Term Project Write-up

Gabriel Browning

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**Scala**

1. Scala’s name derives from the language’s ability to scale drastically with large quantities of data and the language was developed in 2001 for exactly that reason. Many criticisms of Java were addressed by the swiss creators of Scala to create more efficient programs with the readability of higher level languages like Python and Ruby
2. In my project, I made plenty of use of the object-oriented and functional programming paradigms, especially the latter. The types in scala are static and strong. Once you define a value object with any value, it has that value until the day it dies. The preferred method of defining data is as an immutable “value” rather than a variable. While this is fairly odd to get used to, it promotes Scala’s functional paradigm and often allows the program to run much more efficiently than using variables in the same code. The language is both compiled and interpreted, like it’s parent language: Java.
3. Scala fits *nearly all* of the criteria of a good language as defined in our text. The purpose of Scala was to create a Java that was even more developer-friendly, readable, and reliable and allows the developer to be more creative and less restricted in how they format and design their code.
4. I learned a lot about effective methods for recursion and instances where recursion was actually better than any kind of for or while loop. Some of my code ran *drastically* faster when I wrote it as a recursive loop rather than as a single loop (even though it took a bit more time to code). After working with the language, I gained a deeper respect for recursion and data science with programming.