Tutorial 2

* 1. CPU: AMD Ryzen Threadripper 3990X – 64C / 128T / 2.9~4.3GHz
  2. Memory: G.Skill Trident Z Royal DDR4-4000
  3. Input: Logitech G915 KB
  4. Output: Samsung Odyssey G9
  5. Function in C: Computations will be conducted inside the function, we can simply call it in the main function easily, and reusable, easily maintainable.
  6. Higher level programming languages:
     1. Easier syntaxes to read, simple, tasks will run under the hood. Easier to debug. Portable, can run on any platform
     2. Cons: Requires interpreter, slower, less memory efficient

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| **Current Setup** | **New Setup** | **Y / N** | **Software** | **Instruction Set Architecture** | **Hardware** |
| Your “Hello World” C++ program compiled  on your **Windows** laptop. The executable is  “Hello.exe”. | The “Hello.exe” executable is copied to the  lab **Windows** machine to run. | Y | Same  (OS / executable) | Same (x86) | Same |
| Your “Hello World” C++ program compiled  on your **Windows** laptop. The executable is  “Hello.exe”. | The “Hello.exe” executable is copied to your  mobile phone (iOS or Android) to run. | N | Different | Different  (x86 vs ARM) | Different |
| Your C++ source code e.g. “HelloWorld.cpp”  can compile and run on the lab machine. | The “HelloWorld.cpp” source code is copied  to a **macOS** laptop. g++ (a C++ compiler) is  used to compile the source code. | Y | Different OS but with the correct compiler | Same (x86) | Same |
| Your “Hello World” C++ program compiled  on your **macOS** laptop. | The “Hello” executable is copied to the lab  **Windows** machine to run. | N | Compiled program on Mac is unix executable | Same (x86) | Same |
| A Java program is compiled on your  **macOS** laptop, producing an executable  Hello.class. | The Java executable Hello.class is copied  to the lab **Windows** machine to run. | Y | Same executable extensions | Same (x86) | Same |
| A **Python** program Hello.py is written and  executed on your **macOS** laptop. | The same Python program Hello.py is  copied to the lab **Windows** machine to run. | Y | Same file extension with the correct compiler | Same (x86) | Same |