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Part-VII
Package & Interface

Practical No: 31

AIM: Write a program that illustrates interface inheritance. Interface K1 declares method mK and a variable integer variable that is initialized to 1. Interface K2 extend K1 & declares mK. Interface K3 extends K2 & declares mK. The return type of mK is void in all interfaces. Class U implements K3. Its version of mK displays value of integer variable. Instantiate U & invoke its method

Solution

Practical31.java

```
package com.jayshil.javaapp;

interface k1{
    int a=1;
    void mk();
}

interface k2 extends k1{
    void mk();
}

interface k3 extends k2{
    void mk();
}

class u implements k3{
    public void mk(){
        System.out.println("a="+a);
    }
}

public class Practical31{
    public static void main(String[] args){
        u u1=new u();
        u1.mk();
    }
}
```



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```
}  
}
```

Output

```
Run: Practical31 x  
D:\softwares\Java\bin\java.exe "-javaagent:D:\softwares\Java\intelliJ\IntelliJ IDEA Commu  
a=1  
Process finished with exit code 0  
Build completed successfully in 2 sec, 619 ms (a minute ago)
```



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Practical No: 32

AIM: Write a program to find out the area of square and circle using interface. Where you have to take two classes for circle and rectangle and one interface.

Solution

Practical32.java

```
package com.jayshil.javaapp;

import java.awt.*;

interface Initialization{
    void Dimensions();
    void area();
}

class Circle_area implements Initialization{
    int r = 0;
    double pi = 3.141, area = 0;
    public void Dimensions(){
        r = 5;
    }
    public void area(){
        area = pi * r * r;
        System.out.println("Area of circle is : "+area);
    }
}

class Rectangle_area implements Initialization{
    int l = 0, b = 0;
    double area;
    public void Dimensions(){
        l = 6;
        b = 4;
    }
    public void area(){
        area = l * b;
        System.out.println("Area of rectangle is : "+area);
    }
}
```



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```
public class Practical32 {  
    public static void main(String[] args) {  
        Rectangle_area obj_1 = new Rectangle_area();  
        obj_1.Dimensions();  
        obj_1.area();  
  
        Circle_area obj_2 = new Circle_area();  
        obj_2.Dimensions();  
        obj_2.area();  
    }  
}
```

Output

```
Run: Practical32 x  
D:\softwares\Java\bin\java.exe -javaagent:D:\softwares\Java\intelliJ\IntelliJ IDEA Community Edition 2020.3.2  
Area of rectangle is :24.0  
Area of circle is : 78.525  
Process finished with exit code 0  
Build completed successfully in 1 sec, 333 ms (a minute ago)
```