

### **Box.java**

```
class box {
    float length;
    float width;
    float height;
    box(){
        length=0;
        width=0;
        height=0;
        System.out.println("From base default const - ");
    }
    box(float l, float w, float h){
        length=l;
        width=w;
        height=h;
        System.out.println("From base const - ");
    }
    void volume() {
        System.out.println("Volume is : "+length*width*height);
    }
}
```

### **Woodbox.java**

```
class woodbox extends box {

    float thick;

    woodbox(float l, float w, float h, float t){
        length=l;
        width=w;
        height=h;
        thick=t;
        System.out.println("From woodbox const - ");
    }

    woodbox(float l, float w, float h){
        super(l,w,h);
        thick=0;
    }
    void showthick() {
        System.out.println("Thickness is : "+thick);
    }
}
```

### **Boxinh.java**

```
class boxinh{
    public static void main(String ar[]){
        woodbox ob1= new woodbox(10,6,5,2);
        ob1.volume();
        ob1.showthick();
    }
}
```

```

        woodbox ob2= new woodbox(8,6,4);
        ob2.volume();

    }
}

```

### Supercon.java

```

class plate {
    float length,width;
    plate(float l,float w){
        length=l;
        width=w;
        System.out.println("From plate const- ");
    }
}

class box extends plate{
    float height;
    box(float l,float w, float h){
        super(l,w);
        height=h;
        System.out.println("From box const- ");
    }
}

class woodbox extends box{
    float thick;
    woodbox(float l,float w, float h,float t){
        super(l,w,h);
        thick=t;
        System.out.println("From woodbox const- ");
    }
}

class supercon {
    public static void main (String args[]){
        woodbox mybox= new woodbox(20,12,6,3);

        System.out.println("Box's length is : "+mybox.length);
        System.out.println("Box's width is : "+mybox.width);
        System.out.println("Box's height is : "+mybox.height);
        System.out.println("Box's thickness is : "+mybox.thick);

    }
}

```

## Dynamethod.java

```
class base {
    float length, width;
    base(float l, float w){
        length=l;
        width=w;
        System.out.println("From base const - ");
    }
    void area() {
        System.out.println("Area is : "+length*width);
    }
    void volume(){
        System.out.println("From base volume - ");
    }
}

class derive extends base {
    float height;
    derive(float l, float w, float h){
        super(l,w);
        height=h;
    }
    // void area() {
    //     System.out.println("From derive area - ");
    // }

    void volume(){
        System.out.println("Volume is : "+length*width*height);
    }
}

class dynamethod {
    public static void main (String args[]){

        // derive ob1= new derive(5,4,3);
        base ob1= new base(3,4);
        ob1.area();
        ob1.volume();
        ob1= new derive(7,6,5);
        // ob1.area();
        ob1.volume();
    }
}
```

## Interfacehu.java

```
interface human {
    void speak();
    void eat();
}

class indian implements human{
    public void speak(){
        System.out.println("Indian speaks Hindi");
    }
    public void eat(){
        System.out.println("Indian eats Rice");
    }
    public void write(){
        System.out.println("Indian writes English");
    }
}

class interfacehu {
    public static void main (String data[]){
        //human ob= new human();   interface can't be instantiated
        human ob= new indian();    // interface can be referenced
        indian i= new indian();
        i.speak();
        i.eat();
        System.out.println("Done -");
    }
}
```

## Minherit.java

```
class minherit extends box implements human{

    minherit(float l, float w, float h){
        super(l,w,h);
        System.out.println("From const - ");
    }

    public void speak(){
        System.out.println("Indian speaks Hindi");
    }
    public void eat(){
        System.out.println("Indian eats Rice");
    }
}

void dim(){
    System.out.println("Dimensions are :"+length+" "+width+" "+height);
}

public static void main (String ar[]){
```

```

        minherit ob= new minherit(10,7,5);
        ob.volume();
        ob.speak();
    }
}

```

### **Interfaceinherit.java**

```

interface A {
    void method1();
    void method2();
}

```

```

interface B extends A {
    void method3();
    void method4();
}

```

```

class demo implements B{

    public void method1(){
        System.out.println("From method- 1");
    }
    public void method2(){
        System.out.println("From method- 2");
    }

    public void method3(){
        System.out.println("From method- 3");
    }
    public void method4(){
        System.out.println("From method- 4");
    }

}

```

### **dynaLookup .java**

```

interface human {
    void speak();
    void eat();
}

```

```

class indian implements human{

    public void speak(){
        System.out.println("Indian speaks Hindi");
    }
    public void eat(){
        System.out.println("Indian eats Rice");
    }
    public void write(){

```

```
        System.out.println("Indian writes English");
    }
}
```

```
class chinese implements human{

    public void speak(){
        System.out.println("Chinese speaks Mandarin");
    }
    public void eat(){
        System.out.println("Chinese eats with sticks");
    }
}
```

```
class dynaLookup {
public static void main (String data[]){
    human ob= new indian();           // interface can be referenced
        ob.speak();
        ob.eat();
    ob= new chinese();
        ob.speak();
        ob.eat();
    System.out.println("Done -");
}
}
```