

*7

Java -> compiler -> .class -> JVM <- OS

1. Java card
 - Smart Cards
2. Java ME
 - Feature phones, smaller devices
3. Java SE
 - Desktop applications
4. Java EE
 - Web Applications

Adoptium JDK

JDK -> Java Development Kit

= (javac, java, javap, jar...) + docs + (rt.jar (Core libraries) + JVM(Java Virtual Machine))

Editor and IDE

Attendance

- ```
Student
{
rollno, name, mobile
}
Employee
{
empid, name, salary
}
Date{
day, month, year
}
```

## - Major Pillars

1. Abstraction
2. Encapsulation
3. Modularity
4. Hirerachy

## - Minor Pillars

1. Typing/ Polymorphism
2. Concurrency
3. Persistence

Object

```
class{
Data Members -> Fields
```

## Member Functions -> Methods

Human has -a Heart ()  
Employee has-a Doj

}

has-a // Association  
is-a // Inheritance

Base/ Parent

Derived/ Child

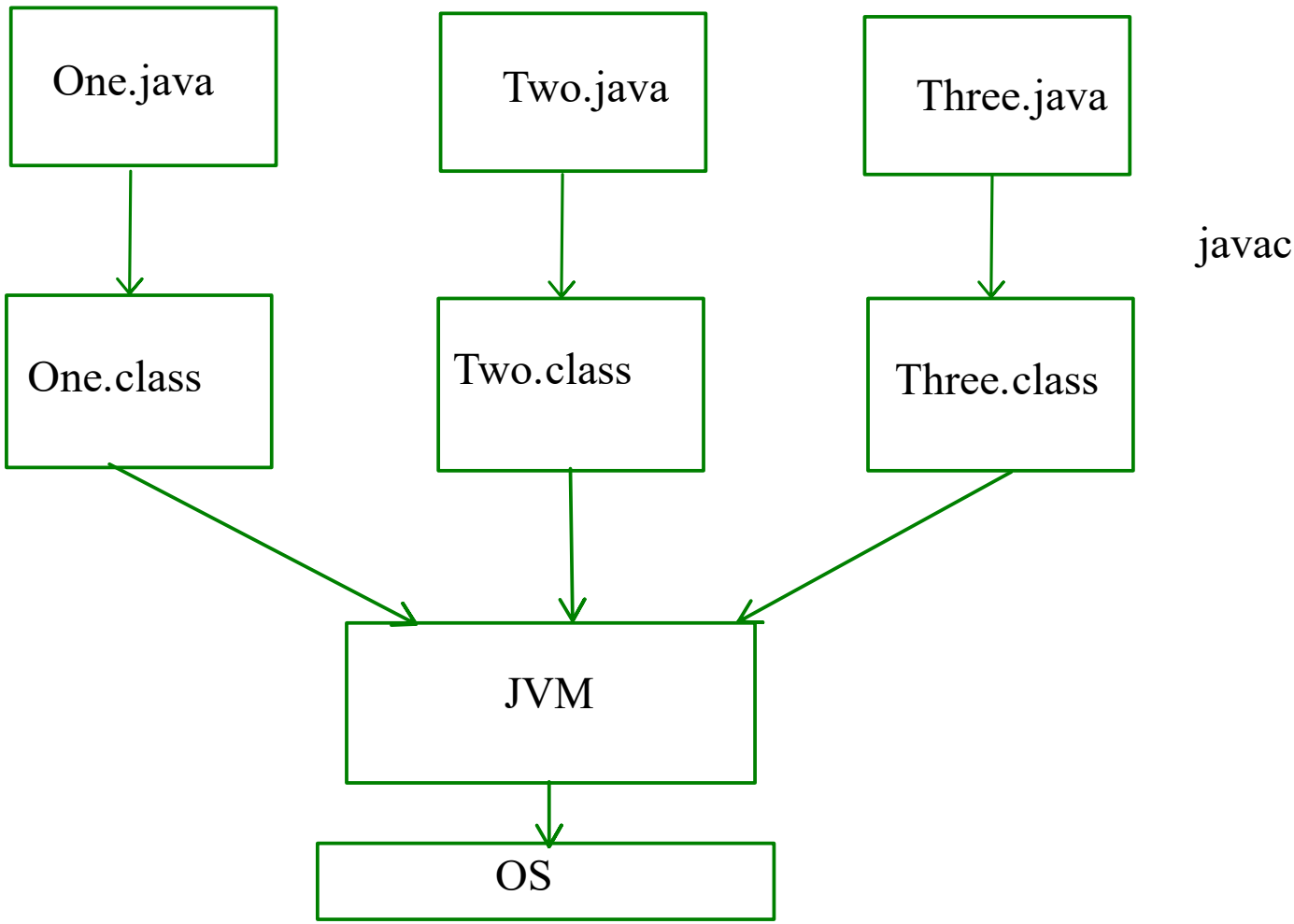
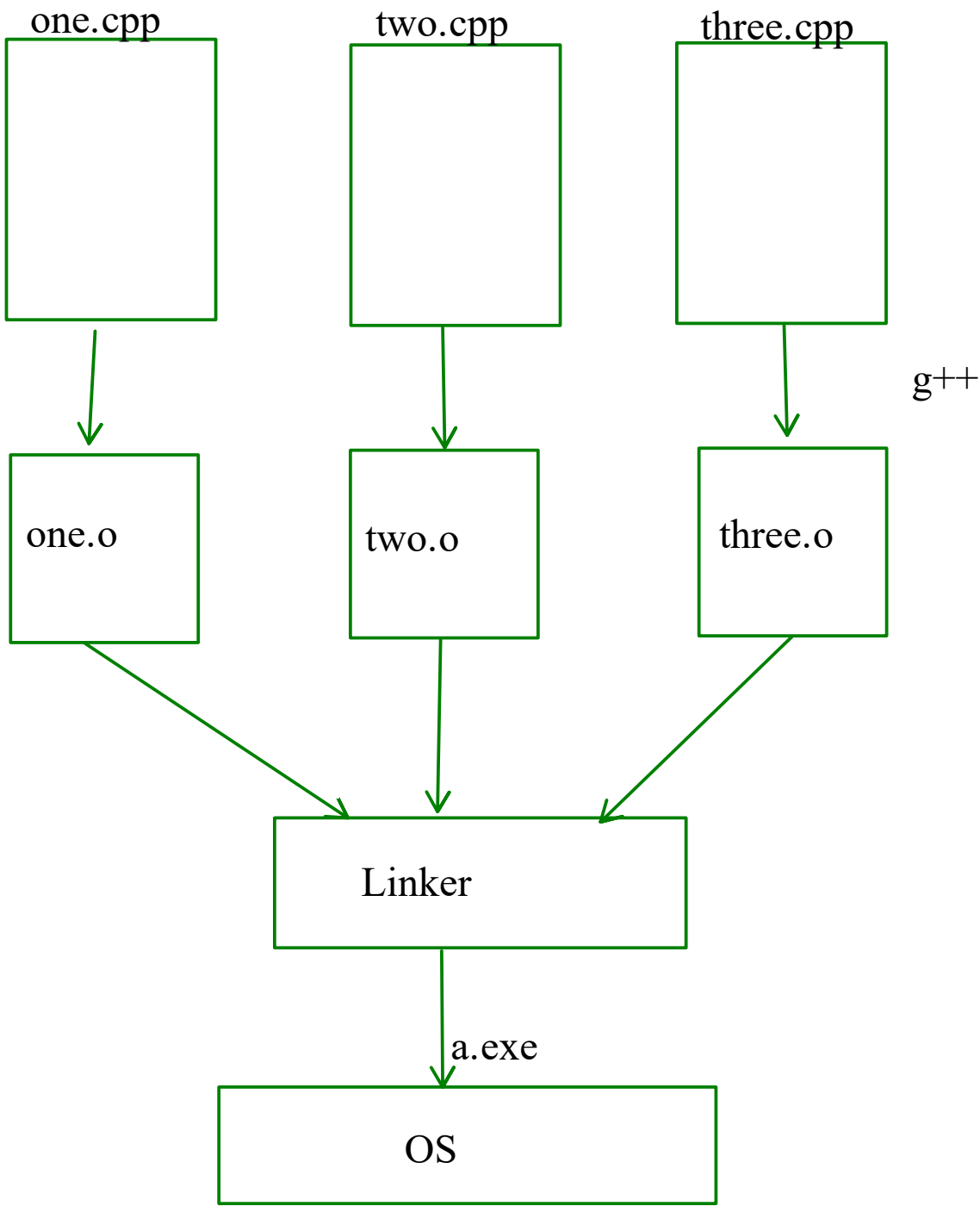
JDBC

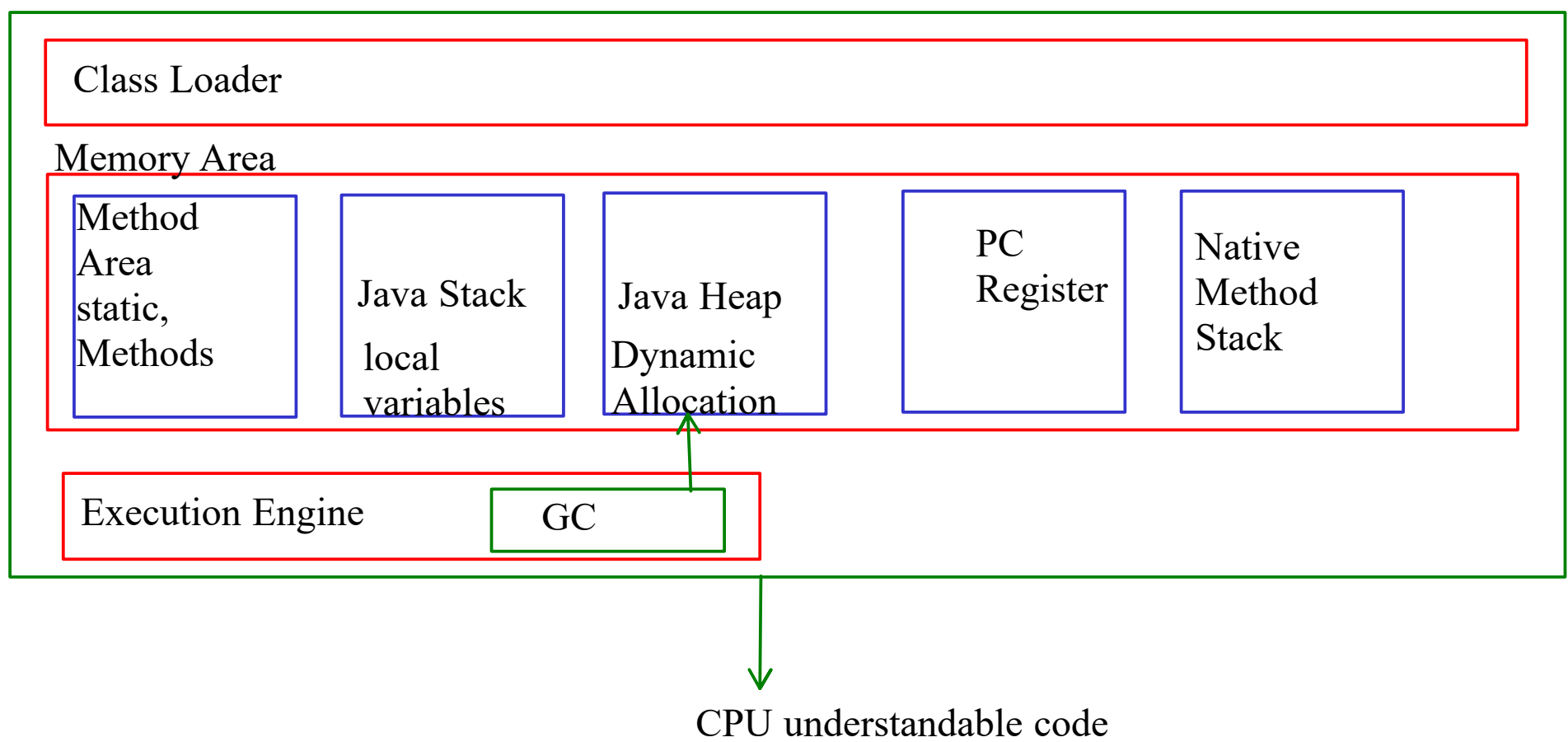
```
int num1;
```

```
int num1;
int num2;
```

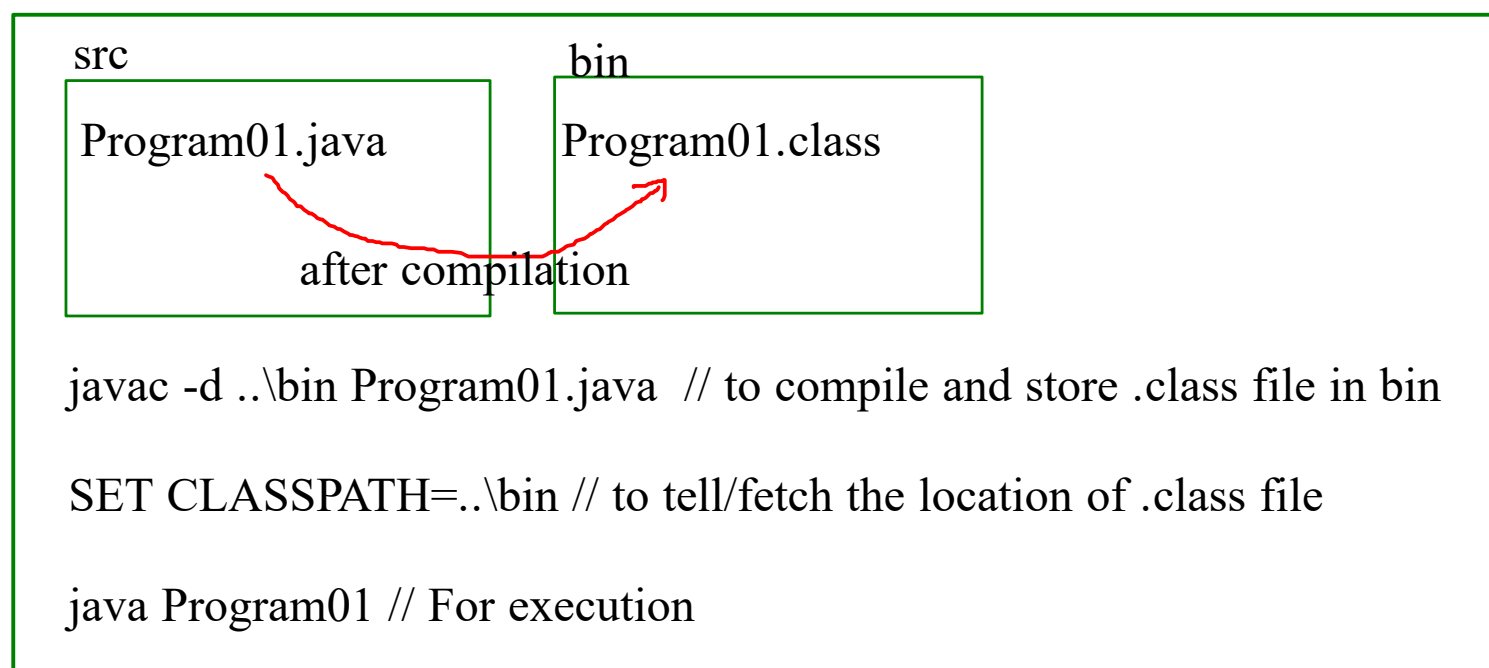
JDK, JRE, JVM  
- JDK (tools + docs + JRE)  
  
- JRE (rt.jar + JVM)

java.lang





cmd\_line



PATH -&gt; OS variable

CLASSPATH -&gt; Java Variable

Q. can we overload the main method

- Yes we can overload the main method.

```
java Program01
String []args = {}
```

```
Program01.main(args);
```

Q. Who invokes the main method

- JVM invokes the main method

Class

- class is a logical entity
- it is also called as blueprint of an object
- it consists of fields and methods
- it consists of static and non static members

1. State

- Fields of the class represents state of an object

2. Behaviour

- Methods represent the behaviour of an object

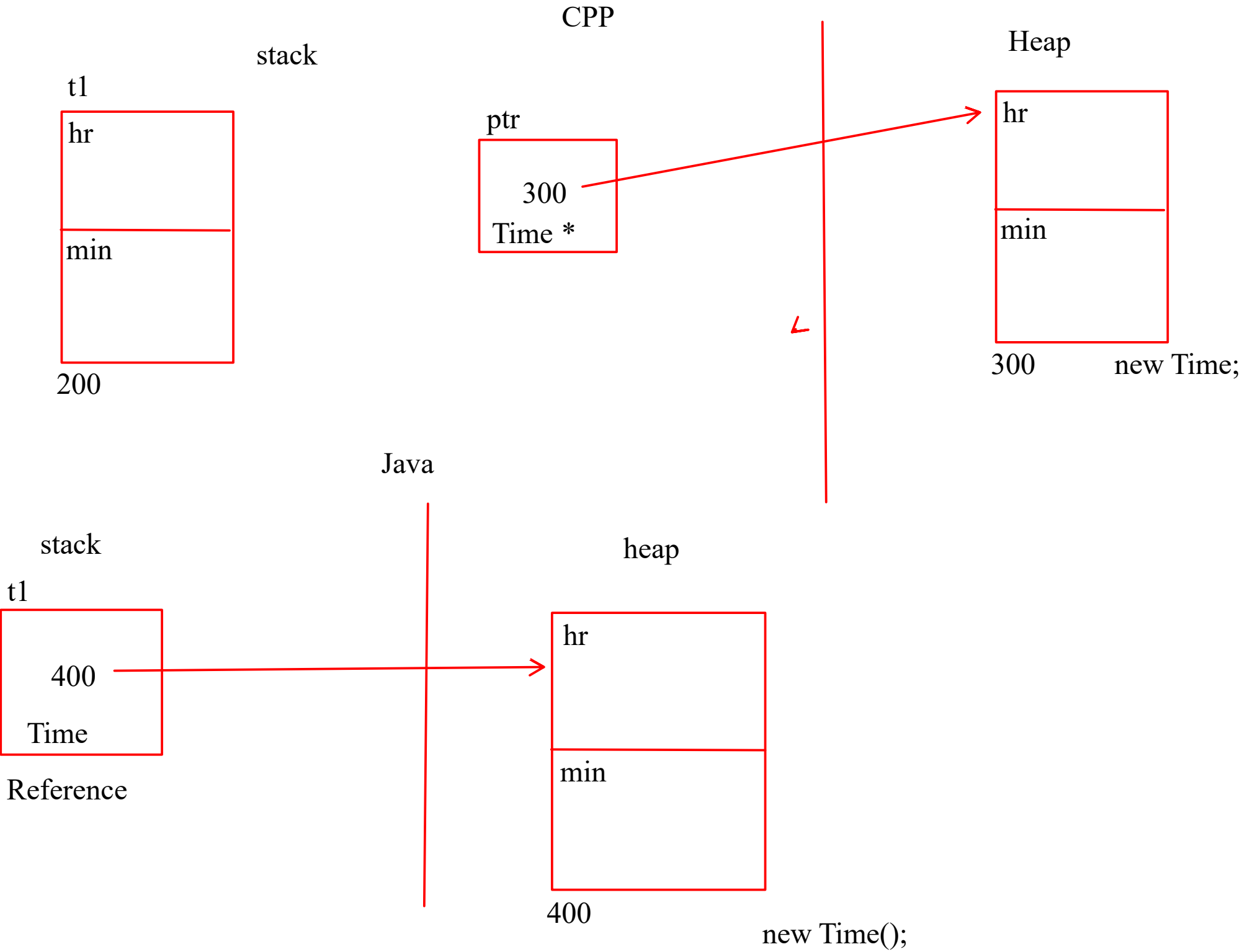
Object

- It is a physical entity
- it is also called as instance of the class
- It represents 3 things

3. Identity

- Unique field in the class represent identity, if unique field is not present then the address represents the identity

- 1. multiple non public classes into a single .java file
- 2. as per java language specification, we can have only 1 public class in a single .java file.
- 3. Also the name of the public class and the name of the .java file should be same



```
Assignments // Directory
 Assignment01 // workspace
 Assign01
 Assign02
 Assignment02 // workspace
```