What is interface?

**Ans:** **An interface is a specification of methods prototypes means only method name are written in interface without method bodies. All the methods of the interface are public and abstract.(implementation class me define krna zaroori).There can be more than one implementation class for defining methods of interface using multiple inheritance.**

**Features of interface:**

1. **An interface will have 0 or more abstract methods which are all public and abstract by default.**
2. **An interface can have variables which are public ,static and final by default. This means all the variables of the interface are constants.**
3. **None of the methods in interface can be private, protected or static.**
4. **We cannot create an object to an interface, but we can create a reference of instance type.**
5. **All the methods of interface should be implemented in its implementation classes. If any method is not implemented, then that implementation class should be declared as abstract.**
6. **Interface reference can refer to the objects of its implementation classes.(using upcasting and downcasting)**
7. **When an interface is written, any third party vendor can provide implementation classes to it.**
8. **An interface can extend another interface. But cannot implement another interface.**
9. **It is possible to write a class within an interface.**
10. **Interface forces the implementation classes to implement all of its methods compulsory. Java compiler checks whether all the methods are implemented in the implementation classes or not.**

A class can implement (not extend) multiple interfaces, for example, we can write:

***class Myclass implements interface1,interface2,….***

***class Myclass extends class1 implements interface1,interface2***

some queries arise in your mind may be like:

1. **Can you implement one interface from another..?**

Ans: **No, we can’t implementing an interface means writing body for the methods. This cannot be done again in an interface, since none of the methods of interface can have body.**

1. **Can you write a class with in an interface?**

Ans: **yes, it is possible to write a class within an interface.**

**Multiple inheritance using interface:**

Example:

***interface Father***

***{***

***float HT=6.2f; //public static final***

***void height(); //public abstract***

***}***

***interface Mother***

***{***

***float HT=5.8f;***

***void height();***

***}***

***class Child implements Father, Mother{***

***public void height()***

***{***

***//Child got average height of its parents***

***float ht=(Father.HT+Mother.HT)/2;***

***system.out.println(“child’s height=”+ht);***

***}***

***}***

***class Multi{***

***public static void main(String args[] )***

***{***

***Child ch=new Child();***

***Ch.height();***

***}***

***}***

**Interface A**

**{**

**Sum(2para);**

**}**

**Interface B**

**{**

**Sum(3para);**

**}**

**Class C implements A,B**

**{**

**Sum();**

**}**

**Overloading happens…..overriding ka concept hi khatam ho gaya.**