Chapter 11 Why Multiple Inheritance not Support in Java by Munawar

Is multiple inheritance allowed in java?

Multiple inheritance face problems when there exist methods with same signature in both the super classes.

Due to such problems, Java does not support multiples inheritance directly but the similar concept can be allowed using interfaces.

A class can implement multiple interfaces and extend a class at the same time.

Note:

1. Interface in Java is a bit like the class but with significant difference.

2. An interface can only have method signature fields and default methods.

3. The class implementing an interface needs to define the methods (not the field).

4. You can create a reference of interfaces but not the object.

5. Interfaces methods are public by default.

Polymorphism using interfaces

Cell phone   GPS   Camera   Media Player

Smart Phone

GPS g =new Smart Phone ();

Smart Phone s=new Smart Phone ();

Implementing an interface forces method implement.

Source Code

```java
import javax.swing.plaf.synth.SynthTextAreaUI;
import java.util.Scanner;
import java.util.Random;

interface Bicycle{
    int m=100; // by default this variable is public in interfaces
    void applyBrake(int decrement);
    void speedUp(int increment);
}
interface HornBicycle{
    void blowHornk3g();
    void blogHorn();
}
class AvonCycle implements Bicycle,HornBicycle{
    int k=100;
    void BlowHorn(){
        System.out.println("Peep Pop Peep up");
    }
   public void applyBrake(int decrement){
        System.out.println("Applying Brake");
    }
    public void speedUp(int increment){
        System.out.println("Applyinh speed up");
    }
   public void blowHornk3g(){
        System.out.println("Blow horn");
    }
    public  void blogHorn(){
        System.out.println("Blog Horn");
    }
}
public class Main {
    public static void main (String [] args) {

        AvonCycle Anmunwar=new AvonCycle();
        Anmunwar.applyBrake(1);
        // you can create properties in interface
        System.out.println(Anmunwar.m);
        //you cannot modify the properties in interfaces as they are final
//        Anmunwar.m=200;      // error is occur
//        System.out.println(Anmunwar.m);
        Anmunwar.blogHorn();
        Anmunwar.BlowHorn();
        System.out.println(Anmunwar.k);
    }
```

```
}
```

Thank You