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RTS Labs – Code Exercise #3

The one thing I would change about Python would be its use of dynamic data types for variables. While this feature is attractive to beginner and casual programmers, it comes at the cost of memory efficiency and processing speed. If static types and type-checking were implemented, Python could possibly change from an interpreted language to a compiled language. This would bring about the ability to allocate specific memory blocks for variables instead of requiring the help of the Python memory manager during code interpretation. Python code compiled into machine code would also require less overhead at runtime. For debugging purposes, a compiler would catch any conflicting static-typed variables, preventing code to be executed with potential vulnerabilities and making the code safer as well.

Since I consider Python my favorite language, this change would help remove the stigma it has in mobile and web applications. It is very straightforward and powerful, but its higher memory requirements and slower speed in comparison to lower-level languages make it much less viable. By reducing these disparities, Python's robust open-source libraries could be further implemented in these other areas of tech that have tighter performance requirements.