Dt : 13/10/2022

faq:

what is the diff b/w

(i)Implemented methods

(ii)Non-Implemented methods

(i)Implemented methods:

=>The methods which are taken from interfaces and constructed with bodies are known as Implemented methods.

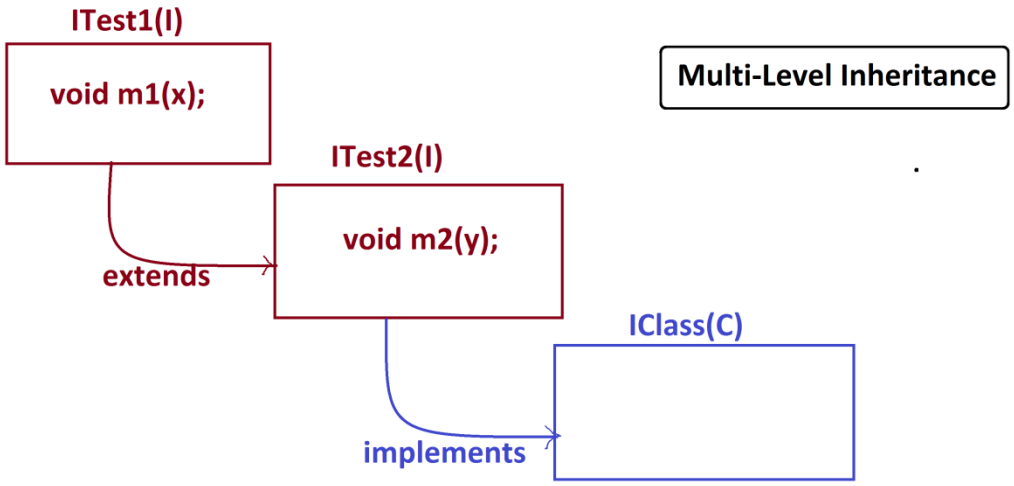
(ii)Non-Implemented methods:

=>The methods which are not taken from the interfaces are known as Non-Implemented methods.

Rule-12 : Interface cannot be declared with blocks and Constructors

Rule-13 : Interface can use the features of another interface using "extends" keyword.

Diagram:



Ex:

ITest1.java

```
package test;
public interface ITest1 {
    public abstract void m1(int x);
}
```

ITest2.java

```
package test;
public interface ITest2 extends ITest1{
     public abstract void m2(int y);
}
```

IClass.java

```
package test;
public class IClass implements ITest2{
     public void m1(int x) {
          System.out.println("===ITest1 m1(x)====");
          System.out.println("The value x:"+x);
     }
     public void m2(int y) {
          System.out.println("===ITest2 m2(y)====");
```

```
            System.out.println("The value y:"+y);
      }
}
```

DemoInterface2.java(MainClass)

```
package maccess;
import test.*;
public class DemoInterface2 {
      public static void main(String[] args) {
          IClass ob = new IClass();
          ob.m1(11);
          ob.m2(12);
      }
}
```

o/p:

===ITest1 m1(x)====

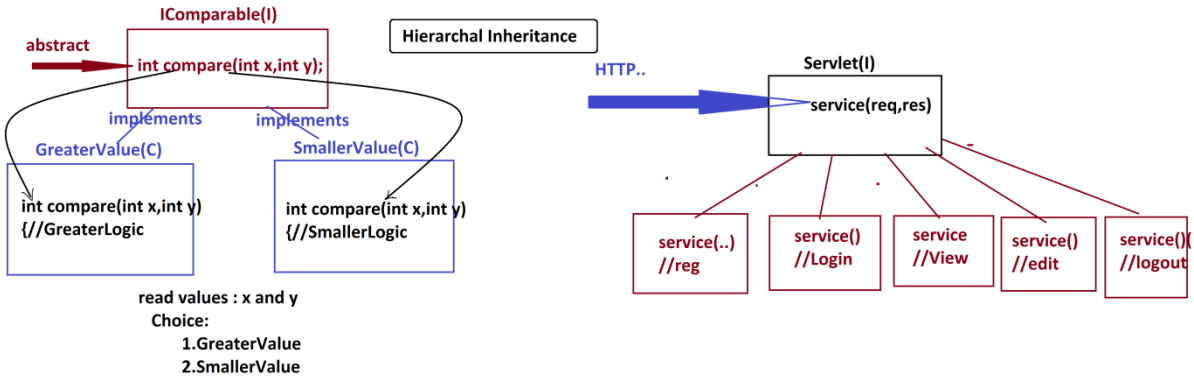
The value x:11

===ITest2 m2(y)====

The value y:12

Rule-14 : Interfaces can be implemented to any number of implementation classes without restriction.

Diagram:



Ex:

IComparable.java

```
package test;
public interface IComparable {
    public abstract int compare(int x,int y);
}
```

GreaterValue.java

```
package test;
public class GreaterValue implements IComparable{
     public int compare(int x,int y) {
      if(x>y) return x;
      else return y;
     }
}
```

SmallerValue.java

```
package test;
public class SmallerValue implements IComparable{
       public int compare(int x,int y) {
            if(x<y) return x;
            else return y;
           }
}
```

DemoInterrface3.java(MainClass)

```
package maccess;
import test.*;
import java.util.*;
public class DemoInterface3 {
        public static void main(String[] args) {
    Scanner s = new Scanner(System.in);
    System.out.println("Enter the value x:");
    int x = s.nextInt();
    System.out.println("Enter the value y:");
    int y = s.nextInt();
    System.out.println("====Choice====");
    System.out.println("1.GreaterValue\n2.SmallerValue");
    System.out.println("Enter the Choice:");
    switch(s.nextInt())
    {
    case 1:
        GreaterValue gv = new GreaterValue();
        int r1 = gv.compare(x, y);
        System.out.println("GreaterValue:"+r1);
        break;
    case 2:
        break;
    default:
```

```
            System.out.println("Invalid Choice...");
        }//end of switch
        s.close();
            }
}
```

o/p:

Enter the value x:

12

Enter the value y:

13

====Choice====

1.GreaterValue

2.SmallerValue

Enter the Choice:

1

GreaterValue:13

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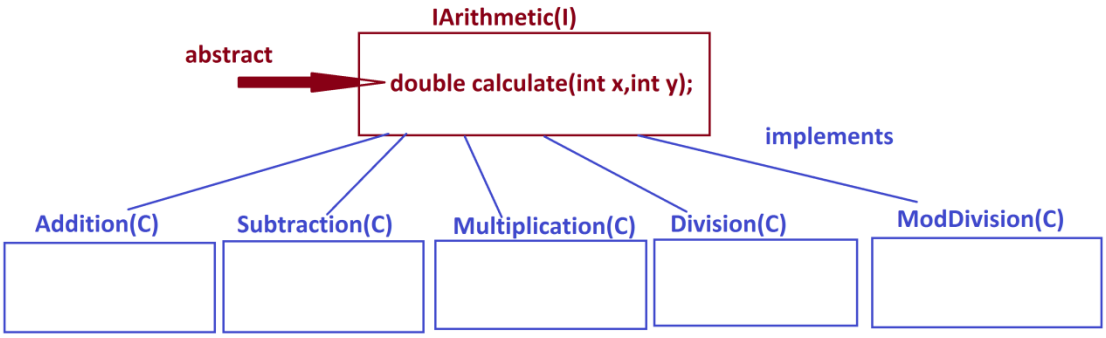
Assignment:

Construct IArithmetic application using the following Layout:



read values : x and y
Choice:
1.add
2.sub
3.mul
4.div
5.modDiv

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