JIT convert byte to machine code.

Jre provides runtime environment to the program

Jdk provide Jre as well as development kit

It is mandatory for same name of class file and class in public specifier but not in default

byte 1 -128 to 127

int 4 -2^31 to 2^31-1

short 2 -2^15 TO 2^15-1

long 8 -2^63 to 2^63-1

In java methods are by default are default and virtual in nature.

Virtual : should override

Abstract : must override

Object in java

Abc a; //not object

Abc a = new Abc();

Object in C++

Abc a; //static

Abc \*a = new Abc(); //dynamic

== compare the address

equals() compare the value

which is repeated code is **boiler plate code**

**Spaghetti code** is a pejorative phrase for unstructured and difficult-to-maintain source code.

**class :** a blueprint that describe state (member variables) and implementations of behavior

**object :** instance of class that maintains its state in variables and implements its behavior with methods

Data Hiding: make data member private and cannot access data member directly through object of a that class for that we need getter and setters.\

Abstraction : Access modifier/specifiers

Encapsulation : class/package

Polymorphism: Overloading and Overriding

Inheritance

System : Class

Out : reference of PrintStream

Println : PrintStream Class methods

Pre-written Code:

Library : consist of class files

Framework : multiple library

Component :

Bean :

Services:

1.Public

2.Protected : cannot be called outside class directly but by extending that class can be called.

3.default

4.Private

Method Signature

1.Number of Parameter

2.Type of Parameter

3.Sequence of Parameter

Overloading can be stop using generics

Overloading: Early / Static / compiletime Binding

same method name with different signature.

works can work with or without inheritance.

return type is not considered.

Overriding : Late / Dynamic/ runtime binding

works in inheritance

same method with same signature

can be given same or above access.

Overriding can be stop using final keyword

Abstract class can have all type of member including abstract.

Final : final(not inherit) and abstract(must inherit) cannot be used together in class

Constructor is a special methods used to initialied the member of class.

* Constructor has same name as of the class.
* No return type
* Automatically called whenever object is created.
* If we don’t create any constructor of class then compiler generate default constructor.