

Introduction to coding / programming

28 Aug 2025

* C, python and java

C → used for ^{develop of} system software

- * memcaching library of facebook
- * Compiled language
- * machine dependent

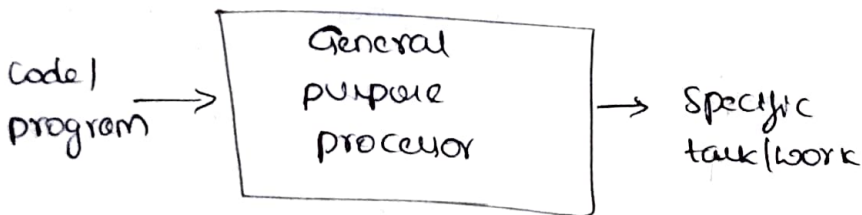
python

- modern high-level language
- upgradable language
- Reuse of libraries
- interpreted language
- machine independent / portable

java

- high level language and mainly used in backend
- compiled language but it is hybrid of C and python

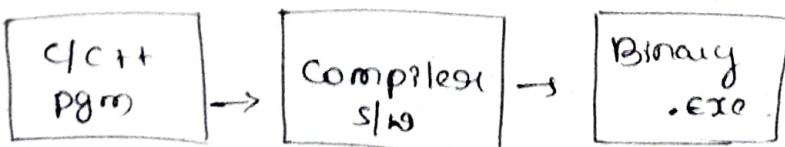
what is programming



* package of code — software — in 1950 by John

language evolution

↓
Binary
↓
Assembly
↓
high level.



compilation

* C is machine dependent \rightarrow Because.

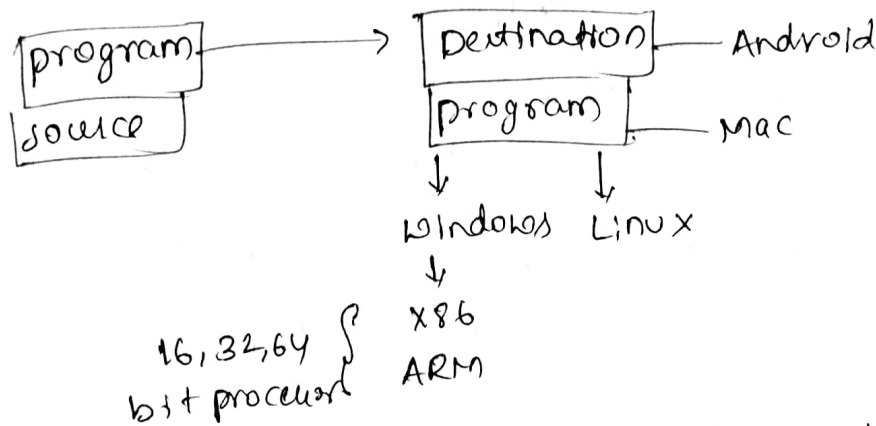
* x86 intel base Architecture and ARM are processor may different from one system to another. and also different compiler and also different configurations - on

* compiler is also executable file.

* when we compiled the program, then the object file is created followed by executable file.

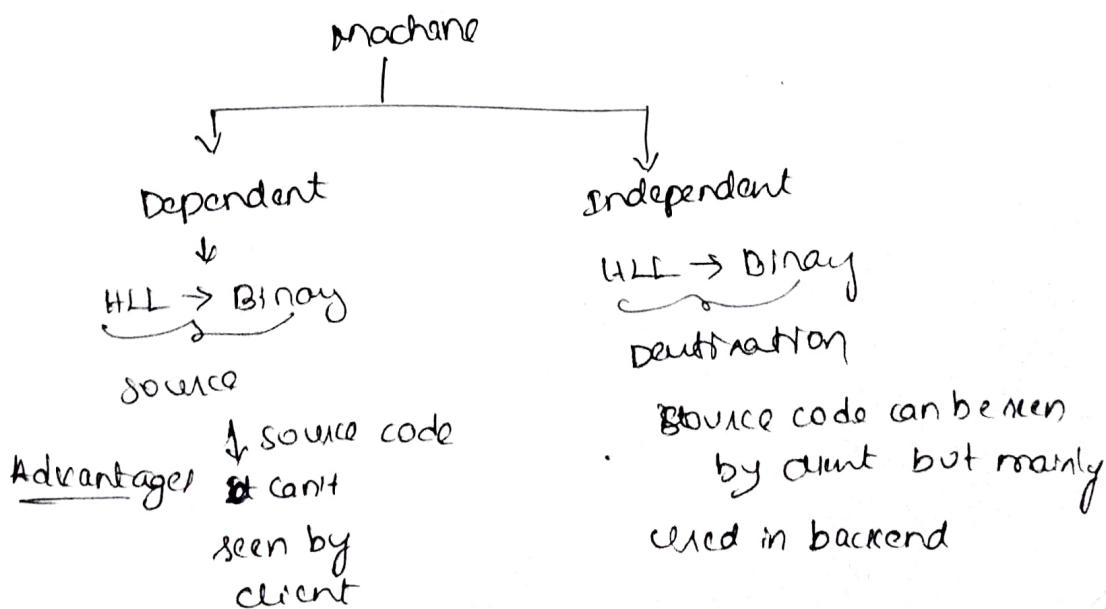
* It may differ with ~~the~~ configuration of system like 32-bit or 64-bit

python



* interpreter are configured to different systems

interpreter \rightarrow python.exe \rightarrow Binary/execute.



- * C + compiler language required lot of time to be compile where as interpreter language run by ~~run~~ line by line from initial itself
- * interpreter language mainly used in prototype model
- * python is slow where C is fast
- * python require more memory where as C require less memory
Ex: integer use in C is 4 bytes where as python is 28 bytes.
- * python can't create exe / binary file when its program is interpreted
- * Java has similar design of python
- * Java - when program is compiled it can be converted into intermediate language to overcome the issue of python where source code is required.
- * JVM - can perform JIT (Just in time) compilation - convert intermediate language to Binary language

