

Java??

↳ Platform independent

↳ compiled file

C++ ( ) ← High level.  
↓  
compiler.

OS [ 0101010. ] ← machine level Bit & Code.

Java ??

.java X  
↓  
compiled

Byte level Code. → .class ← Machine level Bit level X

Java Virtual Machine  
↓  
P.C

S.D E

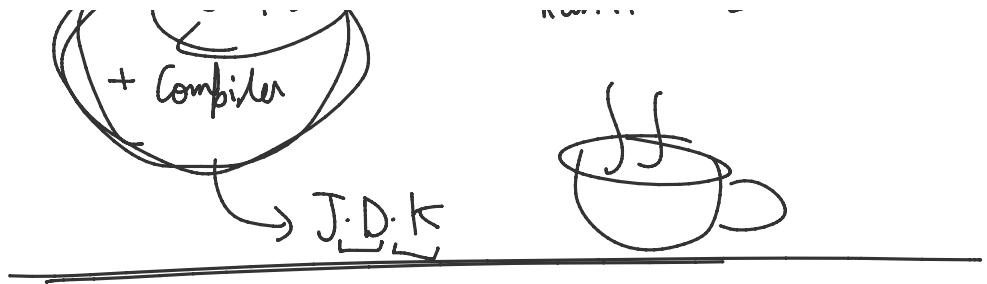
JVM + Lib

JRE + Compiler

Client

JVM + Lib

↳ JRE = JVM + Lib  
Runtime Env.

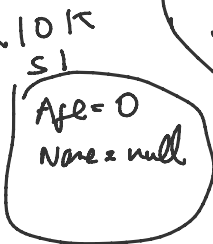
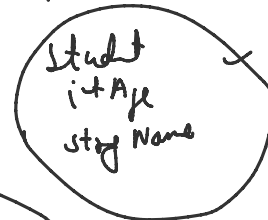


C, OOPSX

```
1) Student s1 = new Student();
```

① Class dependencies evaluated.

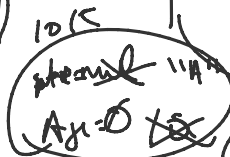
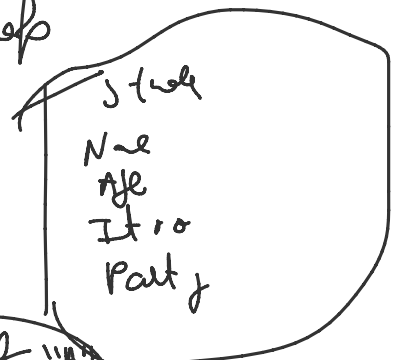
Heap



```
Student s1 = new Student();
10K s1.Name = "A";
10K s1.Age = 10;
Student s2 = s1; 10K
s2.Age = 99;

System.out.println(s1.Age);
```

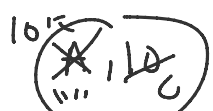
Heap



```
Student s1 = new Student(); 10K
s1.Name = "A";
s1.Age = 10;

Student s2 = new Student(); 20K
s2.Name = "B";
s2.Age = 20;
```

Heap



```

s1.Name = "A";
s1.age = 10;

Student s2 = new Student();
s2.Name = "B";
s2.age = 20;

System.out.println(s1.Name + s1.age);
System.out.println(s2.Name + s2.age);
int myAge = 12;
String myName = "mune";
Test3 t1 = new Test3(s1.Name, s2.age, myAge, myName);
System.out.println(s1.Name + s1.age);
System.out.println(s2.Name + s2.age);
}

public static void Test3(Student s1,
    String Name, int Age, int myAge, String myName) {
    s1.Name = Name;
    s1.age = Age;
    myAge = 0;
    myName = "";
    myAge = 0;
}

```

Handwritten notes on the left side of the code:

- 20K (next to `s2.Name = "B";`)
- A-10, B-20 (next to `s1.Name = "A";` and `s2.age = 20;`)
- 100K (next to `String myName = "mune";`)
- 500K (next to `Test3 t1 = new Test3(s1.Name, s2.age, myAge, myName);`)
- 20K (next to `s1.age = 10;`)
- 100K (next to `s1.Name = "A";`)
- 20 11 (next to `myAge = 12;`)

10K

Handwritten note: A circle containing "10K" and "100K" with a star and a checkmark.

20K

Handwritten note: A circle containing "20K" and "20.5K" with a star and a checkmark.

100K

Handwritten note: "mune"

500K

Handwritten note: " " (empty string)