
Sketch book
Poetry and distance in life

Core Java

Day 1

WHY JAVA

① **Platform Independent**

First.java

javac -d ..\bin First.java

- -d → directory where to generate
- javac → compiler does not force you to write in case sensetive manner

compiler output is a intermediate byte code

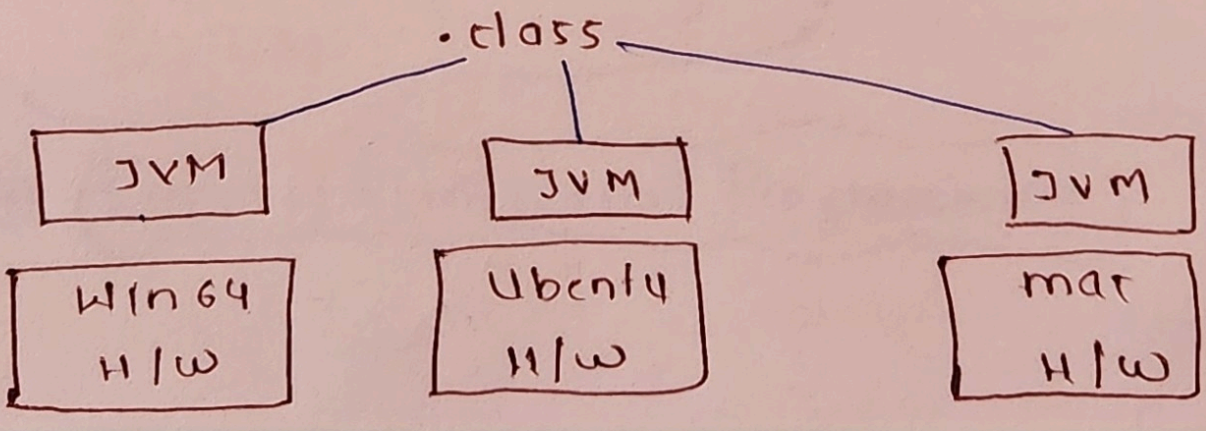
First.class → it is in binary format

→ This is platform independen

note: To run code it has to be converted into platform specific Native code.

Its own understandable platform.

- To run application or code you have a virtual machine called as JVM



(2) Day 1

- JVM take platform independent Byte code and convert it into platform specific or win64 / Ubuntu / Mac specific Native language code.

- JVM works on: write ones and use anywere principle

Note: Compile time and Run time seperation makes Java platform independent.

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(2) Simple & Robust

(3) Secure

(4) Automatic memory managment

(5) Inherent Multi threaded support

(6) Object Oriented support

- Encapsulation
- Inheritance
- Polymorphism
- abstraction

(7) Excellent I/O support

(8) Inherent networking support for TCP/IP, UDP/IP programming & for URLs

(9) Support functional Programming

③

Day1

- install JDK 11 (11.0.7) Installation
- STS

- In java there are two folders called bin and src you can also change their name like anything it is not compulsory to follow the bin & src naming

- can we compile the code without using main method in it ?

  ↳ Yes, we can but we can not run it.

  ↓ their will be runtime error.

src

```
class HelloJava{

}
```

This is .java file created in src folder without containing any main method when we compile this file using

directory ↑

```
> javac -d ..\bin HelloJava.java
```

It will create a .class file under bin folder

bin

HelloJava.class

To run use

```
> java HelloJava
```

④

```
class Hello {
    public static void main (String []args)
    {
        System.out.println (" Hello ");
    }
```

don't return anything

to call the method by class name

access specifia

If you compile and run above code the code will be run successfully.

But in case if you change "main" method name to "Main" the compiler will understand it as a method but it can't run bcaz Java is casesenstive language

In above code main method contains main(String []args) → If you don't give it it throws runtime error

command line argument.

what if interviewer asks you take values from user without using scanner method ?

simply use.

```
System.out.println( String "My name is."
        + args[0] + " " + args[1]);
```

If you run above code using it throws ArrayIndexOutOfBoundException

```
> Java Hello
```

⑤ But if you run it like

> java Hello swaraj Kadam

then it will compile and run successfully.

- Name of default package in java

java.lang → it is implicitly present in it

If you want use scanner it present in java.util

public static void double parseDouble(String s) throws NumberFormatException

method declaration in java

- If you want to convert string into double →

Double.parseDouble(args[0])

Difference Between Java SE 8 (JDK 1.8) and Java SE 11

- First we will learn about

JDK (Java Dev Kit tools)

JRE (Java Runtime environment)

→ splited into 2 portion (JDT, JRE) Day 1

(6)

JDK

In our bin folder JDT is present

ex: javac, java, jar,

↙ Javap

Java dev tools

JRE →

Java API libs

Jar (Java archival format)

<Java_home>/jre/lib rt.jar

any jar file consists of classes, packged class

Java virtual machine

- class loader
- Interpreter
- JIT (Just-in-Time)
- Hot spot profiler
- Garbage collector.