Scripting/Interpreted Languages

Perl, Python, Shell, Java

High/Middle Level Languages

C, C++
(What Most Malware Is Written In)

Assembly Language

Intel X86, etc.
(First Layer of Human Readable Code)

Machine Code

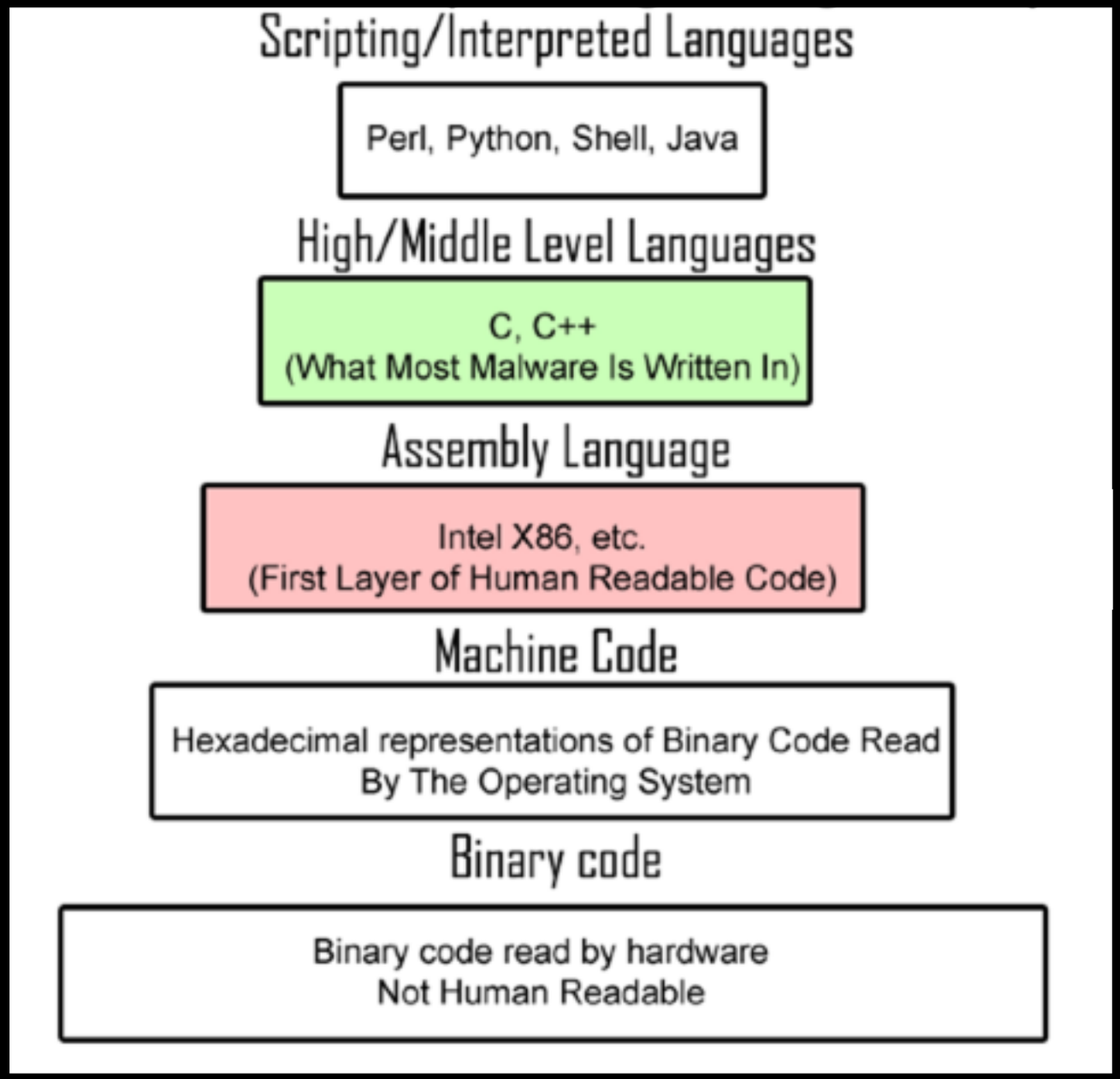
Hexadecimal representations of Binary Code Read By The Operating System

Binary code

Binary code read by hardware
Not Human Readable

WHAT IS PROGRAMMING?

- Now, consider something like Python (or even R). It's called a scripting/ interpreted language.
- It runs on top of these high/middle level languages.
- Which then gets translated into assembly language. Assembly is difficult to read, but it is human interpretable.
- This then gets translated into machine code, read by the operating system as hexadecimal.
- Which is finally then translated into binary code (e.g., 110101010001010)



WATCH THE FOLLOWING VIDEO ON THE NEXT SLIDE.

SEE HOW THE VARIOUS LANGUAGES WORK TOGETHER AT DIFFERENT LEVELS OF ABSTRACTION.

ALSO, CONSIDER THE HISTORY OF THESE LANGUAGES OVER TIME.

LANGUAGES OVER TIME.

ALSO, CONSIDER THE HISTORY OF THESE

ABSTRACTION.

TOGETHER WITH DIFFERENT PARTS OF