1. **What is package in java?**

Ans:

package is a collection of related classes and interfaces.

package is mainly used to avoid name conflicts.

1. **What is inheritance?**

Ans:

The ability for a new class to be created from an existing class by extending it is known as inheritance. It provides reusability. Basically you go for inheritance when u realize that "new type is same as existing type".

1. **How many types of inheritance are allowed in java?**

Ans:

1. Single level b) multilevel c) hierarchical
2. **What is the use of super keyword in java?**

Ans:

In java super keyword is used for 2 purposes:

1. Invoking parent class constructor from child class constructor
2. Invoking parent class method or variable from child class method.
3. **What is the rule for super keyword in java?**

Ans:

When super keyword Is used to invoke parent class constructor, the keyword has to be used on the very first line of child class constructor.

1. **What is the difference between this and super when used inside the constructor?**

Ans:

this Keyword in a Constructor

* Refers to the **current class's constructor** or **current instance**.
* Used to **call another constructor of the same class**.
* Must be the first statement in the constructor.

super Keyword in a Constructor

* Refers to the **parent class constructor**.
* Used to **call the parent class constructor** (either default or parameterized).
* Must be the first statement in the constructor.

1. **What do you need to give to client as a developer when you develop some code for the client?**

Ans:

Docs and jar files.

Docs contain the api of your classes and interfaces developed.

Jar file contains .class files of your classes and interfaces developed.

1. **What is the difference between overloading and overriding?**

Ans:

Overloading means defining more than one function with the same name but with the different arguments. Difference in number, order and type. In java method overloading happens in same class as well as in different classes ( parent class and child class have methods with the same name but different arguments).

Overriding on the other hand means parent class and child class have methods with the same name but with the same argument type.

1. **Explain lazy and eager resolution.**

Ans:

Let me explain these concepts with the help of example:

class A { }

class B { }

class Sample

{

private A ob1=new A(); // class A will be loaded only after first object of Sample gets created. - lazy resolution

private static B ob2=new B(); // class B will be loaded immediately after class Sample gets loaded - eager resolution

}

1. **What is reusability and how to achieve it?**

Ans:

Reusability means using existing type while defining a new type. It can be achieved in two ways:

a) composition/aggregation [part-of/has-a relationship]

b) inheritance [is-a relationship]

1. **On what basis you choose has-a or is-a relationship in OOPS.**

Ans:

you go for composition/aggregation when you want to use some of the functionalities of existing type inside new type.

e.g.

while designing "Car" you would reuse "Engine" by composition/aggregation, because "Car" is not an "Engine" it just needs some functionalities of Engine.

you go for inheritance when you realize that new type is "same as" existing type.

e.g.

while designing "Car" you would reuse "FourWheeler" because Car is same as FourWheeler.

1. **What happens when you instantiate child class object ?**

Ans:

when we create object of child class

control goes to child class constructor,

from there it will invoke parent class default/no-arg constructor by default.

and then it comes back inside child class constructor.

1. **What if parent class does not have "default/no-arg" constructor in case of inheritance?**

Ans:

In case of inheritance, if parent class does not have a default or no-arg constructor,it gives error in the child class constructor/s. This error can be solved either by providing no-arg or default constructor or by invoking parent class parameterized constructor from child class constructor/s explicitly (using super keyword).

1. **What is the meaning of “final class” ?**

Ans:

Final class is the one which cannot be inherited.

1. **What is the meaning of “final method”?**

Ans:

Final method is the one which cannot be overridden.

1. **How do you create array of object in java?**

Ans:

In java , you have to first create an array of reference ( to a particular class ) and then for each reference ,create an object.