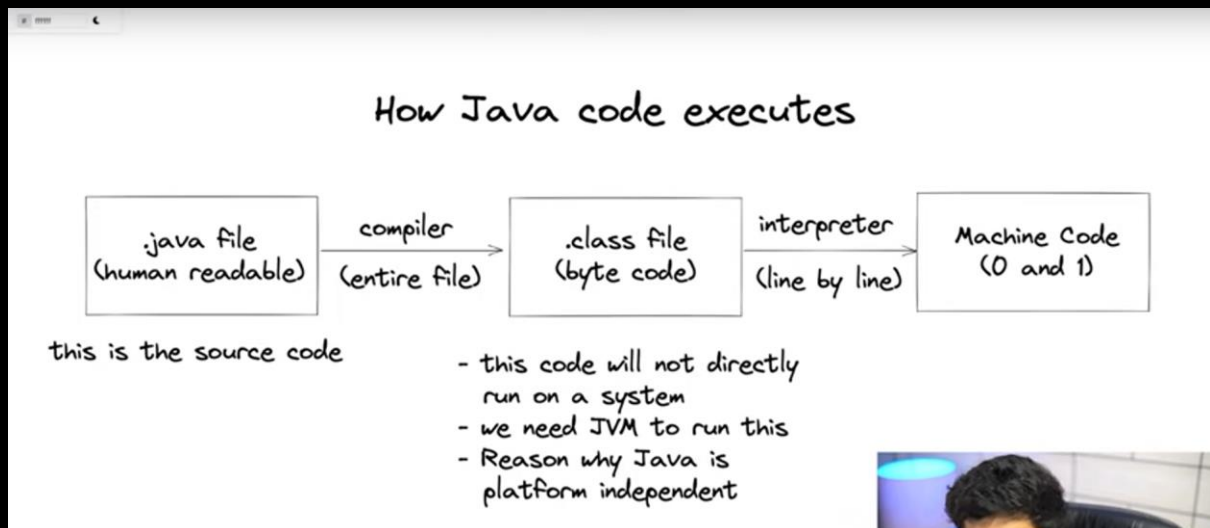


INTRODUCTION TO JAVA AND ITS ARCHITECTURE



Source code file compiled into byte code (.class file) by using compiler

Interpreter = compiles the code line by line

More about platform independence

- It means that byte code can run on all operating systems.
- We need to convert source code to machine code so computer can understand
- Compiler helps in doing this by turning it into executable code
- this executable code is a set of instructions for the computer
- After compiling C/C++ code we get .exe file which is platform dependent
- In Java we get bytecode, JVM converts this to machine code
- Java is platform-independent but JVM is platform dependent

Platform Independence means = Byte code can runs the All Machines

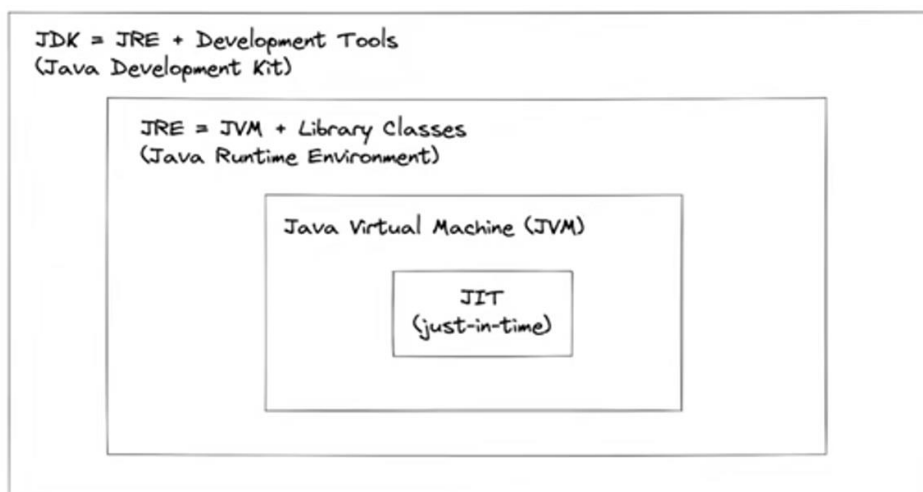
What is meant by compilations ?

⇒ Converting Source code into Machine code (executable code)

JVM converts the Byte Code into Machine Code

Jvm is Platform dependent

JDK VS JRE VS JVM VS JIT



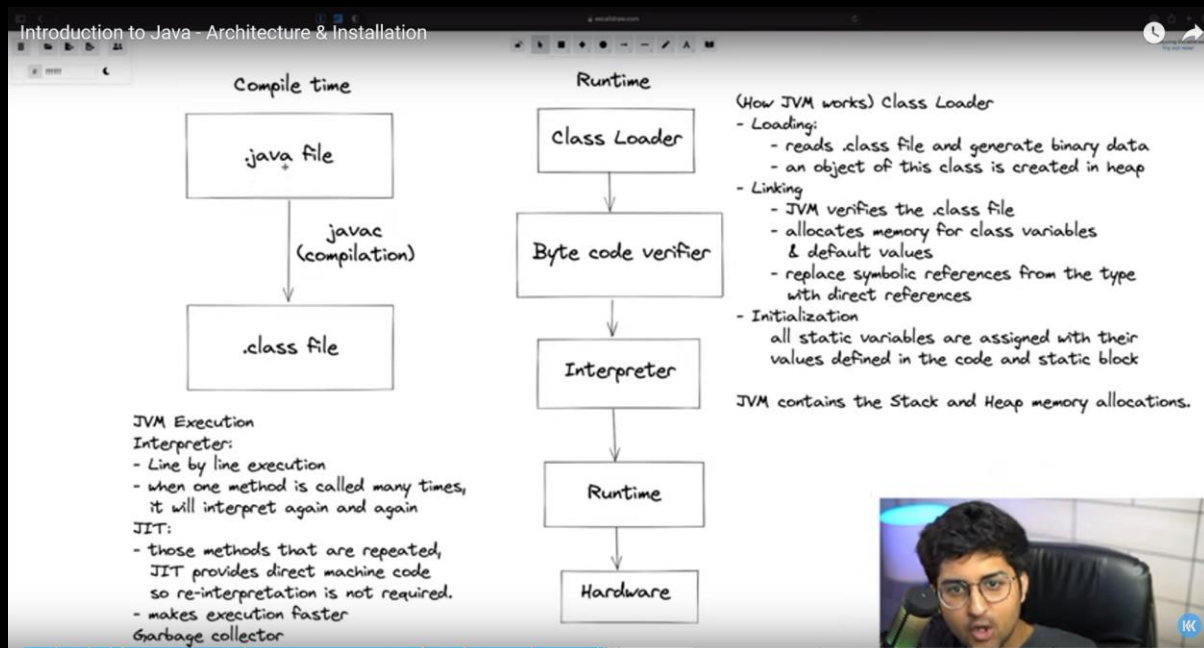
JDK

- Provides environment to develop and run the Java program
- It is a package that includes:
 1. development tools - to provide an environment to develop your program
 2. JRE - to execute your program
 3. a compiler - javac
 4. archiver - jar
 5. docs generator - javadoc
 6. interpreter / loader

Java code into Byte Code = It is done by javaC

JRE

- It is an installation package that provides environment to only run the program
- It consists of:
 1. Deployment technologies
 2. User interface toolkits
 3. Integration libraries
 4. Base libraries
 5. JVM
- After we get the .class file, the next things happen at runtime:
 1. Class loader loads all classes needed to execute the program.
 2. JVM sends code to Byte code verifier to check the for



Static variables are object independent

