

C-Like syntax

BASIC-Like syntax

C#

Visual Basic

PERL

Python

Java

PHP

JavaScript

Ruby

High level languages

High Level Languages

Assembly Language

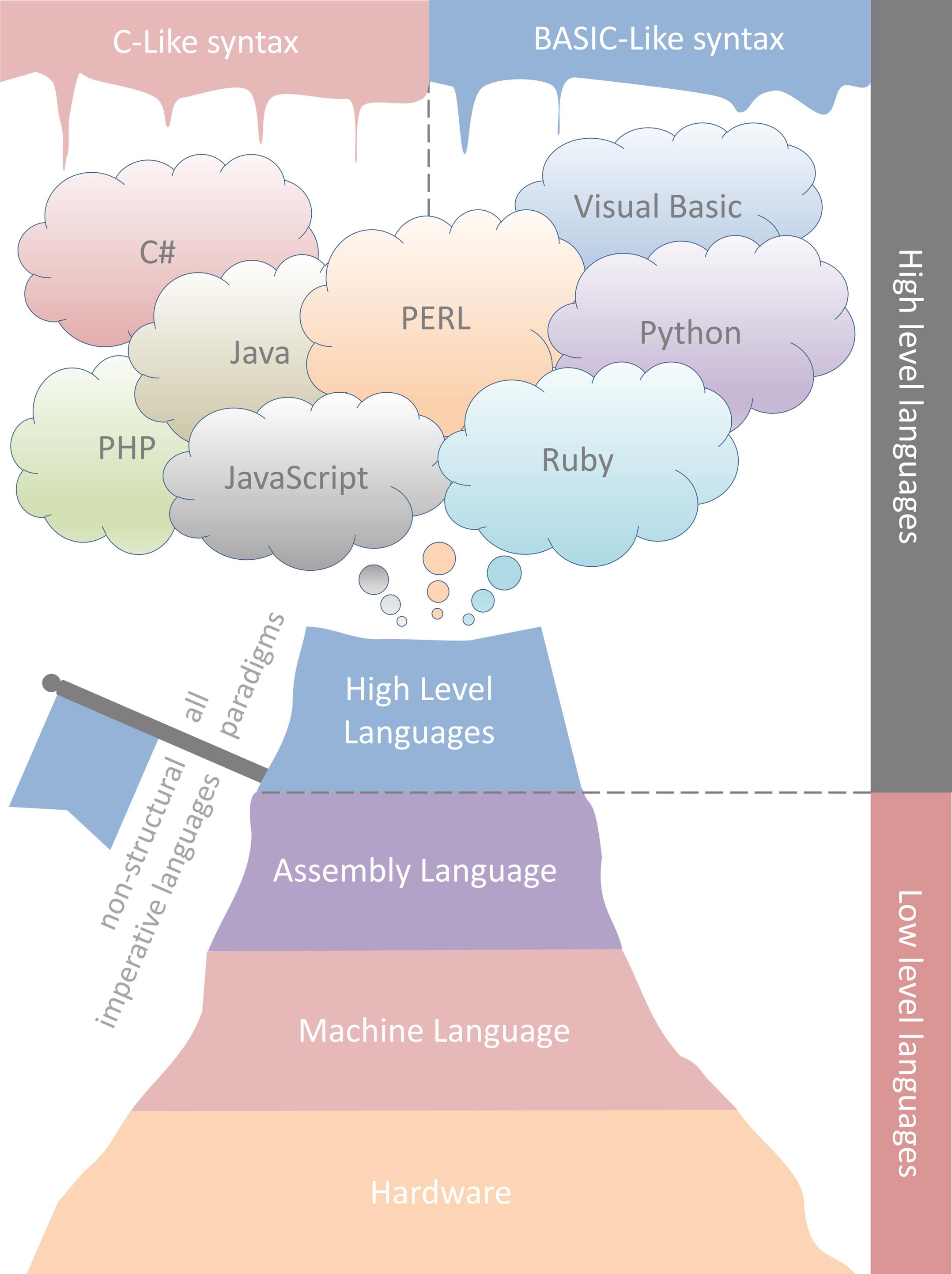
Low level languages

Machine Language

Hardware

all paradigms

non-structural imperative languages



Paradigms, computer languages and their syntax. It shows the link between hardware, computer languages, paradigms and syntax styles. Notice that low level computer languages are imperative and unstructured. Some older high-level computer languages that are equipped with the absolute jump commands, are in fact imperative and unstructured (ex. QBASIC). The bridge from unstructured to structured also exists. Some of the most recent higher-level computer languages, are equipped with absolute jump commands and functions at the same time (ex. VB6). Note that absolute jump commands are known as "GOTO" in most high-level computer languages of the past, where this keyword was able to move execution from the current line to an arbitrary line (eg. Inside a 100-line implementation, "GOTO 10" can move execution to line 10, regardless of where the statement is made). In the assembly language, the most well-known unconditional jump command is the "JMP" mnemonic of Intel CPU's. There are other types of jumps that represent conditional jumps, and these represent a myriad of mnemonics in groups of two to four characters that all begin with the letter "J" (eg. "JL" — Jump if Less, "JGE" — Jump if Greater or Equal, "JNLE" — Jump if Not Less or Equal, and so on). In other CPUs, like Z80, the mnemonic for the absolute jump command is "JP". From firmware to firmware, these notations, or mnemonics, can be represented by different sets of characters. However, because the world works on Intel CPU designs, the word Assembly language is often associated with Intel CPUs. Note that mnemonics means "memoria technica" or "technical memory", and it refers to how information is written in the shortest way in order to be remembered without information loss. In short, it is optimization of notation.