics. I will expect at least 3 sources beyond your textbook, with proper citations for relevant facts from those references. Of course, for this assignment, you are welcome to use web or book resources of any type; just be sure to use reputable sources and include them in your bibliography.

Please note that since most of these topics have at least some component that is opinion-based, I expect a clear thesis statement which summarizes your opinion or finding, which must then be supported by relevant facts and reasonable arguments in the body of your essay.

- Pick two languages that you are familiar with or want to learn more about, and read further regarding their similarities and differences. Are they compiled or interpreted? Declarative or imperative? Strongly typed or weakly typed? What types of tasks are better or more easily accomplished in one versus the other? Note that I expect additional sources with in-depth comparisons based on the categorizations of languages that we discussed for this essay, to be sure to read up on the specifications of the languages.
- Familiarize yourself with the history of Java and C# using online (or other) sources, including the conflict between Sun and Microsoft over Java standardization. Some have claimed that C#, at least partially, is Microsoft's attempt to kill Java. Defend or refute this claim, with relevant facts to back up your opinion.
- C has a reputation for being a relatively "unsafe" high-level language. Why is this the case? Is this a feature, or a major design flaw? What utilities exist to enforce safer practices in C, and are these sufficient "patches" to C's security vulnerabilities?