

Comparison

Assignment: Searching long text file with
Python and shell scripts

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Course Title

concepts of Programming Languages

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Readability

Simplicity: Python and Shell scripting is much simpler from every side from C++. in C++ there is issue with simple semi-colon in ending line but python and shell scripting have no issue of that. They have not any thing for line change. But in C++ one can write code with any structure he/she wants but in python there is problem and that is, python must have to follow a structure is one space is occur then code shows error. So, have to maintain. But in shell scripting does not need to follow that. Python and shell scripting has easiest way to understand method and very simple from C++

Orthogonality: Python has much more library then C++ so Python use that library but code is much smaller than C++ because C++ have to use many things but python has no. in shell scripting code is much smaller then python and C++

Data Types: Data types are much easier to understand than C++ for python and shell scripting. Because there are many things in python that is direct English. But C++ data types all are keyword. And shell scripting is much more easier type then python and C++

Syntax Design: the syntax design is C++ is better than python but shell scripting design is okay. In python have to in a structure but in C++ and shell scripting has no such an issue of that. So, for syntax design c++ is better than both.

Writability

Support for Abstraction: The quality of the code in C++ is better than python because there are many things python does not follow the instruction but the abstract method is better in C++. Easy to write

Expressivity: Expressivity is very good in python then shell scripting and C++ because then data types are much more easily and readable and writable then C++ and shell scripting. Easy to write and the express quality is good in python. In whole 3 language support comment option.

Reliability

Type checking: Type checking is much faster in C++ and shell scripting then python. In python not only read then line and compile but must follow the structure. But C++ and shell scripting has not such kind of issue. And compilation is much faster in C++ and shell scripting

Exception Handling: The exception handling in python is very good then C++ and shell scripting. So, python is much more reliable than other 2 language

Restricted Aliasing: The Restricted Aliasing is better in shell scripting because there are many things python and C++ does not handle but shell scripting follows all the instruction for restricted aliasing.

Performance: The Performance is great in 3 languages. But shell scripting and c++ need to small code so they run faster than python.