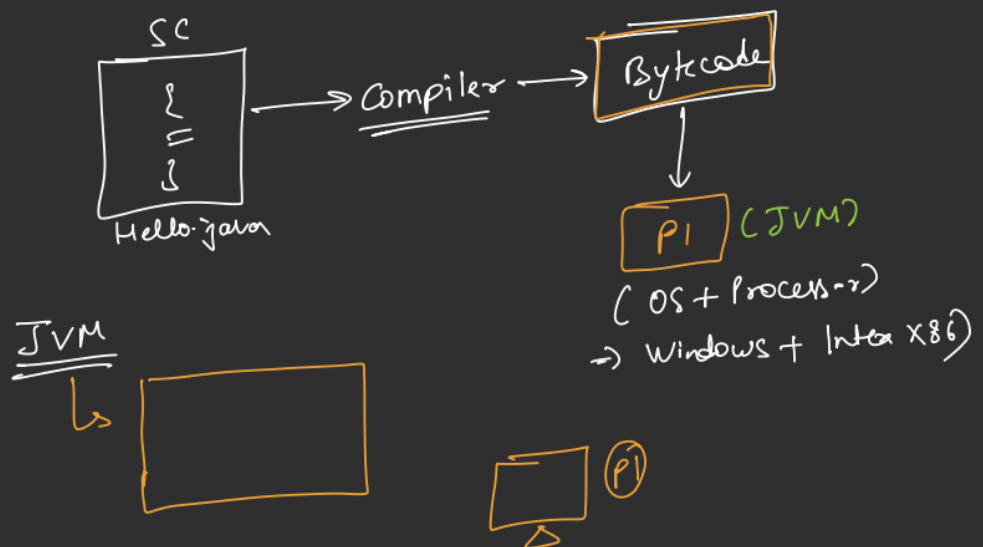
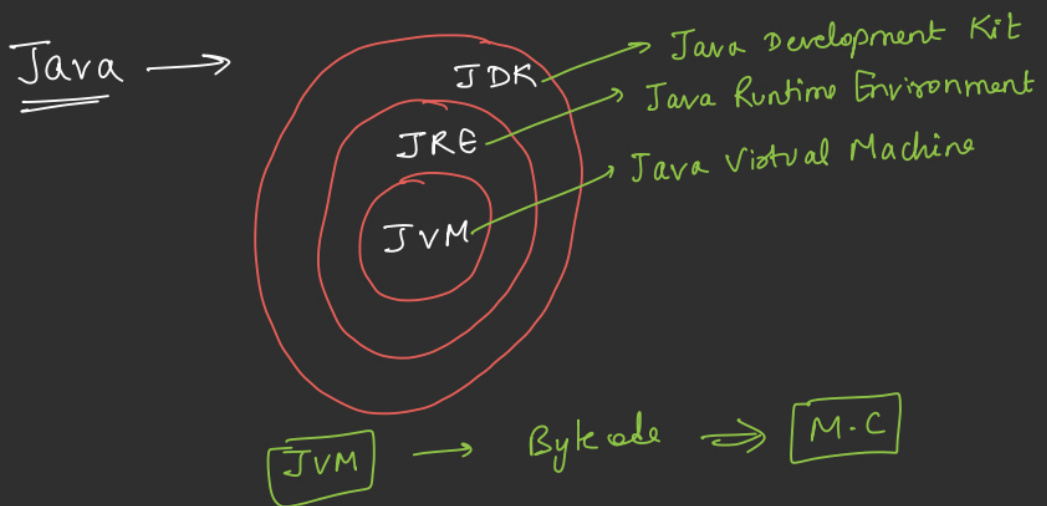
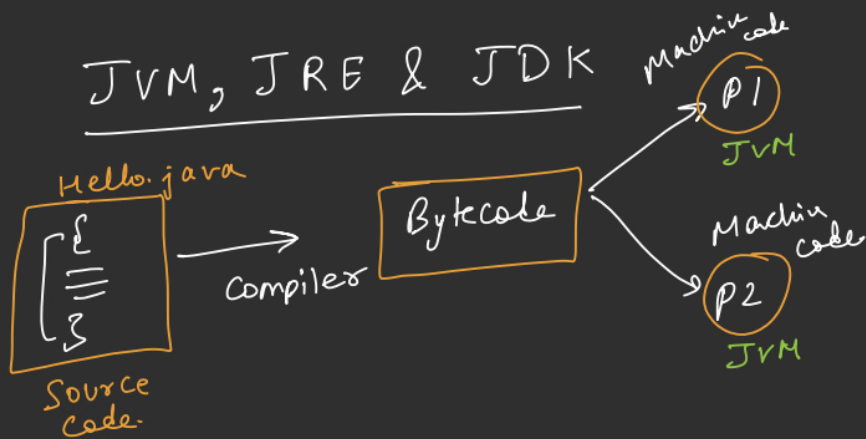
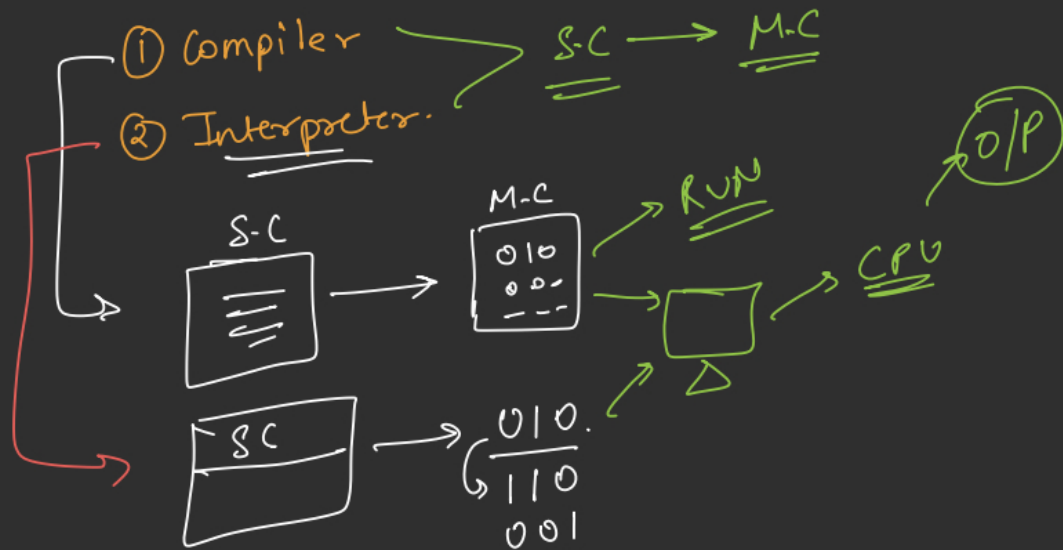


# JVM, JRE & JDK





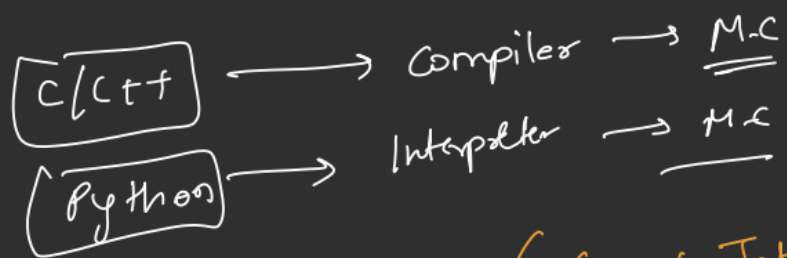
## Interpreter

↳ Convert code line by line.

## Compiler

↳ Convert code all at once.

C/C++ → compiled lang.



Java → Both (Com + Interpreted)

JVM

Bytecode  $\rightarrow$  Interpreter  $\rightarrow$  M.C

Java  $\rightarrow$  com  $\rightarrow$  Bytecode

JVM (Interpreter + JIT)

M.C

Earlier Problems

- ① H/W slow
- ② RAM limited
- ③ DISC slow



Interpreter + JIT Compiler

Just-in-time

JVM

Bytecode

frequent code

JIT

Interpreter

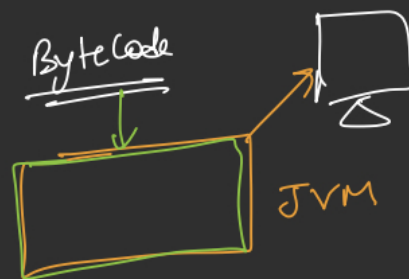
M.C



C/C++  $\uparrow$  | Java

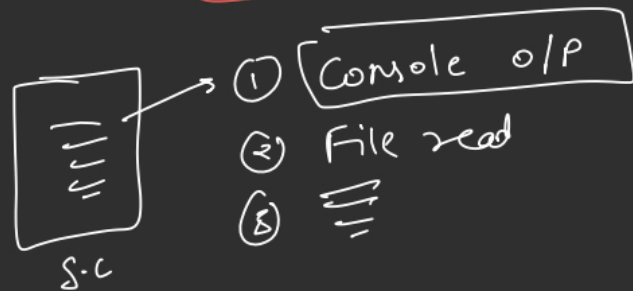
## JVM

- ① Convert Bytecode to M-C  
(Interpreter + JIT Compiler)
- ② Security (Sand-box Model).
- ③ Garbage Collection.



## JRE

→ JVM + Class libraries



## JDK (Java Development Kit)

→ JRE + Compiler,  
Debugger,  
!  
JavaDoc

