

**5)** Create classes Student and sports. Create another class result inherited from student and sports. Display the academic and sports score of a student.

```
interface student
{
    void stresult();
}

interface sports
{
    void spresult();
}

class result implements student,sports{
    public void spresult()
    {
        String eighthundred="First";
        String twohundred="Second";
        String longjump="First";
        String relay="Second";
        System.out.println("Sports Result");
        System.out.println("eight hundered merter:"+ eighthundred);
        System.out.println("Two Hundred Meter:"+twohundred);
        System.out.println("long jump:"+longjump);
        System.out.println("Relay:"+relay);
    }
    public void stresult()
    {
        int physics=50;
        int chemistry=60;
        int biology=40;
        int hindi=40;
        int social=77;
```

```

System.out.println("Marks");

System.out.println("physics:"+physics);

System.out.println("chemistry:"+chemistry);

System.out.println("biology:"+biology);

System.out.println("hindi:"+hindi);

System.out.println("social:"+social);

}

public static void main(String[] args)

{

result r = new result(); r.stresultt();

r.spresult();

}

}

```

```

C:\Users\micromedia02>cd desktop
C:\Users\micromedia02\Desktop>javac result.java
C:\Users\micromedia02\Desktop>java result
Marks
physics:50
chemistry:60
biology:40
hindi:40
social:77
Sports Result
eight hundred meter:First
Two Hundred Meter:Second
long jump:First
Relay:Second
C:\Users\micromedia02\Desktop>

```

6) Create an interface having prototype of functions area() and perimeter(). Create two classes circle and rectangle which implements the above interface. Create a menu driven program to find area and perimeter of objects.

```

import java.util.Scanner;

interface Shape

{

```

```
void input();
void area();
void perimeter();
}

class Circle implements Shape
{
    int r = 0;
    double pi = 3.14, ar = 0, per=0;
    public void input()
    { Scanner s = new Scanner(System.in); System.out.print("Enter radius of circle:");
      r= s.nextInt();
    }
    public void area()
    {
        ar = pi * r * r;
        System.out.println("Area of circle:"+ar);
    }
    public void perimeter()
    {
        per = 2 * pi * r;
        System.out.println("Perimeter of circle:"+per);
    }
}

class Rectangle implements Shape
{
    int l = 0, b = 0;
    double ar, per;
    public void input()
    { Scanner s = new Scanner(System.in);
      System.out.print("Enter length of rectangle:");
      l = s.nextInt();
```

```
System.out.print("Enter breadth of rectangle:");

b = s.nextInt();

}

public void area()

{

ar = l * b;

System.out.println("Area of rectangle:"+ar);

}

public void perimeter()

{

per = 2 * (l + b);

System.out.println("Perimeter of rectangle:"+per);

}

}

public class shapes

{

public static void main(String[] args)

{ int n;

Scanner s = new Scanner(System.in);

Rectangle obj1 = new Rectangle();

Circle obj2 = new Circle(); System.out.println("1.Area of circle");

System.out.println("2.Perimeter of circle");

System.out.println("3.Area of rectangle");

System.out.println("4.Perimeter of rectangle");

System.out.println("Enter your option:");

n= s.nextInt();

switch(n) {

case 1:

obj2.input();

obj2.area();

break;
```

```

case 2:
obj2.input();
obj2.perimeter();
break;
case 3:
obj2.input();
obj2.area();
break;
case 4:
obj2.input();
obj2.perimeter();
break;
default:
System.out.println("Invalid option");
}
}
}

```

```

C:\Users\micromedia02\Desktop>javac shapes.java
C:\Users\micromedia02\Desktop>java shapes
1.Area of circle
2.Perimeter of circle
3.Area of rectangle
4.Perimeter of rectangle
Enter your option:
1
Enter radius of circle:5
Area of circle:78.5
C:\Users\micromedia02\Desktop>

```

7) Prepare bill with the given format using calculate method from interface.

Order No.Date Productid name quantity price total

101 A 2 25 50 102 B 1 100 100

Net.Amount 150

interface bill

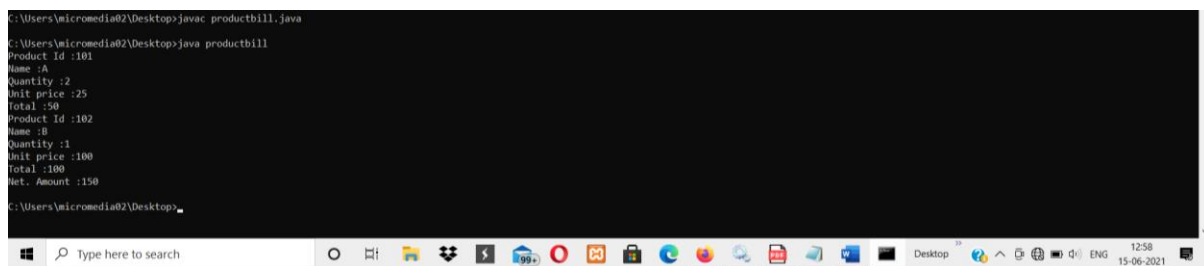
```

{
int productdetails();

```

```
}  
  
class product1 implements bill{  
    int id = 101,quantity= 2,unit=25,total=0; String name="A";  
  
    public int productdetails()  
    {  
        total = quantity * unit;  
        System.out.println("Product Id :"+id);  
        System.out.println("Name :"+name);  
        System.out.println("Quantity :"+quantity);  
        System.out.println("Unit price :"+unit);  
        System.out.println("Total :"+total);  
        return(total);  
    }  
}  
  
class product2 implements bill{  
    int id = 102,quantity= 1,unit=100,total=0;  
    String name="B";  
  
    public int productdetails()  
    {  
        total = quantity * unit;  
        System.out.println("Product Id :"+id);  
        System.out.println("Name :"+name);  
        System.out.println("Quantity :"+quantity);  
        System.out.println("Unit price :"+unit);  
        System.out.println("Total :"+total);  
        return(total);  
    }  
}  
  
public class productbill
```

```
{  
    public static void main(String[] args)  
    {  
        product1 p1 = new product1();  
        product2 p2 = new product2();  
        int t1= p1.productdetails();  
        int t2= p2.productdetails();  
        int t3=t1+t2;  
  
        System.out.println("Net. Amount :"+t3);  
    }  
}
```



```
C:\Users\micromedia02\Desktop>javac productbill.java  
C:\Users\micromedia02\Desktop>java productbill  
Product Id :101  
Name :A  
Quantity :2  
Unit price :25  
Total :50  
Product Id :102  
Name :B  
Quantity :1  
Unit price :100  
Total :100  
Net. Amount :150  
C:\Users\micromedia02\Desktop>
```

The screenshot shows a Windows command prompt window with a black background and white text. The user has executed the Java compilation and execution commands. The output shows the details for two products: Product 1 (ID 101, Name A, Quantity 2, Unit price 25, Total 50) and Product 2 (ID 102, Name B, Quantity 1, Unit price 100, Total 100). The final output is 'Net. Amount :150'. The Windows taskbar is visible at the bottom, showing the search bar and various application icons.