# CSE 425 ASSIGNMENT

**Comparison table among C++, python, shell script:**

| Title | Python | Shell Script | C++ |
|---|---|---|---|
| Definitio n | Python has a planning logic that underscores code clarity, outstandingly utilizing significant whitespace. It gives builds that empower clear programming on both little and huge scales. | A shell content is a PC program intended to be controlled by the Unix shell, a command line mediator. The different dialects of shell contents are viewed as a scripting language. | C++ is a broadly useful programming language as an extension of the C language. It has basic, object-arranged and nonexclusive programming highlights, while additionally giving facilities to low-level memory control. |
| Readabili ty | Python is viewed as cleaner and more straightforward, with accentuation code readability. | Shell script is kind of ambiguous. In terms of readability, wit hin the drawback t hat has given in assignment. | C++ is probably going to be a lot of legible than shell script however less than python. |
| Writabili ty | Python strikes a decent balance between quick compilation, readability and writability. Python additionally needs less code to jot down than C++. | In terms of writability, Shell script is earlier than the opposite 2 han dily. It takes terribly little quantity o f code to scan and conduct search in a very file with bash script. | C++ may be a statically written, free-form, multi-paradigm and a compiled programming language. |
| Reliabilit y: | Python is very reliable. Python is actively maintained, so when problems are reported, they are dealt with promptly. | BUSH is a high-reliability direction and web scripting language with a shell and debugger. It is | it is more reliable than Python, provided you have enough memory and time. The strong points of C++ comparing to Python are speed, memory efficiency, closeness to hardware, but not reliability. |

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| | | based on programming designing standards and underscores unwavering quality, code reuse and versatility. | |
| Run time | 9.07 seconds | 8.09 seconds | 7.98 seconds |
| Length | 49 lines (including spaces) | 53 lines (including spaces) | 81 lines (including spaces) |
| Design issues | Python executes with the assistance of an interpret rather than the compiler, which makes it moderate down in light of the fact that assemblage and execution help it to work regularly. | Shell script language structure just as enigmatic order line parameters for every Unix application and that is a structure issue. | Good error-handling, exception management and correct memory management. |
| Important features | Easy to code, easy to scan, expressive, portable, dynamically written. Free and open supply etc options have created Python special. | A key feature of shell scripts is that the invocation of their interpreters is handled as a core OS feature . | C++ and python area unit object familiarized programming languages. They support oop ideas like Inheritance, Polymorphism, Encapsulation, and Abstraction. |
| Data Types | • integers.<br>• Floating-Point Numbers.<br>• Complex Numbers.<br>• Strings. Escape Sequences in Strings. Raw Strings. Triple-Quoted Strings.<br>• Boolean Type, Boolean Context, and “Truthiness”<br>• Built-In Functions. | • string<br>• Integer<br>• Boolean | • Integer<br>• Character<br>• Boolean<br>• Floating Point<br>• Double Floating Point<br>• Valueless or Void<br>• Wide Character |