Interface :-
An interface is just like Java class, but it only has static constants and abstract method. Java uses Interface to implement multiple inheritance. A Java class can implement multiple Java Interfaces.

Features of Interface :-
- All methods in an interface are implicitly public and abstract.
- All variables declared inside interface are implicitly public static and final.
- An interface cannot be instantiated.
- A Java class can implement multiple Java Interfaces.
- It is necessary that the class must implement all the methods declared in the interfaces.
- Class should override all the abstract methods declared in the interface.
- An interface can extend from one or many interfaces.
- Class can extend only one class but implement any number of interfaces.
- An interface cannot implement another Interface.
- It has to extend another interface if needed.

Note:-
- To use an interface in your class, append the keyword "implements" after your class name followed by the interface name.
- At the time of declaration, interface variable must be initialized. Otherwise, the compiler will throw an error.

Example of an Interface in Java:-
interface Shiva
{
   public void power();
   public void ideal();
}
class Kartik implements Shiva {
   public void power()
   {
      System.out.println("implementation of power");
   }
   public void ideal()
   {
      System.out.println("implementation of ideal");
   }
}
class Main{
    public static void main(String arg[])
    {
        Shiva obj = new Kartik();
        obj.power();
        obj.ideal();
    }
}

**Inheritance with interface:-**

interface Inf1 {
    public void method1();
}

interface Inf2 extends Inf1 {
    public void method2();
}

class Demo implements Inf2 {
    public void method1()
    {
        System.out.println("method1");
    }

    public void method2()
    {
        System.out.println("method2");
    }
}

class Main1{
    public static void main(String args[])
    {
        Inf2 obj = new Demo();
        obj.method2();
    }
}

**Multiple inheritance:-**

Multiple inheritance in Java can be achieved by interface. A class can implement any number of classes separated by comma.

interface Shiv {
}
void work();
}
interface Parvati
{
    void work();
}
class Ganesh implements Shiv, Parvati {
    public void work()
    {
        System.out.println("MULTIPLE INHERITANCE ACHIEVED");
    }
}
class Main2{
    public static void main(String args[]){
        Shiv s = new Ganesh();
        s.work();
    }
}

Note:

➢ A class can extend a class.
➢ A class can implement an interface.
➢ An interface can extend another interface.

Exercise:

1) Write down the key differences between abstract class and interface.
2) How to access a variable inside an interface.