Date: / /

# JAVA

Keywords are case sensitive public, Public, PUBLIC are all different

keywords

```
public class Hello{
    ....  //part /body
}.
```

code block

public - optional access modifier.

Method: It is a collection of statements (one or more) that performs an operation.

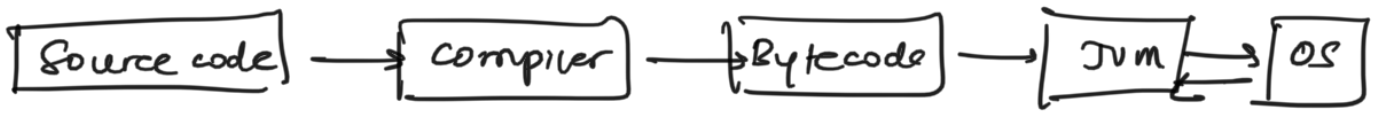
Main method - entry point of any java code. Java looks for it when running any program

```
public class Hello{

    public static void main(String args[]){
        S.O.P ("Hello"); -> Statement
    }

}
```

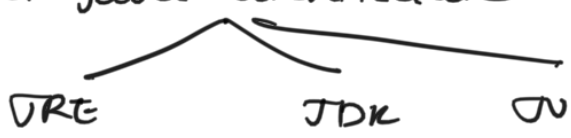
code block

Statement: a complete command to be executed and can include one or more expressions

Java Architecture




components of java architecture




JVM - Java Virtual Machine

- Java apps - write once run anywhere
- This is because of JVM
- it provides an environment for executing java programs.
- interprets bytecode into machine code which is executed in the machine in which java program runs.

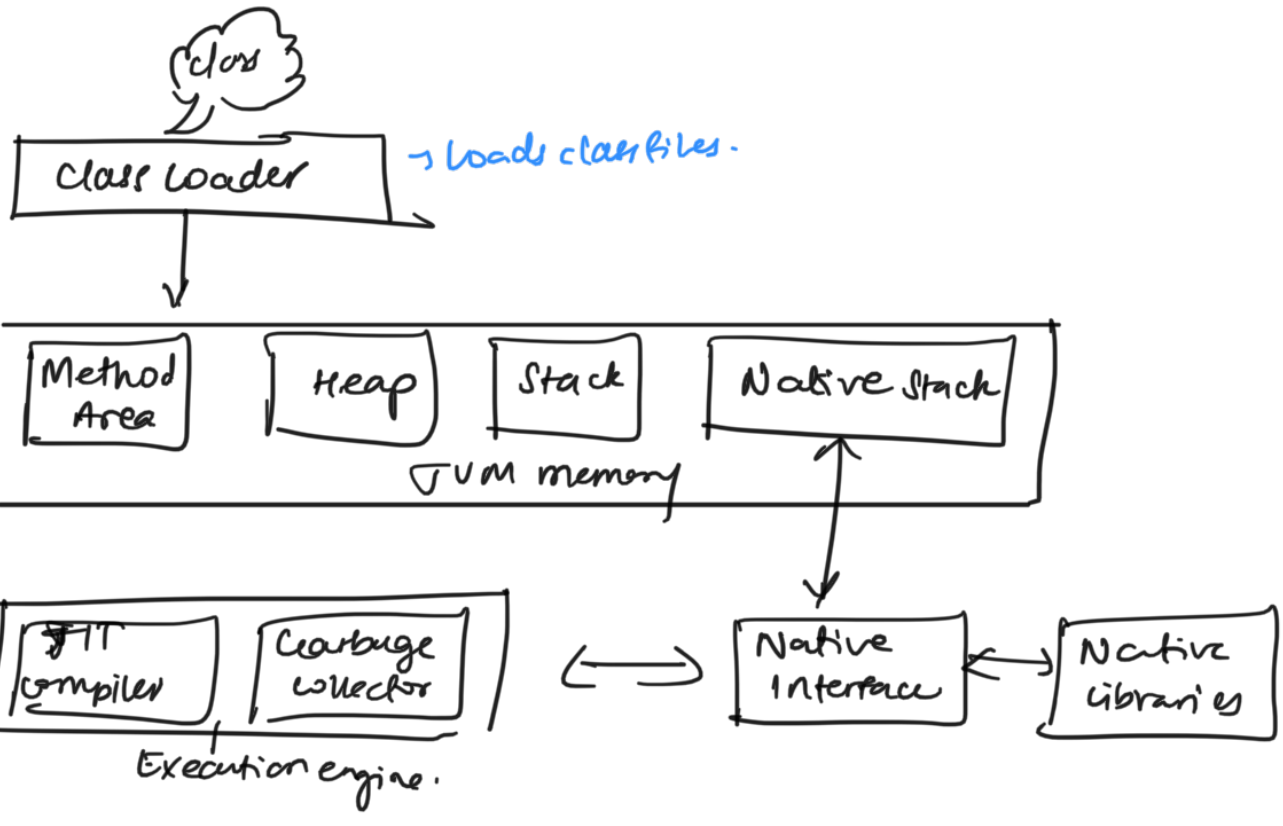
functions -

Load the code

Verify code

Execute code

Provide runtime environment




method area - class data is stored.

-static variables, staticblocks, static methods, Instance methods

Heap → created when JVM starts up

- may ↑ ↓ in size
- contains objects.

Stack - created for single execution thread.

- store local var, results, data for calls & returns of athread.

NativeStack - subsumes all native methods used in your app.

GC → remove unwanted obj from heap.

1) Mark & Sweep.

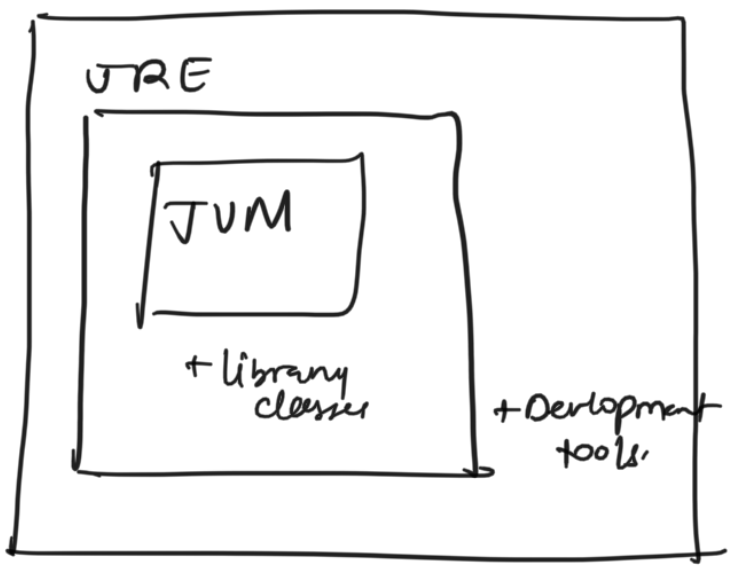
JIT - compile bytecode into machine code at runtime

JRE - Java Runtime Environment

- builds a runtime env in which java programs can be executed.
- takes java code, combine with needed libraries and starts JVM to execute it.
- contain libraries & softwares needed by your java programs to run.
- It is a part of JDK. but can be downloaded separately.

JDK

- is a SDK used to develop java apps and applets.
- contains JRE, development tools, interpreter/loader, compiler, archiver, javadoc. etc




JDK = JRE + dev tools

JRE = JVM + library classes.