Java Inheritance :

Types of java inheritance ?

-There are two types of inheritance

is-A relationship inheritance

Has-A relationship inheritance

What is inheritance?

-inheritance means "IS-A" relationship.

e.g class A

class B **extends** A //extend is a keyword.

class A properties(data member, function member) is owned by class b.

usage: here in class B the class A **object creation is not required**.

what is agregation?

-agregation means "HAS-A" relationship.

keyword not required,

if user create object of one class in other class //this is agregation.

**Main Method** :

How many main methods are there?

- there can be **n** number of main methods.

e:g

public static void main(String[] args)

public static void main(String args)

public static void main()

Method overloading is possible in main method?

-Yes possible (conditionally)

Which main method JVM prefer to call?

-JVM prefer to call the main method, which as only **STRING AGRS[]** as a argument.

**Polymorphism :**

**Method overloading: happen Only in same Class**

what is method overloading?

-Having multiple methods with **same** method name in **same class**

How can we achieve it? bcoz we cannot have multiple methods with **same** name

-By changing the data type

By changing the number of arguments.

Challenges WRT argument?

-concept is same as constructor.

cons: no same datatype with same num of arguments

What is typePromotion? and cases?  
-promoting lower datatype(in terms of byte) to higher datatype.

case1: promotion happen if in method no of args match and minimal datatype match

e.g argReceiver(int a, float b) //argGiver.argReceiver(20, 10)

case2: promotion **won't happen** if arg receiver and giver match two method overloading cond i:e no of arg and data types

case3: promotion **won't happen** if two methods as case 1 complexity.

Why typePromotion required?

-e.g if argument receiver is of type float

and the argument given is int // now int is promoted to float

e.g argReceiver(int a, float b)

argGiver.argReceiver(20, 10) // 10 is promoted from int to float

Method Overriding:

required: parent class and subclass

same method name

inheritance